APPENDIX A

Notice of Preparation (NOP), Initial Study (IS), Comment Letters on the NOP and IS, and Distribution List

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 15, 2022
Sent via email

Kevin Snyder
Community Development Director
City of Indio
100 Civic Center Mall
Indio, CA 92201

Notice of Preparation of a Draft Environmental Impact Report
Desert Retreat Specific Plan Project, City of Indio
State Clearinghouse No. 2022070300

Dear Mr. Snyder:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the City of Indio (City) for the Desert Retreat Specific Plan Project, (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.). CDFW expects that it may

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT LOCATION

The Project site is located in the northwest portion of the City of Indio (Assessor's Parcel Numbers 691-110-002, 003, 004, 008, 011, 014, 015, 021; 691-100-023, 025). The Specific Plan Area is bound by the following streets: 38th Avenue on the north, Jefferson Street on the west, 40th Avenue on the south, and Madison Street on the east.

PROJECT DESCRIPTION SUMMARY

The proposed Project includes the adoption of a Desert Retreat Specific Plan for the development of a master-planned residential community with recreation amenities and a multi-use trail system on an approximate 377-acre site and containing up to 1,500 homes. The Project calls for (1) a large-lot tentative map to facilitate the subdivision of the property into large parcels for acquisition and/or financing, as well as definition of the primary circulation and utility improvements, and (2) a tentative tract map to facilitate the subdivision of the property into residential and common area lots.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The comments and recommendations are also offered to enable the CDFW to adequately review and comment on the proposed Project with respect to the Project's consistency with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009[2]). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov or https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed Project.

   CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish & G. Code, § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. Focused species-specific/CVMSHCP surveys, completed by a CVMSHCP Acceptable Biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be

[2] Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018[3]).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

6. A full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. To ensure that Project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address Project-related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.

2. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the project footprint, such as nearby public lands (e.g., National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

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3 CDFW, 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities, State of California, California Natural Resources Agency, Department of Fish and Wildlife: March 20, 2018 (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline)

3. An evaluation of impacts to on-site and adjacent open space lands from both the construction of the Project and any long-term operational and maintenance needs. =

4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect Project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Alternatives Analysis

CDFW recommends the DEIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]). The alternatives analysis should also evaluate a "no project" alternative (CEQA Guidelines § 15126.6[e]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. The City of Indio should assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Project and its long-term operation and maintenance. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time. Project activities described in the DEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. CDFW also recommends that the DEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid

and otherwise protect sensitive plant communities from project-related direct and indirect impacts.

3. *California Species of Special Concern* (CSSC): CSSC status applies to animals generally not listed under the federal Endangered Species Act or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSCs should be considered during the environmental review process. CSSC that have the potential or have been documented to occur within or adjacent to the project area, including, but not limited to: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), and northern harrier (*Circus hudsonius*).

4. *Mitigation*: CDFW considers adverse project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail. Where habitat preservation is not available onsite, offsite land acquisition, management, and preservation should be evaluated and discussed in detail.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the DEIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

   CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the

Project. Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in advance of project impacts in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

6. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the DEIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

7. *Moving out of Harm's Way:* To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.

8. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project. It is the policy of CESA to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. CDFW must comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the DEIR addresses all Project impacts to listed species and specify a mitigation monitoring andreporting program that will meet the requirements of CESA.

Coachella Valley Multiple Species Habitat Conservation Plan

Within the Inland Deserts Region, CDFW issued Natural Community Conservation Plan Approval and Take Authorization for the CVMSHCP per Section 2800, *et seq*., of the California Fish and Game Code on September 9, 2008. The CVMSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and provides for the incidental take of covered species in association with activities covered under the permit.

Compliance with approved habitat plans, such as the CVMSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the CEQA Guidelines requires that the CEQA document discuss any inconsistencies between a proposed Project and applicable general plans and regional plans, including habitat conservation plans and natural community conservation plans. An assessment of the impacts to the CVMSHCP as a result of this Project is necessary to address CEQA requirements. To obtain additional information regarding the CVMSHCP please go to: http://www.cvmshcp.org/.

The proposed Project occurs within the CVMSHCP area and is subject to the provisions and policies of the CVMSHCP. In order to be considered a covered activity, Permittees should demonstrate that proposed actions are consistent with the CVMSHCP and its associated Implementing Agreement.

Regardless of whether take of threatened and/or endangered species is obtained through the CVMSHCP or through a CESA ITP, the DEIR needs to address how the proposed Project will affect the conservation objectives of the CVMSHCP. Therefore, all surveys required by the CVMSHCP to determine consistency should be conducted and results included in the DEIR so that CDFW can adequately assess whether the Project will impact the CVMSHCP.

Lake and Streambed Alteration Program

Based on review of material submitted with the NOP and review of aerial photography, a drainage feature appears along the eastern side of the Project, and there are two channels (along 40th Avenue and Madison Street) that converge in the southeast corner of the Project. Depending on how the Project is designed and constructed, it is likely that the Project applicant will need to notify CDFW per Fish and Game Code section 1602. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To submit a Lake or Streambed Alteration notification package, please go to https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

To ameliorate the water demands of this Project, CDFW recommends incorporation of water-wise concepts in project landscape design plans. In particular, CDFW recommends xeriscaping with locally native California species, and installing water-efficient and targeted irrigation systems (such as drip irrigation). Native plants support butterflies, birds, reptiles, amphibians, small mammals, bees, and other pollinators that evolved with those plants, more information on native plants suitable for the Project location and nearby nurseries is available at CALSCAPE: https://calscape.org/. Local water agencies/districts and resource conservation districts in your area may be able to provide information on plant nurseries that carry locally native species, and some facilities display drought-tolerant locally native species demonstration gardens (for example the Riverside-Corona Resource Conservation District in Riverside). Information on drought-tolerant landscaping and water-efficient irrigation systems is available on California's Save our Water website: https://saveourwater.com/ .

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). Information can be submitted online or via completion of the CNDDB field survey form at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data . The types of information reported

to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a DEIR for Desert Retreat Specific Plan Project (SCH No. 2020070300) and recommends that the City of Indio address the CDFW's comments and concerns in the forthcoming DEIR. Questions regarding this letter or further coordination should be directed to Jacob Skaggs, Environmental Scientist, at jacob.skaggs@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Kim Freeburn
84F92FFEEFD24C8...

Kim Freeburn
Acting Environmental Program Manager

ec:

Heather Brashear, Senior Environmental Scientist (Supervisor), CDFW
Heather.Brashear@Wildlife.ca.gov

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INITIAL STUDY

for the

DESERT RETREAT SPECIFIC PLAN PROJECT

Prepared for:

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Prepared by:

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JULY 2022

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1. **Project title:** Desert Retreat Specific Plan
2. **Lead agency name and address:** City of Indio, 100 Civic Center Mall, 92201
3. **Contact person and telephone number:** Kevin Snyder, AICP, Community Development Director, (760) 541-4255
4. **Project location:** The Project site is located in the northwest portion of the City of Indio, as shown in **Figure 1: Regional Location Map.** The Specific Plan Area is bound by the following streets: 38th Avenue on the north, Jefferson Street on the west, 40th Avenue on the south, and Madison Street on the east, as shown in **Figure 2: Project Location Map**.
5. **Project Sponsor Name and Address**: Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691
6. **General Plan and Zoning designation:** SN (Suburban Neighborhood), RL (Residential Low) and Village Core
7. **Description of Project:** The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site.

   The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing.

Land Use

As shown in **Figure 3: Land Use Map**, the Project is a proposed gated, active adult residential community of up to 1,500 single family detached homes at an overall density of approximately 4 du/ac. The Project will include open space buffers along major public streets and the adjacent Coachella Valley Water District (CVWD) wastewater treatment plant. A network of open space paseos and corridors will traverse the Project and will provide ample opportunity for pedestrian and bicycle movement within the gated neighborhood. The network of paseos and corridors will connect to the main boulevard sidewalks within the Project and the external sidewalks along the perimeter of the Project site with access points spaced consistently on adjoining public streets to promote connectivity with the surrounding residential communities and recreational amenities. Cul-de-sacs will be designed to terminate at open space areas for maximum pedestrian connectivity. The

neighborhood will include a private recreational facility with tennis, pickleball, community pool, and interior space available to residents. A series of water features will be incorporated selectively around the grounds of the recreational facility to enhance visual character of the Project through the creation of focal points.

Circulation System

The General Plan Circulation Plan in the Mobility Chapter classifies the streets around the Project site as: 4-lane Boulevard (40th Avenue) and 2-Lane Collectors with Median or Center Left-Turn Lane (Jefferson Street, Madison Street and 38th Avenue). 40th Avenue is currently configured with 1 automobile lane and 1 bicycle lane in each direction and a center left-turn lane.

The proposed vehicular entries to the community would be gated as shown on **Figure 4: Conceptual Vehicle Circulation Plan**. The primary entry on 40th Avenue will be configured as either a conventional intersection or, alternatively, as a roundabout. Pedestrian, bicycle, and golf cart crossings of 40th Avenue would be accommodated into the proposed conventional intersection or roundabout designs for the primary entry at appropriate locations. Secondary gated entries on Madison Street and 38th Avenue are also proposed.

The internal system of private roads will allow residents to access the private recreational facility without leaving the site.

Utility Infrastructure

Water and sanitary sewer service will be provided by the Coachella Valley Water District (CVWD). Connection to an existing 12-inch sewer main at the southeast corner of the Project site is proposed. An 18-inch water line in Jefferson Street, an 18-inch water line in 40th Avenue, and an 8-inch water line in 38th Avenue are proposed to be looped through the site with connections at 38th and 40th Avenues to provide water service. The sewer and water infrastructure improvements are expected to include excavation, trenching and pipeline installation work within the existing public rights-of-way in the Project vicinity, as well as installation of on-site improvements during the land development phase of Project construction. CVWD will perform modeling studies to determine the final scope of water and sewer improvements required for the Project.

Electricity will be provided by the Imperial Irrigation District (IID). Existing electrical distribution facilities are on all adjacent streets. IID has indicated that an additional sub-station may be necessary to adequately serve the Project.

Project Actions

The applicant is requesting approval of the following discretionary actions by the City:

- Adoption of Desert Retreat Specific Plan: The Specific Plan will guide development within the Specific Plan Area, regulate land uses, define circulation and utility systems to support the allowed uses, and identify development standards and design guidelines.
- Tentative Tract Maps (TTM): The Project calls for (i) a large-lot tentative map to facilitate the subdivision of the property into large parcels for acquisition and/or financing, as well as definition of the primary circulation and utility improvements, and (2) a tentative tract map to facilitate the subdivision of the property into residential and common area lots.
- Design Review Approvals: Approval of a design review by the City addressing design of the Project is requested.
- Development Agreement: Approval of a development agreement between the City and Pulte Group addressing implementation of the Project is requested.

In addition, the applicant and City are considering the preparation and approval of a statutory development agreement to strengthen the public planning process by providing additional certainty with respect to the applicant's ability to complete the development process under the rules and regulations in effect at the time of project approval, as well as providing greater flexibility for the City to ensure that the project promotes the City's planning goals and provides public benefits.

Subsequent actions associated with implementation of the proposed Project are anticipated to include Final Tract Maps and Development Plan Permits as required by the Specific Plan.

8. Surrounding Land Uses and Setting:

North: Talavera Community (Westwick Street) and CVWD Water Reclamation Plant 7 (38th Avenue and Madison Street).

East: Sun City Shadow Hills Community (80-814 Sun City Boulevard).

South: Sun City Shadow Hills Community (80-814 Sun City Boulevard).

West: Shadow Hills High School (39-225 Jefferson Street), residential uses and vacant land.

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

CVWD will approve a Sewer and Water Service Agreement.

IID will approve all electrical infrastructure required to serve the project.

10. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code Section (PRC) 21080.3.1 (b,c)?

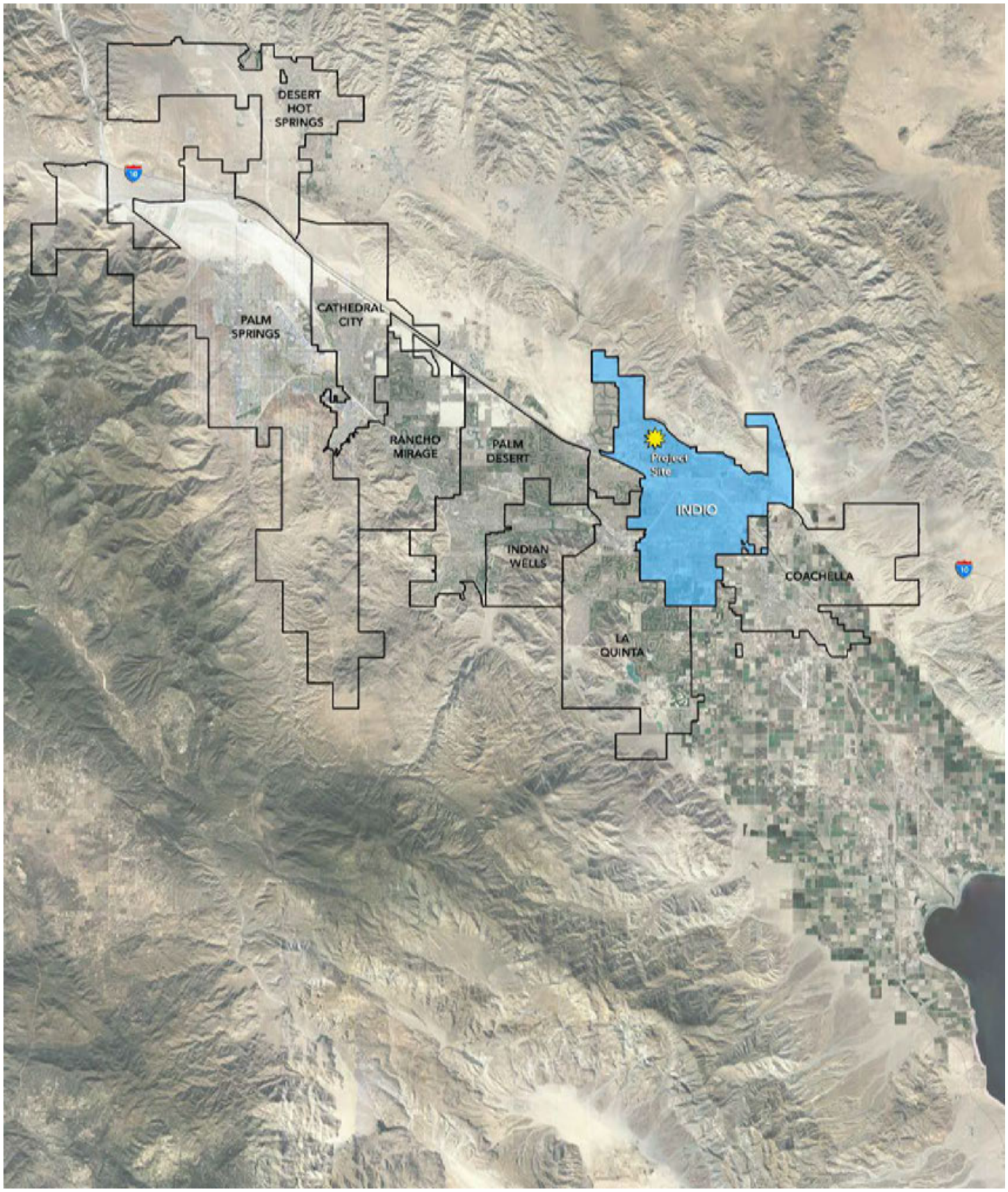
Not as of the date of this Initial Study but the City will provide formal notification of this proposed Project to Native American tribes that have requested project notifications from the City pursuant to PRC 21080.3.1 (b).

In addition, the City will provide notification to tribes identified by the Native American Heritage Commission (NAHC) of the opportunity to consult pursuant to California Government Code Section 65352.

If so, has consultation begun?

Formal consultation has not begun, but in connection with the cultural resources and Tribal cultural resources studies for the EIR, the project archaeologist has contacted the Tribes traditionally and culturally affiliated with the project site and is coordinating Tribal monitoring of all on-site survey work, as requested by those Tribes.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and Project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 20803.3.2) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office Historical Preservation. Please also note that PRC Section 20892.3(c) contains provisions specific to confidentiality.



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20

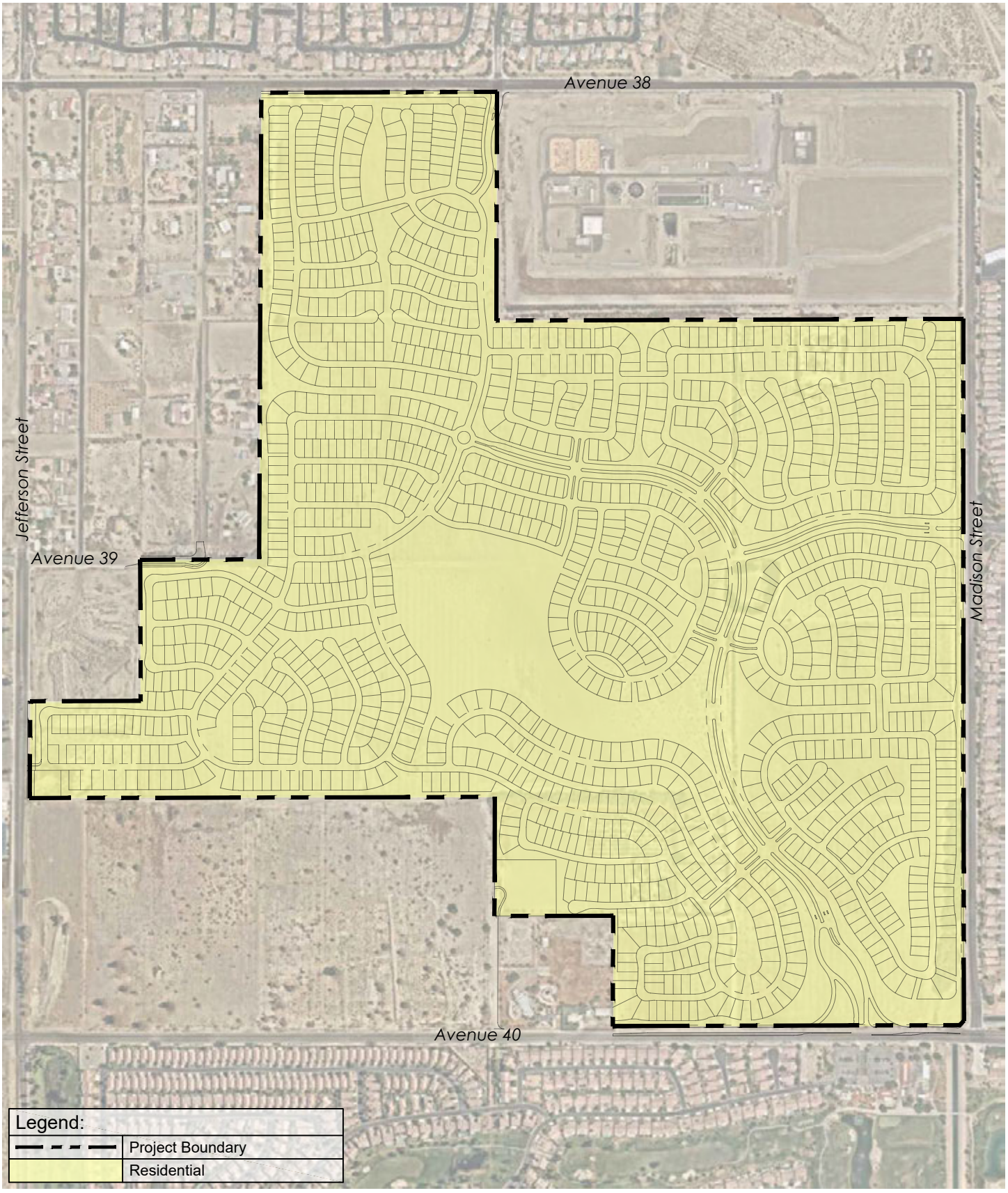
SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20



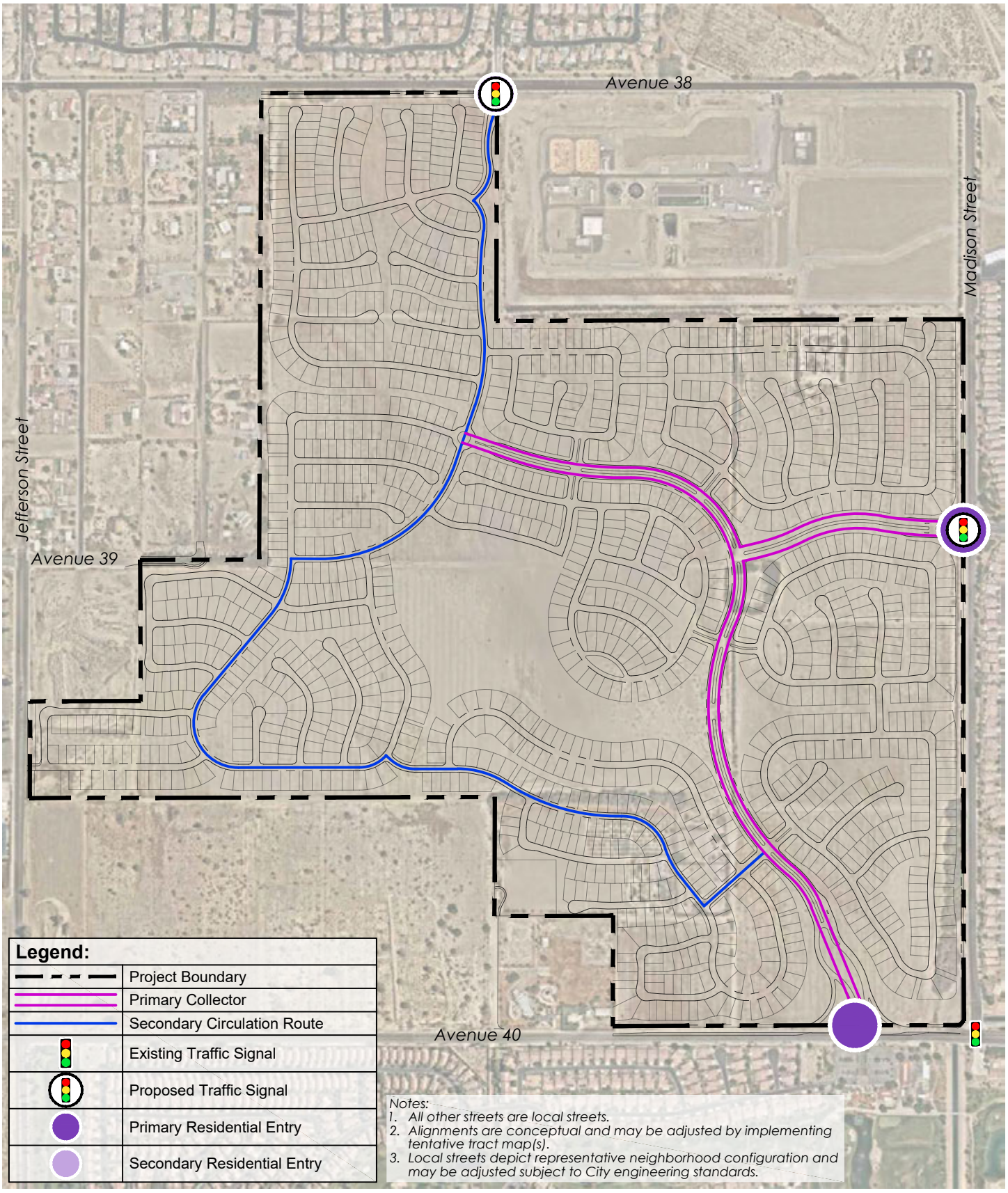
SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **3**

INDIO

Land Use Map

044-002-20



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **4**

INDIO

Conceptual Vehicle Circulation Plan

044-002-20

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☒	Agriculture and Forestry	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Energy Resources
☒	Greenhouse Gas Emissions	☒	Geology/Soils	☐	Hazards and Hazardous Materials
☒	Hydrology/Water Quality	☒	Land Use Planning	☐	Mineral Resources
☒	Noise	☒	Population and Housing	☒	Public Services
☒	Recreation	☒	Transportation and Traffic	☒	Tribal Cultural Resources
☒	Utilities and Service Systems	☒	Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☒	I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Kevin H. Snyder
Lead Agency Signature

07/15/2022
Date

Kevin H. Snyder, AICP, Director of Community Development
Printed Name

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration, Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and

    b. the mitigation measure identified, if any, to reduce the impact to less than significant.

1. Aesthetics

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Findings of Fact: The approximately 377-acre Project Site consists of vacant, undeveloped land that has been subject to a variety of previous disturbance, including historic agricultural activities and recent disking. There are no identified scenic vistas in the City.[1] Views of the San Jacinto and Santa Rosa Mountains to the west and south and the Little San Bernardino Mountains to the north are available from the site and surrounding area.[2] The proposed residential development would be similar in scale and character to the existing Sun City Shadow Hills Community located immediately east and south of the Project Site and would not obstruct available public views available from streets in the area to any greater degree than this existing development. For these reasons, impacts would be less than significant.

Further Study: No further study required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☒	☐

Findings of Fact: The Project Site is located approximately 4.5 miles north of California State Route (SR) 111,[3] which is an eligible State scenic highway without official designation.[4] The nearest officially designated State scenic highway is US Route 62, approximately 25 miles to the northwest. The Project Site is flat and vacant with minimal vegetation as a result of the historic agricultural activities and recent disking. There are no trees, rock outcroppings, historic buildings, or other scenic resources on the Project Site. Impacts would be less than significant.

Further Study: No further study required.

1 City of Indio General Plan Update EIR Page 4.1-6-4.1-7.

2 City of Indio General Plan Update EIR Page 4.1-2, available at https://www.indio.org/your_government/development_services/gp2040/environmental_impact_report.htm.

3 Google Maps accessed May 2022, maps.google.com.

4 Department of Transportation, "California Scenic Highway Mapping System," accessed June 2018, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

c. In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

Findings of Fact: Surrounding land uses include single-family residential to the north; single-family residential and a golf course to the east and south; and Shadow Hills High School and single-family residential and vacant land to the west.

The Project Site is flat and vacant with minimal vegetation. The Specific Plan would permit development of single-family residential homes with recreational and community uses in the center of the Project Site. The proposed Project would change the existing visual character of the site by allowing the development of a residential community. The proposed residential development would be similar in scale and character to the existing Sun City Shadow Hills Community located immediately east and south of the Project Site While the visual character of the Project Site would change with implementation of the proposed Project, this change would be consistent with existing surroundings. The Project would not substantially degrade the existing visual quality of the site or the surrounding area, and the impacts of the Project would be less than significant.

Further study: No further study required.

d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Findings of Fact: Existing sources of light in the area include light from the residential uses east of the Project Site across Madison Street, south across 40th Avenue, and north across 38th Avenue. Another source of nighttime light in the area includes the high school to the west and vehicle traffic on the streets surrounding the site.

Future development of the Project Site will introduce new sources of light typical of residential neighborhoods in the area. Although new sources of light would occur throughout the Project Site with new development, they would be consistent with existing surroundings, and would not be adversely affect day or nighttime views. The proposed Project would adhere to applicable City policies and regulations, including requiring shielding of lighting fixtures to prevent spillover onto surrounding properties. The Project would not create a new source of substantial light or glare and the impacts of the Project would be less than significant.

Further Study: No further study required.

2. Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☒	☐	☐	☐

Findings of Fact: Portions of the Project Site are designated as Prime Farmland on the 2018 Important Farmland Map prepared by the California Department of Conservation, Farmland Mapping and Monitoring Program.[5] To qualify as Prime Farmland, the land must have been used for irrigated agricultural production at some time during the four years prior to the date of the Important Farmland Map and the soils must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the USDA Natural Resources Conservation Service (NRCS).[6] The City's General Plan Update EIR (2019) identifies the site as fallow and for this reason, the Project Site may no longer meet the criteria to qualify as Prime Farmland.

The land surrounding the Project Site on the north, southeast, and west is primarily designated as Urban and Built-Up Land with small areas designated as Farmland of Local Importance to the south and Other Land to the south and west. While the site is not being actively used for agriculture, implementation of the Project would result in the permanent conversion of land currently identified as Prime Farmland to nonagricultural use.

Further Study: The significance of the conversion of the site to nonagricultural use will be evaluated in the Draft EIR.

5 California Department of Conservation (DOC), Division of Land Resource Protection, California Important Farmland Finder (2018), interactive map, accessed May 2022, https://maps.conservation.ca.gov/dlrp/ciff/.

6 California Department of Conservation (DOC), Division of Land Resource Protection, Prime Farmland and Farmland of Statewide Importance, accessed May 2022, https://www.conservation.ca.gov/dlrp/fmmp/Pages/prime_farmland_fmmp.aspx.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

Findings of Fact: The Project Site General Plan and Zoning designation is Suburban Neighborhood (SN; eight dwelling units per acre maximum), Residential Low (RL), and Village Core.[7] The Project Site is not subject to a Williamson Act contract; it is designated as Non-Enrolled by the California Department of Conservation, Conservation Program Support.[8] The land around the site is developed, and none of it is zoned for agriculture or subject to a Williamson Act Contract. No impacts would occur.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

Findings of Fact: As defined by the Public Resources Code Section 12220(g),[9] forestland is land that can support 10 percent native tree cover of any species under natural conditions and that allows for management of one or more forest resources. Given that there is minimal vegetative cover on the Project Site and the site is not zoned as forestland, the Project would not affect any forestlands as defined by the Public Resources Code.

A Timberland Production Zone is defined by the Government Code Section 51104(g)[10] as an area that is zoned for the sole purpose of growing and harvesting timber. Because the Project Site does not contain any timber resources, nor is it zoned as timberland or timberland zoned Timberland Production, the Project would not conflict with timberland or Timberland Production areas. No impacts would occur.

7 City of Indio, General Plan Update, "Land Use Element."

8 California Department of Conservation, Division of Land Resource Protection, Conservation Program Support, "Riverside County Williamson Act FY 2015/2016," Sheet 2 of 3 (2016), ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Riverside_w_15_16_WA.pdf.

9 Public Resources Code (PRC), sec. 12220(g).

10 PRC, sec. 51104(g).

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒

Findings of Fact: As previously discussed, the Project Site is not defined as having forestland as defined in Public Resources Code Section 12220(g). Additionally, there is no forestland located in or near the Project Site. The Project would not result in the loss of forestland or result in the conversion of forestland to nonforest uses. No impacts would occur.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use, or conversion of forestland to non-forest use?	☒	☐	☐	☐

Findings of Fact: The Project Site is currently designated as Prime Farmland by the California Department of Conservation, Farmland Mapping and Monitoring Program, which mapping has not been updated since 2018.[11] The land surrounding the Project Site is designated as Urban and Built-Up Land to the immediate north, southeast, and west with minor additional areas designated as Farmland of Local Importance to the south and Other Land to the south and west. However, no areas within the City are designated or zoned for agricultural use, and the City's General Plan Update EIR (2019) identifies the site as fallow and, for this reason, the Project Site may no longer meet the criteria to qualify as Prime Farmland.[12]

Further Study: The potential of the Project to convert farmland to a nonagricultural use will be examined in the Draft EIR.

11 California Department of Conservation (DOC), Division of Land Resource Protection, California Important Farmland Finder (2018), interactive map, accessed May 2022, https://maps.conservation.ca.gov/dlrp/ciff/.

12 City of Indio General Plan Update EIR (2019), Figure 4.2-2—4.2-3.

3. Air Quality

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐

Findings of Fact: The Project Site lies within the Salton Sea Air Basin, which includes the Coachella Valley portion of the County of Riverside and the entire County of Imperial. The Salton Sea Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), is currently designated as being in nonattainment of federal air quality standards for 8-hour ozone and particulate matter (PM2.5, PM10), and as unclassified for the federal sulfur dioxide standard. The Air Basin is currently designated as being nonattainment of State air quality standards for ozone, PM2.5, and PM10, and as unclassified for State hydrogen sulfide and visibility-reducing particles standards. Areas where air pollution levels persistently exceed the State or national ambient air quality standards may be designated as nonattainment.

The Project would involve the development of a 377-acre site with up to 1,500 residential units. Construction and operation of the Project will result in an increase in stationary- and mobile-source air emissions associated with typical construction methods and required operational activities associated with residential development and land uses.

Further Study: Construction and operational air emissions will be quantified using the SCAQMD CalEEMod land use emissions computer model and will be reviewed in relation to SCAQMD significance thresholds in the Draft EIR to determine the significance of these emissions.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐

Findings of Fact: Construction and operation of the proposed Project will result in the generation of air emissions. The Air Basin is currently in nonattainment of federal air quality standards for 8-hour ozone and particulate matter (PM2.5, PM10); unclassified for the federal sulfur dioxide standard; in nonattainment of State ozone, PM2.5, and PM10 standards; and unclassified for State hydrogen sulfide and visibility-reducing particles standards. Trenching, paving, and other activities associated with the construction of the Project have the potential to emit diesel particulates typical of construction activity.

Ongoing operations at the Project Site also have the potential to increase the emission of the specific pollutants mentioned above, including those for which the Air Basin is already in nonattainment of federal and state air quality standards. Implementation of the proposed Project could potentially contribute to air quality impacts that may also be cumulatively considerable with other related projects.

Further Study: The Draft EIR will examine the potential for Project-related emissions of criteria pollutants for which the Project area is currently in nonattainment and existing nonattainment status of the Coachella Valley.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

Findings of Fact: There are existing residential uses surrounding the Project Site that would be sensitive to pollutant concentrations. Construction of the Project will generate pollutants. The potential concentrations of these pollutants have not been determined at this time.

Further Study: Construction pollutant concentrations will be quantified using the SCAQMD CalEEMod land use emissions computer model and will be reviewed in relation to SCAQMD significance thresholds in the Draft EIR to determine the significance of these pollutant concentrations.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

Findings of Fact: There are existing residential uses surrounding the Project Site that would be sensitive to odors. Construction of the Project has the potential to expose sensitive receptors to odors associated with construction. The proposed residential uses do not represent a potential source of odors or other emissions with the potential to affect residents located near the Project Site.

Further Study: The potential for construction of the Project to generate odors that could adversely affect existing residential uses around the site will be examined in the Draft EIR.

4. Biological Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐

Findings of Fact: The Project Site is located adjacent to existing residential communities on the south and east and undeveloped land to the northeast. The City of Indio is a participant in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) and is a co-permittee for the permits issued in association with this plan. This plan was prepared for the Coachella Valley and surrounding mountains to address current and potential future State and federal Endangered Species Act issues in the plan area. The goal of the CVMSHCP is to continue to protect natural resources within the plan area by managing such resources and land uses that impact them, and to provide consistency and streamline permitting requirements with respect to protected species in the plan area. The Project Site is not located in an area designated for conservation in the CVMSHCP.

The site has been disturbed by historic agricultural activity and disking to control weed growth, and has limited potential to support native habitat. The surrounding development has also eliminated natural plant communities from the immediate area surrounding the Project Site. Due to history of disturbance of the site for agricultural activities and weed control, no native plant communities are expected to be present on the site. While the site is not expected to contain intact native plant communities, based on its location, the site may have a potential to support special-status wildlife species known to be present in the area.

Further Study: A biological resources study for the Project Site will be prepared to determine the potential for impacts to sensitive plant or wildlife species, and to evaluate the consistency of the Project with applicable goals and objectives of the CVMSHCP. Information from this study will be incorporated into the Draft EIR to assess the potential for significant impacts.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒

Findings of Fact: The Project Site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional by the Corps, Regional Board, or CDFW, nor does it contain any other sensitive natural community identified in any local or regional plans, policies, or regulations.

Further Study: No further study needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Findings of Fact: The Project Site does not contain any federally protected wetlands or water features as defined by Section 404 of the Clean Water Act.[13] No impacts would occur.

Further Study: No further study is needed.

13 City of Indio General Plan Update EIR (2019), Page 4.4-10.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐

Findings of Fact: The Project Site contains disturbed habitat that may be used by native wildlife species for local movement and nursery sites, but it is surrounded by developed areas and is not part of any identified wildlife corridor.[14]

Further Study: The potential for the site to affect wildlife movement and nursery sites will be examined in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Findings of Fact: The City of Indio is a participant in the CVMSHCP and is a co-permittee for the permits issued in association with this plan. The Project Site is not located in any Conservation Area identified in the CVMSHCP, and the Project will pay the City's Local Development Mitigation Fee (LDMF) collected to implement the CVMSHCP. No other local policies or ordinances protecting biological resources apply to the site. The Project is consistent with the CVMSHCP and, for this reason, no impacts will occur.

Further Study: No further study is needed.

14 City of Indio General Plan Update EIR (2019), Figure 4.4-3.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Findings of Fact: As discussed above, the City of Indio is a participant in the CVMSHCP and is a co-permittee for the permits issued in association with this plan. This plan was prepared for the Coachella Valley and surrounding mountains to address current and potential future State and federal Endangered Species Act issues in the plan area. The goal of the CVMSHCP is to continue to protect natural resources within the plan area by managing such resources and land uses that impact them, and to provide consistency and streamline permitting requirements with respect to protected species in the plan area. The Project Site is not located in any conservation area identified in the CVMSHCP, and the Project will pay the City's LDMF collected to implement the CVMSHCP.

Further Study: The consistency of the proposed Specific Plan with applicable goals and objectives in the CVMSHCP will be evaluated in the Draft EIR for informational purposes.

5. Cultural Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☒	☐	☐	☐

Findings of Fact: The Project Site is vacant and has been disturbed by historic agricultural use. No historic resources have been previously identified on the site. The City's General Plan EIR identifies the site and the surrounding area as having a high sensitivity for historic resources.[15] Unidentified historic resources have the potential to be located below the portion of the site disturbed by past agricultural use. Typically, this plow zone includes the upper 5 feet of soil. As such, there is a possibility that previously unidentified historic resources could be present on the site.

Further Study: A cultural resources survey will be prepared that will determine the potential for intact historical resources. Information from this study will be incorporated into the Draft EIR to assess the potential for significant impacts.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐

Findings of Fact: The Project Site has never been developed and is disturbed from historic agricultural use. The City's General Plan EIR identifies the site and the surrounding area as having a high sensitivity for archaeological resources.[16] Unidentified archaeological resources have the potential to be located below the portion of the site disturbed by past agricultural use. As such, there is a potential to encounter subsurface archaeological resources during grading and construction of the Project.

Further Study: A cultural resources survey will be prepared that will determine the potential for intact archaeological deposits. Information from this study will be incorporated into the Draft EIR to assess the potential for significant impacts.

15 City of Indio General Plan Update EIR (2019), Figure 4.5-1.

16 City of Indio General Plan Update EIR (2019), Figure 4.5-1.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☒	☐	☐	☐

Findings of Fact: Human remains are not expected on the Project Site. However, because only the upper portion of the site has been disturbed by agricultural activity, there is the potential for discovering subsurface remains during grading and construction activities.

Further Study: A cultural resources survey will be prepared that will determine the potential for human remains to be discovered. Information from this study will be incorporated into the Draft EIR to assess the potential significant impacts.

6. Energy

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

Findings of Fact: The proposed Project would develop approximately 377 acres of previously undeveloped land with residential uses and would increase the demand for energy resources including electricity and natural gas, and fuel for vehicles used by residents and their guests. The proposed residential development would meet all applicable energy conservation standards and should not result in the wasteful, inefficient, or unnecessary consumption of energy resources for this reason.

Further Study: The Project's energy consumption and compliance with existing energy standards will be evaluated in the Draft EIR to assess the potential for significant impacts.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

Findings of Fact: The proposed residential development would meet all applicable energy conservation standards. The City's Climate Action Plan (CAP) is a tool used to identify the sources of emissions in the community, including emissions from energy use, and the necessary steps to reduce emissions. The CAP also establishes citywide GHG reduction targets for 2030 and 2040 which represent the City's contribution to the State's effort to reduce GHG emissions.

Further Study: The consistency of the proposed Project with the goals, objectives, and policies in the Indio CAP will be evaluated in the Draft EIR to assess the potential for significant impacts.

7. Geology and Soils

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☒	☐	☐	☐
ii. Strong seismic ground shaking?	☒	☐	☐	☐
iii. Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv. Landslides?	☒	☐	☐	☐

Findings of Fact: The Project Site is located in a seismically active area of Southern California. Numerous faults and fault zones, including the San Andreas Fault Zone, are located throughout the Coachella Valley.[17] There is a potential for adverse effects from seismic events.

Further Study: The potential for earthquake-related environmental hazards will be further evaluated in the Draft EIR. A summary of applicable policies pertaining to grading, excavation, and related activities, including those set forth by the California Building Code and the California Geological Survey, will be discussed. The potential for development of the proposed Project to expose people or structures to potentially substantial adverse effects from local and regional seismic events—including impacts associated with fault rupture, strong ground shaking, or seismically induced ground failure, such as liquefaction—and likely source(s) of such impacts will be identified.

17 California Institute of Technology, Southern California Earthquake Data Center, "Significant Earthquakes and Faults," accessed June 2018, http://scedc.caltech.edu/significant/.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐

Findings of Fact: The Project Site contains sandy soils and the Coachella Valley experiences strong winds. Earthmoving activities associated with Project construction will further disturb soils, potentially leading to erosion and/or the loss of topsoil.

Further Study: The potential for the Project to affect soil erosion will be further analyzed in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐

Findings of Fact: Landslide risks generally occur within mountainous or hilly terrain where steep slopes are present. The Project is located on a flat site and its location in the relatively flat Coachella Valley ensures that the site is not at risk of landslides. Lateral spreading, subsidence, liquefaction, and soil collapse are geologic phenomena associated with seismic activity. The Project Site is located in seismically active Southern California.[18]

Further Study: A geotechnical study of the site will be prepared, and the findings of this study will be incorporated in the Draft EIR. Based on the local soil characteristics and related site stability conditions, the ability of the site to support the proposed structures and infrastructure will be evaluated to determine potential impacts and appropriate mitigation measures.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

18 City of Indio, General Plan 2040, "Safety Element," 4-6.

Findings of Fact: Expansive soils are characterized as fine-grained, such as silts and clays, or soils with variable amounts of expansive clay minerals that can change in volume due to changes in water content. Collapsible soils typically occur in recently deposited soils that tend to be drier and more granular.

The Project Site consists of alluvium soil deposits that do not contain silts and clays.[19] Impacts would be less than significant.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Findings of Fact: The Project Site will be connected to the existing sewer system serving the area. Use of septic tanks or alternative wastewater disposal systems are not proposed. No impacts would occur.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

Findings of Fact: The Project Site is vacant and the upper portion has been disturbed by historic agricultural use of the site, and paleontological resources have not been previously identified on the site. However, the proposed Project Site is located in an area identified as having a high potential for sensitive paleontological resources and paleontological resources have the potential to be present below the disturbed portion of the site.[20] For this reason, there is a potential to encounter subsurface paleontological resources during grading and construction of the Project.

Further Study: A cultural resources survey will be prepared that will determine the potential for intact paleontological deposits. Information from this study will be incorporated into the Draft EIR to assess the potential for significant impacts.

19 City of Indio General Plan Update EIR (2019), Pages 4.6-6.

20 City of Indio General Plan Update EIR (2019), Figure 4.5-3.

8. Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐

Findings of Fact: The Project will include the development of up to 1,500 residential units. Construction and operation of the Project will create greenhouse gas emissions.

Further Study: A quantified estimate of greenhouse gas emissions (GHG) emissions from the construction and occupancy and use of the Project will be generated using the SCAQMD CalEEMod land use emissions computer model. This estimate will include emissions of CO2, methane, and other select GHGs converted to carbon dioxide equivalents (CO2e) associated with development of the Project. The significance of these emissions will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Findings of Fact: The City of Indio has adopted a Climate Action Plan that addresses reducing GHG emissions in the City. The Southern California Association of Governments (SCAG) has adopted plans that relate to GHG emissions including the 2020-2045 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS).

Further Study: A quantified estimate of GHG emissions from the construction and occupancy and use of the new planned facilities will be generated using the SCAQMD CalEEMod land use emissions computer model. This estimate will include emissions of CO2, methane, and other select GHGs converted to CO2e associated with development of the Project. The consistency of the Project with local, regional, state plans, policies, and regulations adopted for the purpose of reducing GHG emissions will be analyzed in the Draft EIR.

9. Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Findings of Fact: The Project Site is located in the northwest portion of the City of Indio and is adjacent to existing residential development on the south, north, and east sides and a school to the west. The proposed residential uses will not involve the transport, use, and disposal of hazardous materials. No hazardous materials other than modest amounts of typical cleaning supplies and solvents used for residential housekeeping would be present at the Project site, and use of these substances would comply with Health and Safety Code Section 25501(o).

The construction of the proposed residential community will only involve the transport, use, and disposal of hazardous materials typically associated with grading and construction of site improvements and homes in accordance with City regulation. As a result, potential impacts are less than significant as neither the public nor the environment would be put at risk by standard residential construction practices as they relate to hazardous materials. Impacts would be less than significant.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Findings of Fact: As discussed above, construction of the proposed residential community will only involve the transport, use, and disposal of hazardous materials typically associated with grading and construction of site improvements and homes, and residential uses do not involve the use and handling of hazardous materials. Given that no hazardous materials would be associated with the proposed residential uses, it is not expected that Project implementation would create a significant hazard to the public or environment. Impacts would be less than significant.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

Findings of Fact: Shadow Hills High School is located immediately west of the Project Site across Jefferson Street. The construction of the proposed residential community will only involve the transport, use, and disposal of hazardous materials typically associated with grading and construction of site improvements and homes in accordance with City regulation. The proposed residential uses will not involve the handling of hazardous substances or emit hazardous emissions. As a result, potential impacts are less than significant as the Project would not involve the handling of hazardous substances or emit hazardous emissions within one-quarter mile of an existing or proposed school.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

Findings of Fact: Significant impacts would occur if the Project Site were included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Based on database review, the site is not included on any of these hazardous materials site lists.[21] Impacts would be less than significant.

Further Study: No further study is needed.

21 California Department of Toxic Substances Control, EnviroStor, accessed May 2022, https://www.envirostor.dtsc.ca.gov/public/.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒

Findings of Fact: The closest airport to the Project Site is Bermuda Dunes Airport, a privately owned public use airport, located approximately 2.4 miles to the southwest. The Project Site is located within Bermuda Dunes Airport Land Use Compatibility Plan (ALUCP) Compatibility Zone E (other airport environs).[22] The only use restriction in Compatibility Zone E is that structures need to be less than 100 feet in height to avoid creating a hazard to flight.[23] The Project will construct single-story residential homes less than 100 feet in height and would not create a hazard to flights or require review by the Airport Land Use Commission.[24] The Project Site is not located within the Bermuda Dunes Airport noise contours.[25] As such, the location of the Project would not result in a safety hazard or excessive noise for residents or employees in the Project area. No impacts would occur.

Further Study: No further study is needed.

22 City of Indio General Plan Update EIR (2019), Figure 4.8-3.

23 Riverside County Airport Land Use Compatibility Plan Policy Document, Chapter 2 Countywide Policies, Table 2A Basic Compatibility Criteria.

24 Riverside County Airport Land Use Compatibility Plan Policy Document, Chapter 2 Countywide Policies, Page 2-29.

25 City of Indio General Plan Update EIR (2019), Figure 4.12-2.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Findings of Fact: Construction of the Project could require partial closures of portions of Jefferson Street, 40th Avenue, Madison Street, and 38th Avenue for short periods. Any partial closure of these roads would be temporary, would not occur simultaneously, and would be conducted in accordance with a construction management plan and under the supervision of construction personnel. The City has developed emergency operations plan to guide response to emergency situations.[26] Impacts on emergency evacuation south toward Interstate 10 would be less than significant.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

Findings of Fact: According to the City of Indio General Plan Update EIR,[27] the Project Site and surrounding locations would not be affected by wildfires. Furthermore, the Project Site and surrounding locations are not in a Fire Hazard Severity Zone.[28] No impacts would occur.

Further Study: No further study is needed.

26 City of Indio General Plan Update EIR (2019), Pages 4.8-6—4.8-7.

27 City of Indio General Plan Update EIR (2019), Page 7-2.

28 Fire Hazard Severity Zones Maps, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ accessed May 2022.

10. Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Violate any water quality standards or waste discharge requirements or otherwise degrade surface or ground water quality?	☒	☐	☐	☐

Findings of Fact: The regulatory programs administered by the Colorado River Basin Regional Water Quality Control Board (RWQCB) are designed to minimize and control discharges to surface and groundwater within the region, largely through permitting, to ensure that water quality standards are maintained. The Project Site is located in the Whitewater River Region of the Colorado River Basin. The City of Indio is co-permittee on permits issued by the RWQCB to the Riverside County Flood Control & Water Conservation District and County of Riverside. In accordance with these permits, the Project will comply with National Pollutant Discharge Elimination System (NPDES) requirements during construction and operations, including preparing and implementing of a Storm Water Pollution Prevention Plan (SWPPP) during construction.

The proposed Specific Plan will include grading and drainage master plans. The Project will allow the development of residential uses on the Project Site, which is currently undeveloped. The Project will be required to comply with the requirements of the NPDES General Construction Permit and Municipal Separate Storm Sewer System Permit, approved by the RWQCB to control urban runoff by incorporating effective Best Management Practices (BMPs) water quality control features into the design of the drainage system for the Project Site. No aspect of the proposed Project is expected to substantially degrade water quality.

Further Study: The consistency of the drainage master plan with applicable water quality permit standards; and the design, operation, and maintenance of the proposed project and any potential effects on water quality will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐

Findings of Fact: The Coachella Valley Water District (CVWD) provides water to the City of Indio for residents within the Project Site and surrounding area. CVWD's water supplies include local groundwater in the Indio Subbasin and imported water from the Colorado River and California State Water Project. As

required by the Sustainable Groundwater Management Act (SGMA) for the Indio Subbasin, four local water agencies formed Groundwater Sustainability Agencies (GSAs): CVWD, Coachella Water Authority (CWA), Desert Water Agency (DWA), and Indio Water Authority (IWA). In 2016, the Indio Subbasin GSAs entered into a Memorandum of Understanding for collaborative management of the Indio Subbasin under SGMA. In December 2016, the Indio Subbasin GSAs submitted the 2010 Coachella Valley Water Management Plan (CVWMAP), accompanied by a 2016 Bridge Document prepared by the Indio Subbasin GSAs as an Alternative Plan to a Groundwater Sustainability Plan (GSP) for the Indio Subbasin. In July 2019, the State Department of Water Resources approved the 2010 CVWMP Update as an Alternative Plan as allowed by the SGMA. A draft update of this Alternative Plan was completed in September 2021. This Alternative Plan was developed in coordination with other parallel water planning efforts including the 2020 Coachella Valley Regional Urban Water Management Plan.

The Project would allow the development of up to 1,500 dwelling units that would increase demand for domestic water. CVWD will prepare a water supply assessment (WSA) as required by the California Water Code to provide information on the adequacy of available water supplies, including local groundwater resources, to meet the need for water for the Project.

Further Study: The Project water needs and potential impacts on groundwater supplies will be examined in the Draft EIR based on the CVWD WSA and other information.

		Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☒	☐	☐	☐
i)	Result in a substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii)	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☒	☐	☐	☐
iii)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;	☒	☐	☐	☐
iv)	Impede or redirect flood flows?	☒	☐	☐	☐

Findings of Fact: The Project Site contains no stream or river features. The existing drainage patterns within the Project Site would be altered by grading the site in accordance with the master grading plan included in the proposed Specific Plan and there is a potential for erosion or siltation to occur during grading. Preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control

erosion during construction will be required. The proposed Specific Plan will also include a master plan of drainage that will incorporate features to control potential sources of urban pollutants, including erosion and siltation, as required to meet the applicable water quality standards.

The existing drainage patterns within the Project Site would be altered by grading the site in accordance with the master grading plan included in the proposed Specific Plan and the development allowed by the Specific Plan would change the rate and amount of surface runoff generated within the Specific Plan Area.

The Project will be required to meet the City's standard by retaining all stormwater from a 100-year-frequency storm (worst case of the 1-, 3-, 6-, or 24-hour duration) on site via on-site stormwater retention basin(s) or system(s) designed to the satisfaction of the City Engineer. Submittal of a hydrology/hydraulic report, prepared by a registered civil engineer in accordance with the *Riverside County Hydrology Manual,* is required to show how stormwater will be handled. Additionally, a Water Quality Management Plan will be required to be prepared and approved by the City Engineer prior to issuance of any grading permit(s).

The northeast portion of the Project Site is located within a 100-year flood hazard area and the southwest portion of the Project Site is located within a 500-year flood hazard area.[29] The proposed Specific Plan will include Grading and Drainage Master Plans that will result in removing the proposed homes from the floodplain.

Further Study: The consistency of the Master Drainage Plan with applicable water quality permit standards, the changes to drainage patterns and the amount and rate of runoff with the Specific Plan Area that would result from the Project, and the adequacy of the proposed Master Drainage Plan will be evaluated in the Draft EIR.

	Potentially Significant Impact	**Less than Significant with Project Mitigation**	**Less than Significant Impact**	**No Impact**
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Findings of Fact: The proposed Project will generate standard urban pollutants that are typical of residential uses. The Project will be required to comply with the requirements of the NPDES General Construction Permit and Municipal Separate Storm Sewer System Permit, both as approved by the RWQCB to control urban runoff by preparing and implementing a SWPPP during construction, and incorporating effective Best Management Practices (BMPs) water quality control features into the design of the drainage system for the Project Site.

29 City of Indio, *General Plan 2040,* "Chapter 10. Safety," 10-8.

The Project site is not located in a tsunami or seiche zone. The northeast portion of the Project Site is located within a 100-year flood hazard area and the southwest portion of the Project Site is located within a 500-year flood hazard area.[30] The proposed Specific Plan will include Grading and Drainage Master Plans that will result in removing the proposed homes from the floodplain.

Based on these characteristics of the Project, impacts will be less than significant.

Further Study: The adequacy of the proposed Master Drainage Plan will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

Findings of Fact: The Project proposes the development of 1,500 dwelling units throughout the Specific Plan Area and will be served by CVWD. The Project will be required to comply with the requirements of the NPDES General Construction and Municipal Separate Storm Sewer System Permits approved by the RWQCB and, for this reason, would not conflict with the current water quality goals.

As required by the Sustainable Groundwater Management Act (SGMA) for the Indio Subbasin, four local water agencies formed Groundwater Sustainability Agencies (GSAs): CVWD, Coachella Water Authority (CWA), Desert Water Agency (DWA), and Indio Water Authority (IWA). In 2016, the Indio Subbasin GSAs entered into a Memorandum of Understanding for collaborative management of the Indio Subbasin under SGMA. In December 2016, the Indio Subbasin GSAs submitted the 2010 Coachella Valley Water Management Plan (CVWMAP), accompanied by a 2016 Bridge Document prepared by the Indio Subbasin GSAs as an Alternative Plan to a Groundwater Sustainability Plan (GSP) for the Indio Subbasin. In July 2019, the State Department of Water Resources approved the 2010 CVWMP Update as an Alternative Plan as allowed by the SGMA. A draft update of this Alternative Plan was completed in September 2021. This Alternative Plan was developed in coordination with other parallel water planning efforts, including the 2020 Coachella Valley Regional Urban Water Management Plan.

The proposed Project will increase the demand for water resources managed by the CVWD. As discussed above, CVWD will prepare WSA as required by the California Water Code to provide information on the adequacy of available water supplies, including local groundwater resources, to meet the need for water for the Project.

30 City of Indio, *General Plan 2040,* "Chapter 10. Safety," 10-8.

Further Study: The consistency of the Project as proposed with applicable policies, plans, and programs addressing water quality and groundwater management will be evaluated in the Draft EIR.

11. Land Use and Planning

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Physically divide an established community?	☐	☐	☒	☐

Findings of Fact: The Project Site is located in the northwest portion of the City surrounded to the north, east, and south by development with vacant parcels located northeast of the Specific Plan Area. Surrounding uses include residential neighborhoods and golf courses. Shadow Hills High School is located directly west of the central portion of the Specific Plan Area and pockets of residential and vacant parcels further west.

The Specific Plan Area is bordered by connector streets and represents a rural development site in the City in this regard. The City's General Plan designates the site for Suburban Neighborhood (SN) uses which would be consistent with the pattern of surrounding land uses. The Desert Retreat Specific Plan is proposed to implement the City's General Plan. Development of the site with the uses identified in the City's General Plan would not physically divide the established pattern of development around the site. Impacts would be less than significant.

Further study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Cause a significant environmental impact due to a conflict with applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

Findings of Fact: The City of Indio General Plan designates the Project Site as Suburban Neighborhood (SN; eight dwelling units per acre maximum). The Desert Retreat Specific Plan is proposed to implement the City's General Plan. The Project proposes up to 1,500 residential units on the 377-acre Project site, which results in a density of approximately four dwelling units per acre, less than the allowed maximum of eight dwelling units per acre.

Further Study: The consistency of the proposed Specific Plan with the goals, objectives, and policies in the Indio General Plan will be evaluated in the Draft EIR.

12. Mineral Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☒	☐

Findings of Fact: The Coachella Valley, including the surrounding hills and mountains to the north and south of the Project Site, contain known deposits of mineral resources, such as sands and gravel.[31] However, these deposits are found within the entire desert floor and surrounding hills and mountains to the north and south of the Project Site and are not specific or unique to the Project Site. The Project Site is located in Mineral Resource Zone 1 (MRZ-1), which indicates that the potential for the site to contain mineral resources of value to the region are low.[32] There are currently no mines or extraction sites within the City. Impacts would be less than significant.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☒	☐

Findings of Fact: As mentioned previously, the City of Indio General Plan indicates that mineral resources exist within the City's Sphere of Influence but there are currently no mines or extraction sites in the City. Impacts would be less than significant.

Further Study: No further study is needed.

31 City of Indio General Plan Update, "Conservation + Open Space Element," 69.

32 City of Indio General Plan Update EIR (2019), Pages 4.11-3.

13. Noise

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐

Findings of Fact: Construction of the Project, including grading and construction of residential buildings, would generate noise on a temporary basis. After the site is developed, noise levels generated by the residential uses allowed by the Specific Plan would be consistent with the noise levels generated by surrounding residential uses.

Further Study: The potential for noise generated by construction of the proposed residential uses to affect surrounding land uses will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

Findings of Fact: Construction activities can generate varying degrees of ground vibration depending on the construction procedures and construction equipment used. Residential and other noise sensitive uses located around the Specific Plan Area may experience a temporary increase in groundborne vibration and noise. The proposed uses are consistent in character and intensity with surrounding uses, and will not include any facilities or equipment that will generate excessive groundborne vibration or noise levels.

Further Study: Noise monitoring will be conducted on and around the Project Site to determine ambient noise levels. Noise levels generated by construction activities will be estimated for each phase of project development, including grading and site preparation, and building construction. Noise levels will be compared to City of Indio standards to determine whether significant impacts would occur.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Findings of Fact: The Project Site is not within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. The nearest airport to the Project Site is the Bermuda Dunes Airport located approximately 2.4 miles to the southwest. The Project Site is not located within the Bermuda Dunes Airport noise contours.[33] As such, the location of the Project would not result in excessive noise for residents or employees in the Project area. No impacts would occur.

Further Study: No further study is needed.

33 City of Indio General Plan Update EIR (2019), Figure 4.12-2.

14. Population and Housing

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Findings of Fact: The Project proposes development of up to 1,500 homes on a site designated for development of residential uses by the Indio General Plan. The surrounding area is generally developed on the south, north, and east sides of the Project Site. With urban infrastructure available in the streets bordering the Specific Plan Area, the proposed project would not extend roads or other infrastructure, such as water or sewer lines, to any currently unserved areas.

The proposed Project would develop an Active Adult Community. These age restricted households would have a smaller average household size than the rest of the City. While the proposed residential uses would directly result in the population growth in the area, the population growth from the Project is consistent with what is allowed by the current Suburban Neighborhood General Plan designation as analyzed in the City's General Plan EIR. The average household size for the proposed Project and direct population growth will be lower than that forecasted by the City's General Plan EIR. For these reasons, the Project would not result in substantial population growth not anticipated for in the City's General Plan.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Findings of Fact: The Project Site is vacant and the Project would not, therefore, displace any existing housing units or people on the site. No impacts would occur.

Further Study: No further study is needed.

15. Public Services

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?	☒	☐	☐	☐
ii. Police protection?	☒	☐	☐	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☒	☐	☐	☐
v. Other public facilities?	☒	☐	☐	☐

Findings of Fact: The Project would allow the development of up to 1,500 homes, which would increase the demand for public services. As the Project would provide homes for residents aged 55 and above, the Project would not generate additional students that could affect school facilities. The Project will include private recreational facilities, including a pool, tennis and pickleball courts, and community meeting rooms, which will reduce the demand from residents for certain types of park facilities.

Further Study: The need for additional public service facilities to meet the demands generated by the proposed Project will be evaluated in Draft EIR.

16. Recreation

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Findings of Fact: The Project will provide homes for residents aged 55 and above and the resulting smaller household sizes will reduce the demand on existing park facilities. The Project will include the provision of a new private recreation facilities as described above for use by residents and visitors. These facilities will reduce the demand from residents on neighborhood and community park and recreation facilities. Due to the characteristics of the Project, impacts will be less than significant.

Further Study: No further study needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☒	☐	☐	☐

Findings of Fact: The Project will include the construction of a new private recreational facility to serve residents and their guests.

Further Study: The potential impacts from construction of the proposed recreation facilities will be evaluated in the Draft EIR.

17. Transportation and Traffic

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Conflict with an applicable plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐

Findings of Fact: The City has adopted plans, ordinances, and policies addressing the performance of the circulation system in the City. The Riverside County Transportation Commission has also adopted a Congestion Management Program that includes performance standards for major transportation corridors in the County.

The Project would generate traffic during construction and after construction from occupancy of the proposed homes. The traffic generated by the Project could affect the performance of circulation system in the area.

Further Study: A traffic study will be prepared to evaluate the consistency of the Project with applicable transportation plans.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☒	☐	☐	☐

Findings of Fact: CEQA Guidelines Section 15064.3, subdivision (b) states that land use projects that result in vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. CEQA Guidelines Section 15064.3, subdivision (b), also states that transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, as is the Proposed Project, should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

Further Study: A traffic study will be prepared to evaluate the potential significant impacts of the proposed Project on VMT.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐

Findings of Fact: The proposed Specific Plan identifies access points on the surrounding streets at appropriate locations that would not create any hazards and the proposed residential uses are consistent with surrounding uses. The proposed Project may include the construction of a roundabout for the primary entry on 40th Avenue, if approved by the City and Fire Department.

Further Study: The potential for the Project to increase hazards due to the design of the proposed streets and entries will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Result in inadequate emergency access?	☐	☐	☒	☐

Findings of Fact: Access to the Specific Plan Area is proposed from the major streets bordering the site. The proposed Specific Plan would not result in inadequate emergency access to the site and would not impede existing emergency access to the existing surrounding uses. Impacts would be less than significant.

Further Study: No further study is needed.

18. Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☒	☐	☐	☐

Findings of Fact: The Project Site is vacant and has been disturbed by historic agricultural use. No tribal cultural resources have been previously identified on the site. The City's General Plan EIR identifies the site and the surrounding area as having a high potential for sensitive paleontological resources.[34] Unidentified tribal cultural resources have the potential to be located below the portion of the site disturbed by past agricultural use. Typically, this plow zone includes the upper 5 feet of soil. As such, there is a possibility that previously unidentified tribal cultural resources could be present on the site.

On August 4, 2021, the Native American Heritage Commission (NAHC) was contacted, and a Sacred Land Files (SLF) search was requested. A response was received from NAHC on August 30, 2021, stating that the results of the SFL search were negative. However, the absence of specific site information from the SLF does not indicate the absence of tribal cultural resources within the Project area.

Further Study: A cultural resources assessment of the Specific Plan Area will be completed for the Draft EIR and tribal consultation pursuant to Assembly Bill (AB) 52 will be conducted.

34 City of Indio General Plan Update EIR (2019), Figure 4.5-3.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (d) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

Findings of Fact: As discussed above, the Project Site is vacant and has been disturbed by historic agricultural use. No significant tribal cultural resources have been previously identified on the site. The City's General Plan EIR identifies the site and the surrounding area as having a high potential for sensitive paleontological resources.[35] Unidentified significant tribal cultural resources have the potential to be located below the portion of the site disturbed by past agricultural use. Typically, this plow zone includes the upper 5 feet of soil. As such, there is a possibility that previously unidentified significant tribal cultural resources could be present on the site.

Further Study: A tribal consultation process with relevant Native American tribes will be completed for the Specific Plan Area and the Draft EIR.

35 City of Indio General Plan Update EIR (2019), Figure 4.5-3.

19. Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
Would the Project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Findings of Fact: Development of the Project would increase demand for water service, wastewater conveyance, and treatment within CVWD service boundaries, electrical service within IID boundaries, and natural gas services within Southern California Gas Company (SoCal Gas) boundaries that may require additional facilities.

Further Study: The need for additional facilities and an assessment of the potential impacts of constructing these facilities will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐

Findings of Fact:

The Project would allow the development of up to 1,500 dwelling units that would increase demand for domestic water.

As required by Section 15155 of the CEQA Guidelines and the California Water Code, the City has requested that CVWD prepare a water supply assessment (WSA) to provide information on the adequacy of available water supplies, including local groundwater resources, to meet the need for water for the Project.

Further Study: The Draft EIR will evaluate the sufficiency of available water supplies to meet the needs of the proposed Project based on the WSA that will be prepared by CVWD.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐

Findings of Fact:

CVWD provides wastewater treatment services in the City of Indio. The proposed Project will generate wastewater that will be treated at CVWD water reclamation plants.

Further Study: The amount of wastewater that will be generated by the uses that would be allowed by the proposed Specific Plan will be estimated and compared against the available capacity at the CVWD water reclamation plant that will treat this wastewater.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐

Findings of Fact: Burrtec Waste and Recycling Services provides solid waste collection services in the City. Riverside County Waste Management Department (RCWMD) is responsible for the efficient and effective landfill disposal of nonhazardous county waste. Solid waste generated in the City is collected and taken to the Burrtec-operated Indio/Coachella Valley Waste Transfer Station in the City of Coachella before deposit in an area landfill.[36] Construction and operation of the Project would generate additional solid waste materials.

Further Study: The Draft EIR will evaluate the adequacy of current landfill capacity based on an estimate of the amount of solid waste the proposed uses would generate.

36 City of Indio General Plan Update EIR (2019), Pages 4.16-9.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Findings of Fact: The proposed residential uses will generate typical solid waste generated within the City and collected and disposed of at landfills operated by Riverside County, in accordance with applicable regulations. Impacts would be less than significant.

Further Study: No further study is needed.

20. Wildfire

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Findings of Fact: According to the City of Indio General Plan Update EIR,[37] the Project Site and surrounding locations would not be affected by wildfires. The Project Site and surrounding locations are not in a Fire Hazard Severity Zone.[38] Furthermore, the Project would not impair the use of other rights of way. Therefore, adopted emergency response plans or emergency evacuation plans would not be substantially impaired. As such, no impacts would occur.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

Findings of Fact: The Project Site is topographically flat and is not located in or near state responsibility areas, nor lands classified as very high fire hazard severity zones.[39] In addition, the Project Site is not identified by the City as being located within an area susceptible to fire hazards.[40] As such, no impacts would occur.

Further Study: No further study is needed.

37 City of Indio General Plan Update EIR (2019), Page 7-2.

38 Fire Hazard Severity Zones Maps, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ accessed May 2022.

39 Fire Hazard Severity Zones Maps, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ accessed May 2022.

40 City of Indio General Plan Update EIR (2019), Page 7-2.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

Findings of Fact: The Project Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.[41] In addition, the Project Site is not identified by the City as being located within an area susceptible to fire hazards.[42] The Project would utilize existing roadway and utility infrastructure to connect to the proposed residential development. As such, no impacts would occur.

Further Study: No further study is needed.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Findings of Fact: The Project Site is not located in or near state responsibility areas, nor lands classified as very high fire hazard severity zones.[43] In addition, the Project Site is not identified by the City as being located within an area susceptible to fire hazards.[44] The Project site and surrounding areas are located on relatively flat portions of the floor of the Coachella Valley and is not located downslope or downstream of any hillside areas. For these reasons, no impacts will occur.

Further Study: No further study is needed.

41 Fire Hazard Severity Zones Maps, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ accessed May 2022.

42 City of Indio General Plan Update EIR (2019), Page 7-2.

43 Fire Hazard Severity Zones Maps, FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ accessed May 2022.

44 City of Indio General Plan Update EIR (2019), Page 7-2.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
a. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Findings of Fact: As addressed above, the Specific Plan Area consists of 377 acres of undeveloped land. The site has the potential to support sensitive plant and wildlife species, most of which are covered by the CVMSHCP. There is a potential that previously unidentified cultural resources could be present on the site. Biological and cultural resource studies of the Specific Plan Area will be completed and incorporated into the Draft EIR to evaluate the potential significant impacts of the Project on any resources determined to be present within the Specific Plan Area.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
b. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐

Findings of Fact: The construction and operation of the Project, in conjunction with other related projects, has the potential to result in cumulative impacts. This topic will be evaluated in the Draft EIR.

	Potentially Significant Impact	Less than Significant with Project Mitigation	Less than Significant Impact	No Impact
c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Findings of Fact: The proposed uses will be compatible with existing and planned surrounding uses; for this reason, the construction and operation of the proposed Project does not have the potential to result in substantial adverse effects. Impacts would be less than significant.

Notice of Preparation

Draft Environmental Impact Report

Desert Retreat Specific Plan Project

July 18, 2022

From: Kevin Snyder, AICP
Director of Community Development
City of Indio
100 Civic Center Mall
Indio, CA 92201

The City of Indio (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Desert Retreat Specific Plan Project (Project). The Project description and location, as well as the potential environmental effects proposed for study in the Draft EIR, are contained in the attached Initial Study. The Specific Plan is proposed to implement the City's General Plan for the approximate 377-acre site by allowing development of a master-planned residential community with recreation amenities and a multi-use trail system fostering connectivity with the surrounding communities. The proposed Specific Plan would allow development of up to 1,500 age-restricted active adult residential units.

The City needs to know the views of your agency as to the scope and content of the environmental information relevant to your agency's responsibilities in connection with the proposed Project. Your agency may need to use the EIR prepared by the City when considering any permits or other approvals for this Project. Comments are also invited from all other interested parties.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting will be held on **July 28, 2022,** from **6:30 p.m.** to **8:00 p.m.** at **Shadow Hills High School** in Indio to provide an opportunity to learn more about this proposed Project and provide comments on the possible environmental effects the City should study in the EIR.

Please send your response to Kevin Snyder, the City's Community Development Director, at the address shown above. Please include the name, address, and other contact information for an agency representative who should receive future notices and correspondence related to this Project.

Documents Available For Public Review: The Notice of Preparation (NOP) and Initial Study are available for public review online at: https://www.indio.org/your_government/development_services/hearing_notices.htm. Physical copies are located at Indio City Hall and Indio Public Library.

Thank you for participating in the City's environmental review of this proposed Project.

Signature: Kevin H. Snyder

Kevin Snyder, AICP
Title: Director of Community Development
Telephone: (760) 541-4255/Email: ksnyder@indio.org

APPENDIX B

Desert Retreat Specific Plan

DESERT RETREAT SPECIFIC PLAN

August 2022

Prepared For:
City of Indio

Applicant:
Pulte Home Company, LLC

Prepared By:
MSA Consulting, Inc.

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CHAPTER I: INTRODUCTION & SETTING

1.1 Executive Summary

The Desert Retreat Specific Plan (Specific Plan or SP) is a proposed 378 acre active-adult community located on the northwest corner of Madison Street and 40th Avenue within the corporate limits of the City of Indio, California. The SP sets forth a comprehensive vision for the project and will establish site-specific development standards, land use regulations, and programs to guide the development of the property in a manner that is consistent with the City of Indio General Plan while also maintaining flexibility to respond to changing conditions that factor in any long-term development. This SP implements all applicable elements of the General Plan and includes detailed information about the site's master plan and infrastructure improvements such as circulation, water, sewer, grading and drainage design. The Specific Plan is organized in five chapters, as described below:

Chapter 1, Introduction & Setting: This section provides an overview of the document, the project setting and history, legislative authority for the Specific Plan, entitlement process and other contextual information.

Chapter 2, Master Plan and Infrastructure: This section describes the primary master plan components required for further development of the property. These include land use, circulation, open space and recreation, water and sewer, and grading and drainage.

Chapter 3, Development Standards: This section establishes the allowable uses and development standards applicable within the Specific Plan area.

Chapter 4, Design Guidelines: This section establishes the design guidelines applicable within the Specific Plan area.

Chapter 5, Plan Administration: This section describes the various processes and procedures used to administer and implement the adopted Specific Plan.

1.2 Purpose and Intent

This SP is intended to guide future development and use of land within the Desert Retreat Specific Plan boundary, including the establishment of site-specific development standards and regulations. The Specific Plan is intended to ensure quality development consistent with the goals, objectives, and policies of the City of Indio General Plan.

This Specific Plan defines the location, type and amount of development allowed within the Specific Plan area consistent with the requirements for Specific Plans identified in State Planning and Land Use Law and City of Indio Municipal Code (IMC). It will also establish standards intended to allow the project to respond to market conditions.

This document has been prepared pursuant to California Government Code Section 65450, which grants local governments the authority to prepare specific plans as a systematic means of implementing their General Plan. California Government Code Sections 65450 through 65454 establishes the authority to adopt a Specific Plan, identifies the required contents of a Specific Plan, and mandates consistency with the General Plan.

1.3 Project Location & Site Characteristics

As shown on Figure 1.1, *Regional Location Map*, the Desert Retreat Specific Plan (Specific Plan) is situated in the eastern portion of the Coachella Valley within the City of Indio at the northwest corner of Madison St and 40th Ave. The Specific Plan area totals approximately 378 acres and includes APNs 691-110-002, 003, 004, 008, 011, 014, 021, 023, 025. Figure 1.2, *Local Vicinity Map*, depicts the physical setting of the property. Surrounding land uses are listed below in Table 1.1.

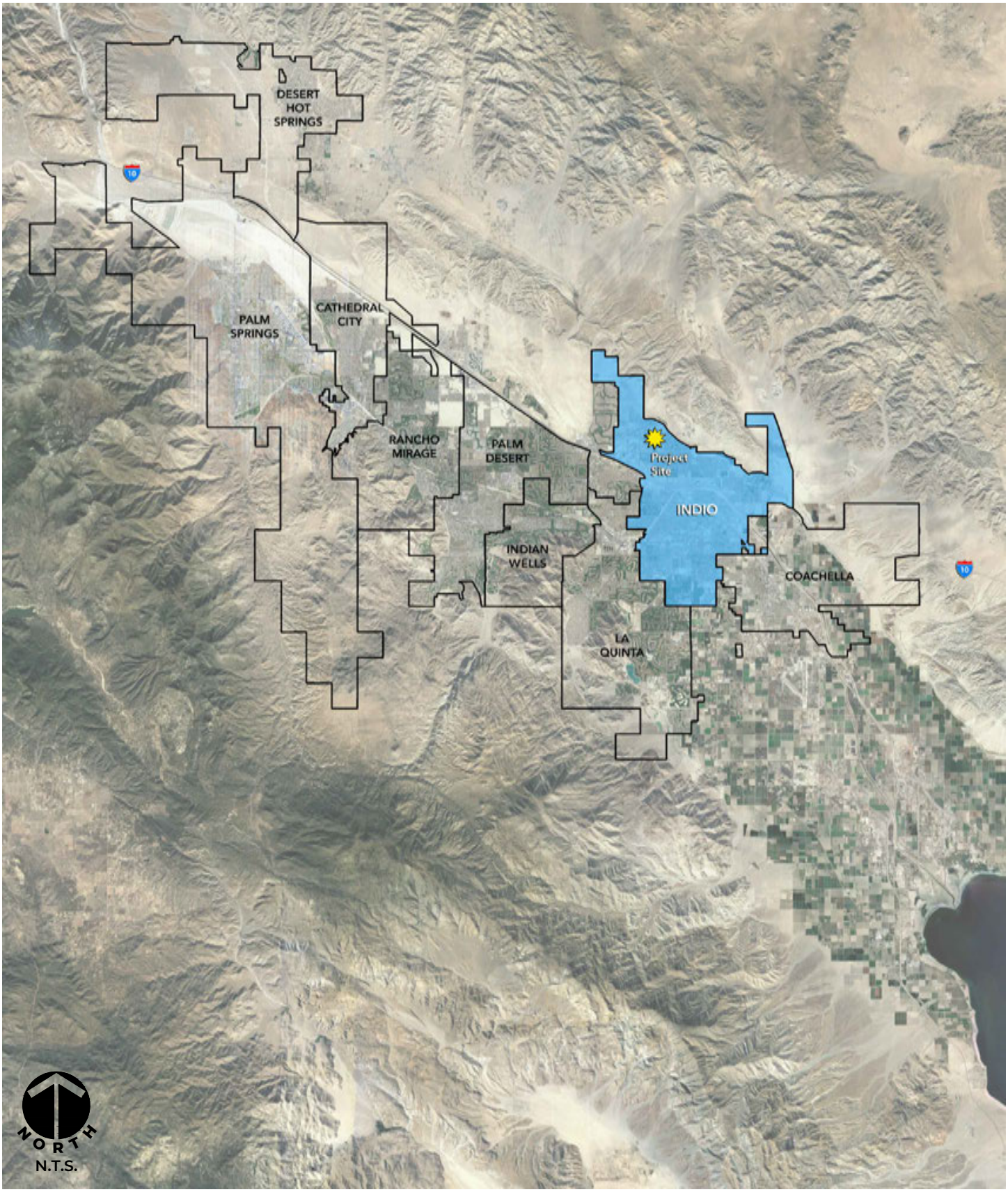
In its current condition the site consists entirely of undeveloped and relatively flat land as shown on Figure 1.3, *Existing Site Conditions.* Site topography slopes from northwest to southeast with higher elevations ranging from 52.2 feet above sea level at the Northwest corner of the property to a low elevation of 32.3 feet above sea level in the southeast corner.

TABLE 1.1

EXISTING AND SURROUNDING USES

	Jurisdiction	General Plan	Zoning	Existing Use
Site	Indio	Village Core/RL	Village Core/RL	Vacant Infill Land
North	Indio	Residential Low/Public/Equestrian Estates	PMP/Public District/EE	Residential / CVWD Treatment Planter
South	Indio	Residential Low	PMP	Sun City Shadow Hills Homes/Golf
East	Indio	Village Core/RL	SP	Sun City Shadow Hills
West	Indio	Country Estates/Public	CEIR-1/2/P	High School/Residential

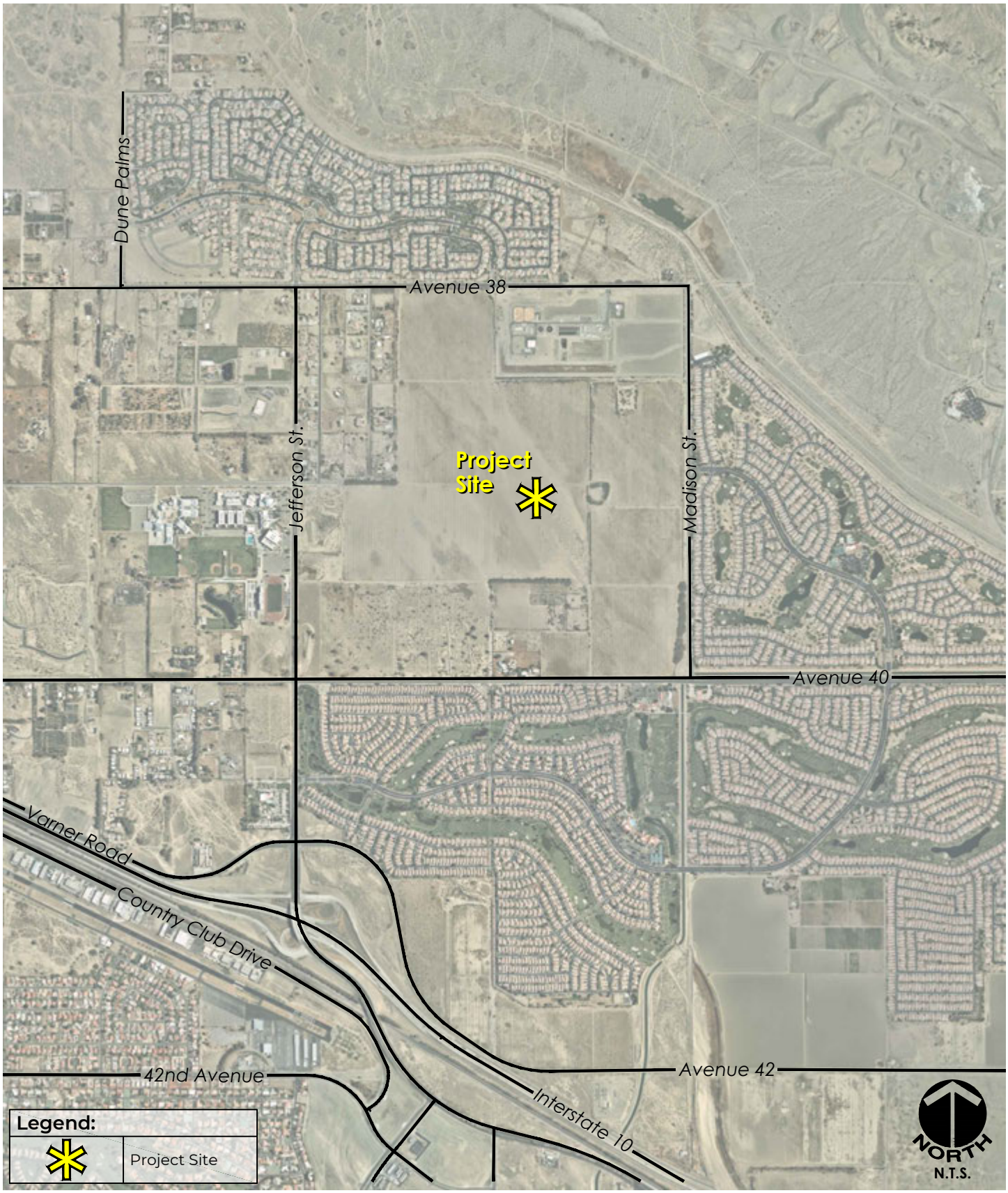
RL (Residential Low =4 DU/AC)



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

REGIONAL LOCATION MAP



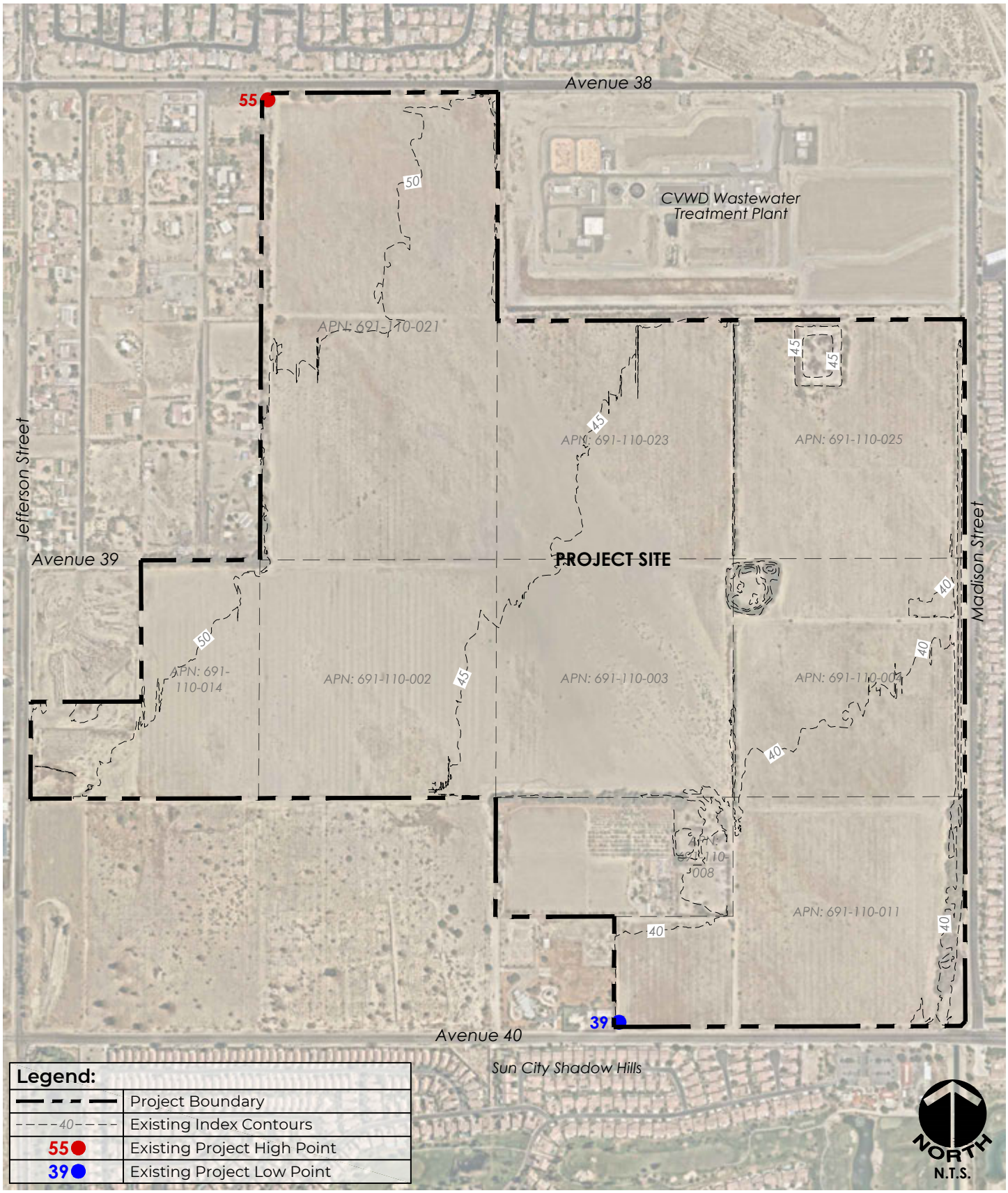
Source: City of Indio

Exhibit Date: August 13, 2022

VICINITY MAP

FIGURE 1.2

MSA CONSULTING, INC.
>PLANNING>CIVIL ENGINEERING>LAND SURVEYING
MSACONSULTINGINC.COM



Source: City of Indio

Exhibit Date: August 13, 2022

EXISTING CONDITIONS

FIGURE 1.3

MSA CONSULTING, INC.
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MSACONSULTINGINC.COM

1.4 Development Concept

The Specific Plan proposes to develop a residential community on approximately 378 acres that would allow the construction of up to 1,500 single-family homes at an average density of 4.1 du/ac The project would include a community clubhouse in the center of the project with outdoor resident amenities such pickle ball courts, bocce ball courts, tennis courts, and water features.

A network of connective open space corridors are integrated throughout the project as a unifying design feature. Chapter 4 of this Specific Plan provides design guidelines and development standards to ensure quality project design that is compatible with the existing built environment and with the Goals and Policies of the City of Indio General Plan.

This Specific Plan intends to provide a degree of flexibility to respond to market demand. The Desert Retreat Specific Plan will supersede the development guidelines and regulations of the Indio Zoning code to allow for a fresh, contemporary development strategy for the site.

1.5 Project Objectives

Various issues were considered and evaluated during the preparation of this Specific Plan. Engineering feasibility, water efficiency, General Plan goals, and compatibility with surrounding land uses were considered during the planning process. In order to ensure the functional integrity, economic viability, environmental sensitivity, and positive aesthetic contribution of this development, unique project objectives were established as follows:

- Develop a thoughtfully planned and integrated project to allow for a quality residential construction project.
- Provide a comprehensive land use plan that establishes development standards, land use regulations, and programs to guide the orderly transition/development of the property.
- Accommodate phasing that provides for a multi-year project buildout in an orderly and efficient manner.
- Establish design guidelines, development regulations, use standards and procedures that facilitate cohesive and attractive landscape and architectural treatments.
- Provide a safe and efficient circulation system;
- Provide water, sewer, and drainage systems to adequately service the project;
- Promote quality development consistent with the goals and policies of the Indio General Plan.
- Create a walkable community by incorporating pedestrian paths within the project and allowing for connections to public sidewalks/trails at each perimeter street.

1.6 General Plan and Zoning

The Indio General Plan 2040, adopted in September 2019, established the City's policy relative to the planned future pattern, intensity, density, and relationships of land uses in the City and the various infrastructure systems needed to effectively support those land uses. This Specific Plan implements the Indio General Plan by bringing detailed policies and regulations together into a focused development plan for the proposed project. It serves as a link between the Indio General Plan and subsequent development proposed within the Specific Plan area. The Specific Plan is a regulatory document which, when adopted by the Indio City Council, will govern all facets of project development including the distribution of land uses, location and sizing of supportive infrastructure, as well as development standards and regulations.

The project site lies within the "Northwest Indio Subarea" of the General Plan. Figure 1.4, *General Plan/Zoning*, displays the existing General Plan Land Uses within and around the project site, consisting of "Suburban Neighborhood". Since this Specific Plan is consistent with the General Plan, no changes are proposed the General Plan or the land use designation.

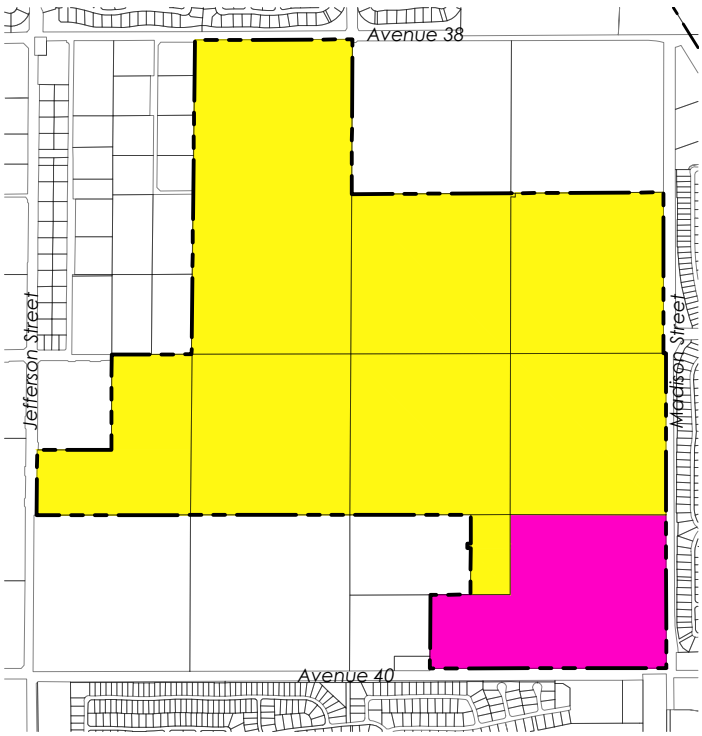
As also shown in Figure 1.4, General Plan/*Zoning*, the Specific Plan area is currently zoned "Residential Low" and "Village Core." The adoption of this Specific Plan will supersede the existing zoning for the site, this Specific Plan would become the new effective zoning of the site.

1.7 Utility & Service Providers

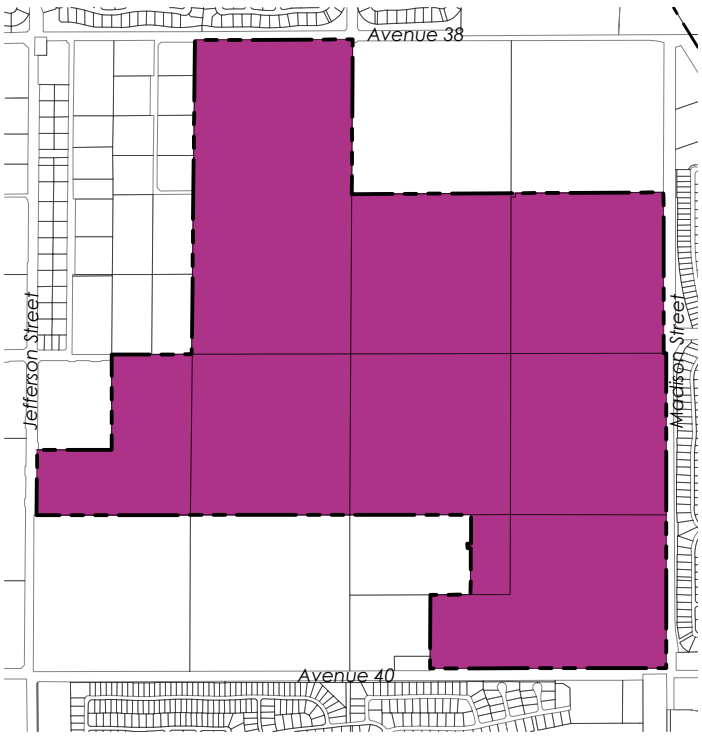
The Specific Plan is within the service area of the utility and service providers as listed in Table 1.2.

TABLE 1.2
UTILITY & SERVICE PROVIDERS

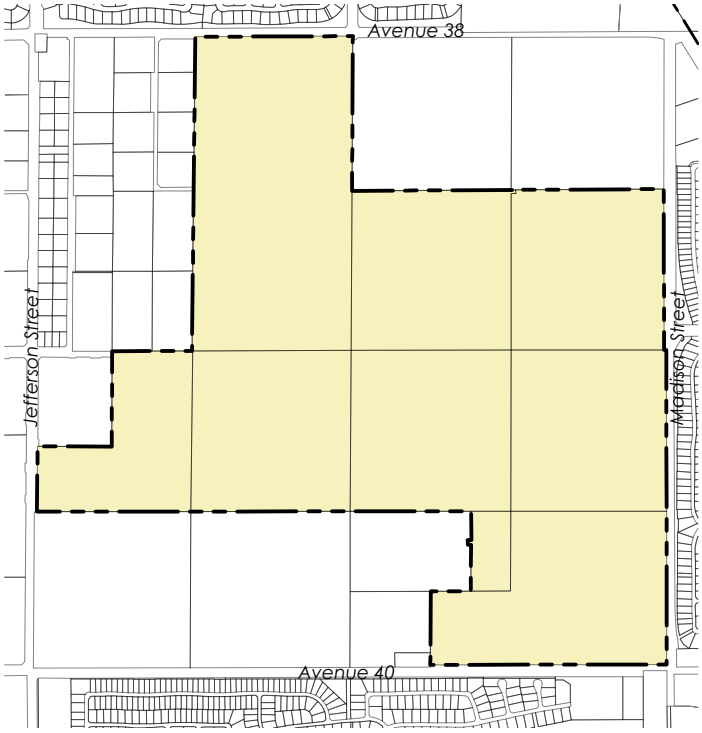
UTILITY/SERVICE	AGENCY	ADDRESS	PHONE
Sewer & Water	CVWD	75-525 Hovley Lane Palm Desert, CA. 92211	760.398.2651
Natural Gas	SCG	P.O. Box 3150 San Dimas, CA. 91773	800.427.2200
Electric	IID	333 E. Barioni Blvd Imperial, CA 92251	760.335.3640
Cable TV	Spectrum	79-785 Hwy 111 Suite E103 La Quinta, CA 92253	855.366.7132
Telephone	Frontier	78150 Avenida La Fonda La Quinta, CA 92253	877.295.4751
Police	Indio PD	46800 Jackson St., Indio, California 92201	760.391.4057
Fire	Cal Fire	46-990 Jackson St. Indio, CA 92201	760.347.0756
Solid Waste	Burrtec	53600 Polk Street Coachella, CA 92236	760.340.2113
Schools	DSUSD	47-950 Dune Palms Road, La Quinta, CA 92253	760.777.4200



Existing Zoning



Proposed Zoning



Existing General Plan

Legend	
— — — —	Specific Plan Boundary
— — — —	City Limits
General Plan	
	Suburban Neighborhood
Zoning	
RL	Residential Low District
SP	Specific Plan
VC	Village Core

NORTH
N.T.S.

Source: City of Indio

Exhibit Date: August 13, 2022

GENERAL PLAN / ZONING

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1.8 CEQA

The project is subject to the requirements of the California Environmental Quality Act (CEQA). Pursuant to the CEQA Guidelines, an Initial Study has been prepared for the Specific Plan to identify the potential environmental effects of the project. To provide CEQA clearances, the City has determined that an Environmental Impact Report (EIR) will accompany the Specific Plan.

The EIR will evaluate any potential environmental impacts associated with the development as described in this Specific Plan and appropriate measures to mitigate these impacts. All mitigation measures identified in the EIR and adopted by the City will be identified in a Mitigation Monitoring Program to define the timing and other requirements for implementing these mitigation measures as the Community is developed over time. All individual development projects within the Specific Plan will be reviewed for consistency with the Specific Plan to determine if supplemental environmental review documentation is needed pursuant to CEQA Guidelines.

1.9 Entitlement Process

Approval of the following entitlements will implement this project:

Specific Plan – The SP will provide comprehensive development guidelines, allowable uses, and development standards for the project as a whole.

Tentative Tract Map (TTM) – TTMs are intended to implement the project and subdivide the property into smaller parcels/lots for development or sale and create common area lots for private streets, the community clubhouse, open space paseos and other facilities.

Design Review (DR) – A Design Review application allows the City to review architectural and landscape plans in greater detail for buildings such as for the community clubhouse and residential homes.

Development Agreement (DA) – A Development Agreement establishes special terms beneficial and mutually agreeable to both the City and the Developer to facilitate development of the community and to vest the community's approvals.

See Section 5 of this Specific Plan for more detailed information on the administrative and public hearing processes related to these implementing approvals.

CHAPTER 2: MASTER PLAN

2.1 Land Use Plan

As noted in Table 2.1, the Specific Plan would facilitate construction of an active adult community with up to 1,500 residential units (gross density of approximately 4 du/ac) and a Community Clubhouse on approximately 378 acres of land. This project would serve as an extension of the existing Sun City Shadow Hills community to the south and east. Figure 2.1 *Land Use Map* shows the project boundary, as well as the layout of the residences and central clubhouse amenity.

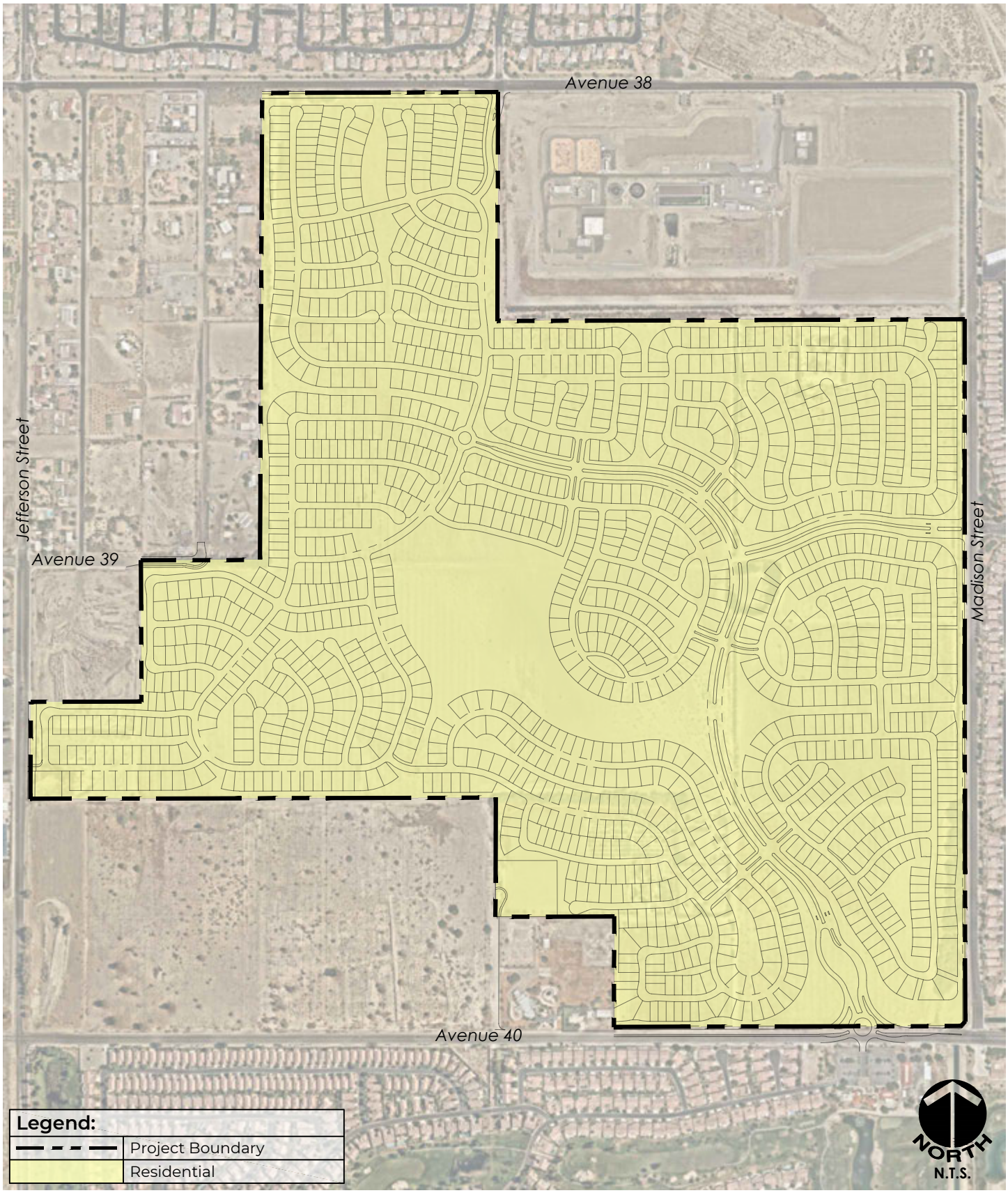
Table 2.1 Land Use Summary

Land Use	Acres	Max Units	Max Building SF
Residential	351.6	1,500	-
Perimeter R.O.W.	2.0	-	-
Clubhouse/Rec	26.1	-	26,100
Totals	377.7	1,500	26,100

2.2 Circulation

Vehicular and pedestrian circulation systems are an important component of this project. The SP has direct and convenient vehicular access to 40th Ave, Madison Steet, 38th Ave, and Jefferson Street. Vehicles will circulate through standard residential streets and project entrances in compliance with City engineering and Fire Department design standards. The circulation system is illustrated in Figure 2.2 *Vehicle Circulation and* Figure 2.3a & 2.3b *Typical Street Sections Private & Public,* Key aspects of the circulation system include:

Off-Site Street Improvements – 40th Ave exists along the project's southernly frontage and will reach a width of 100 feet from each end of the right of way (R.O.W). Jefferson Street will also reach 100 feet from the end of each R.O.W. and exists along the western end of the property. Madison Street to the east will reach a width of 88 feet from each R.O.W, and Avenue 38 to the north will reach a width of 70 feet from each R.O.W. per the Public Typical Street Sections as shown in Figure 2.3.b



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

LAND USE MAP

FIGURE 2.1

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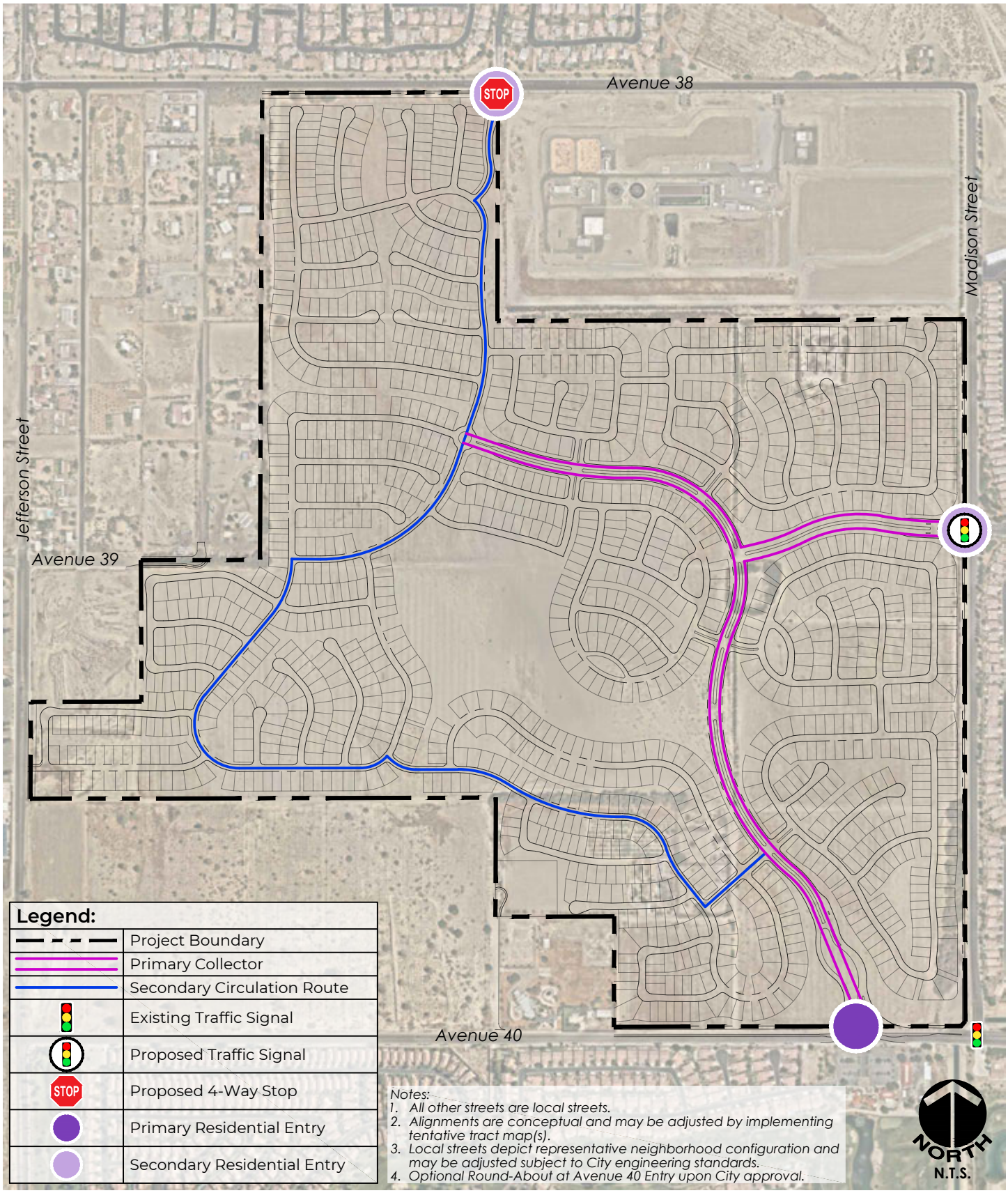

Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

VEHICLE CIRCULATION

FIGURE 2.2

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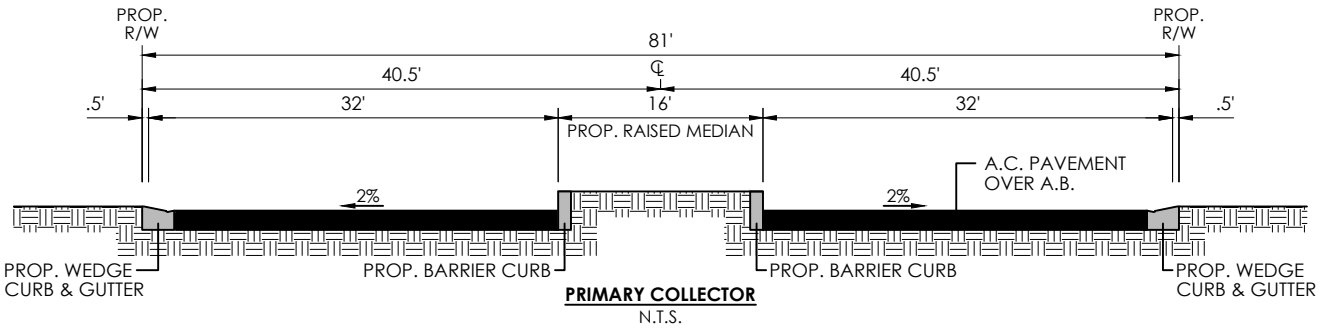
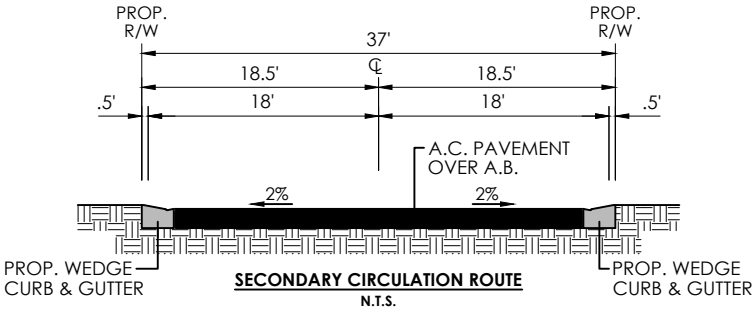


PRIMARY COLLECTOR
N.T.S.



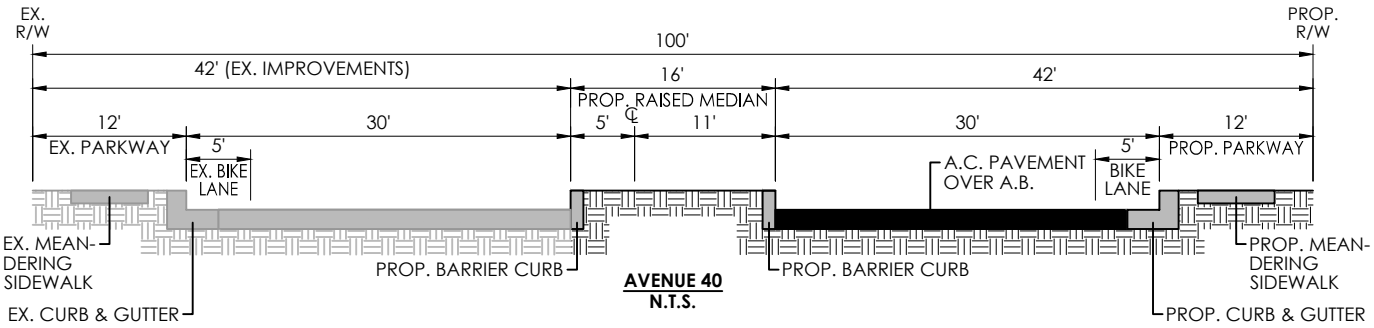
SECONDARY CIRCULATION ROUTE
N.T.S.

NORTH
N.T.S.

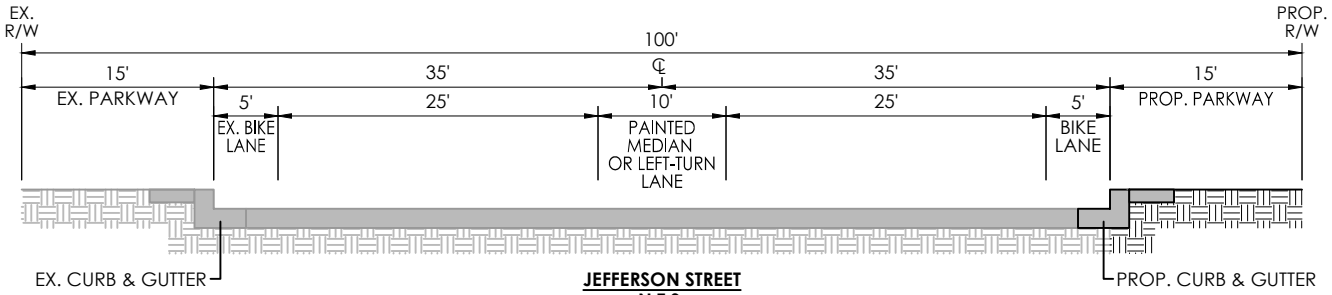
Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

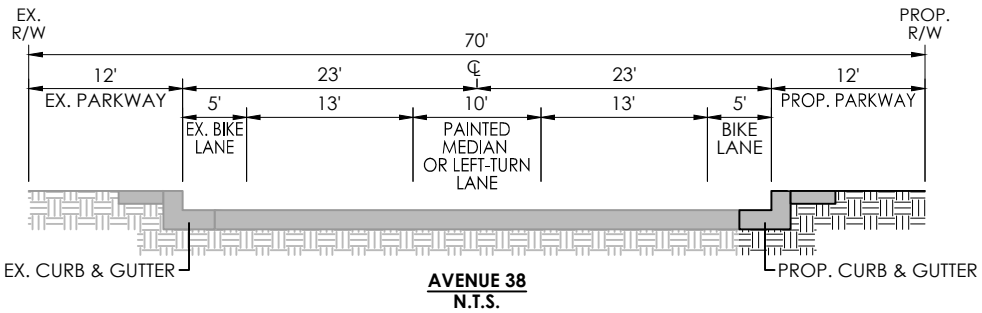
TYPICAL STREET SECTIONS: PRIVATE



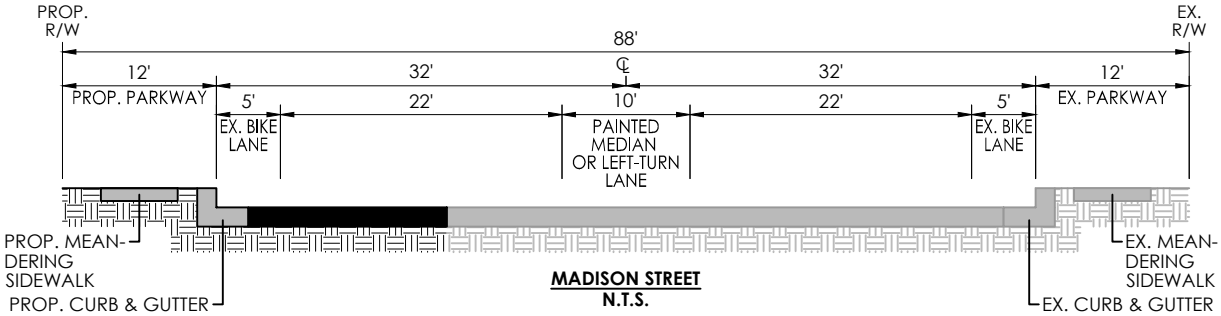
AVENUE 40
N.T.S.



JEFFERSON STREET
N.T.S.



AVENUE 38
N.T.S.



MADISON STREET
N.T.S.

Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

TYPICAL STREET SECTIONS: PUBLIC

Entries – Vehicular access to the site is proposed from gated entries on 40th Avenue, Madison Street, and 38th Avenue. The primary entry would occur on 40th Avenue near the corner with Madison St. Entries would include landscaping, entry signage and pedestrian walkway connections.

Vehicular Circulation – The vehicular circulation system will consist of a central collector road with local residential streets serving individual neighborhoods.

Pedestrian Circulation – The project will feature pedestrian access throughout the project via an integrated system of pedestrian trails/paseos and connecting on-street sidewalks. The project provides multiple pedestrian access points to connect the interior walkway system that allow residents free access to public sidewalks/trails on 40th Avenue, Madison Street, Jefferson Street, 38th and 39TH Avenue. The pedestrian circulation system is shown in greater detail on Figure 2.4 *Pedestrian Circulation*.

2.3 Open Space

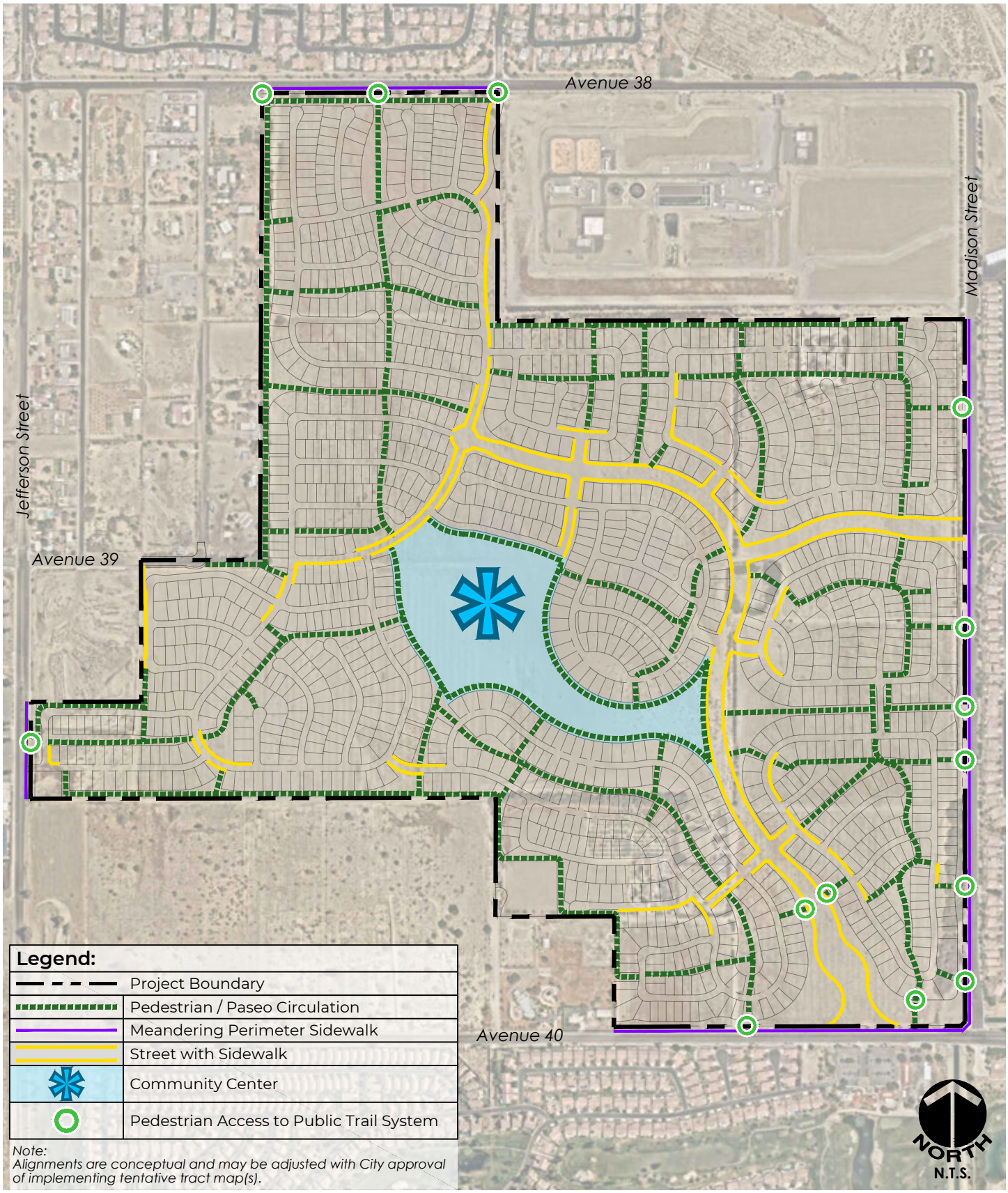
Open Space is an important aspect of a livable development. It provides areas where desert appropriate plant materials can be introduced to soften, accentuate, and shade urban hardscapes. They also provide prime opportunities. Key open space elements include:

Central Recreation Amenity – The project is designed around a central 26.1- acre recreational center that may contain amenities such as a fitness center, a movement studio, locker rooms, a covered outdoor pool, billiards tables, a golf simulator, arts and crafts room, game room, multi-purpose event lawn, sports courts, water features, outdoor kitchen, firepit seating ball room, catering kitchen, terrace, and indoor coffee bar with an outdoor social bar.

Paseos - Paseos provide an interconnected system of open spaces that link individual residences throughout the community with one another, the perimeter public sidewalk system and the central clubhouse amenity. These provide separated amenity corridors that encourage walking and biking throughout the community.

2.4 Water & Sewer

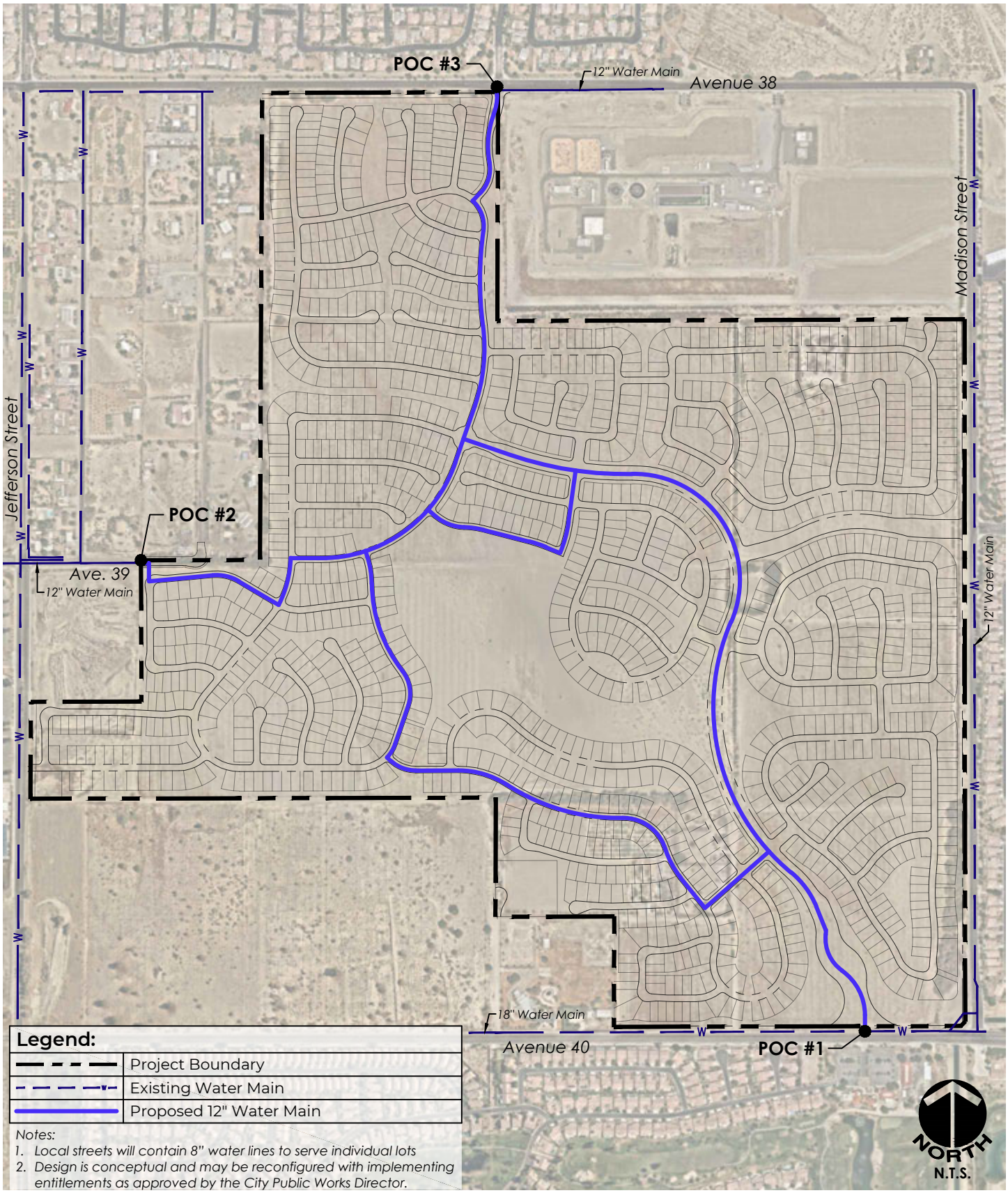
As shown in Figure 2.5 *Conceptual Water Plan and Figure* 2.6 *Conceptual Sewer Plan,* the Specific Plan area is provided with domestic water and sanitary sewer service by the Coachella Valley Water District (CVWD). Development within the project will be served by a private network of lines that will connect to existing public CVWD water and sewer lines located at 3 points of connection off Ave 38, Ave 40, and near the corner of Ave 39 and Jefferson.



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

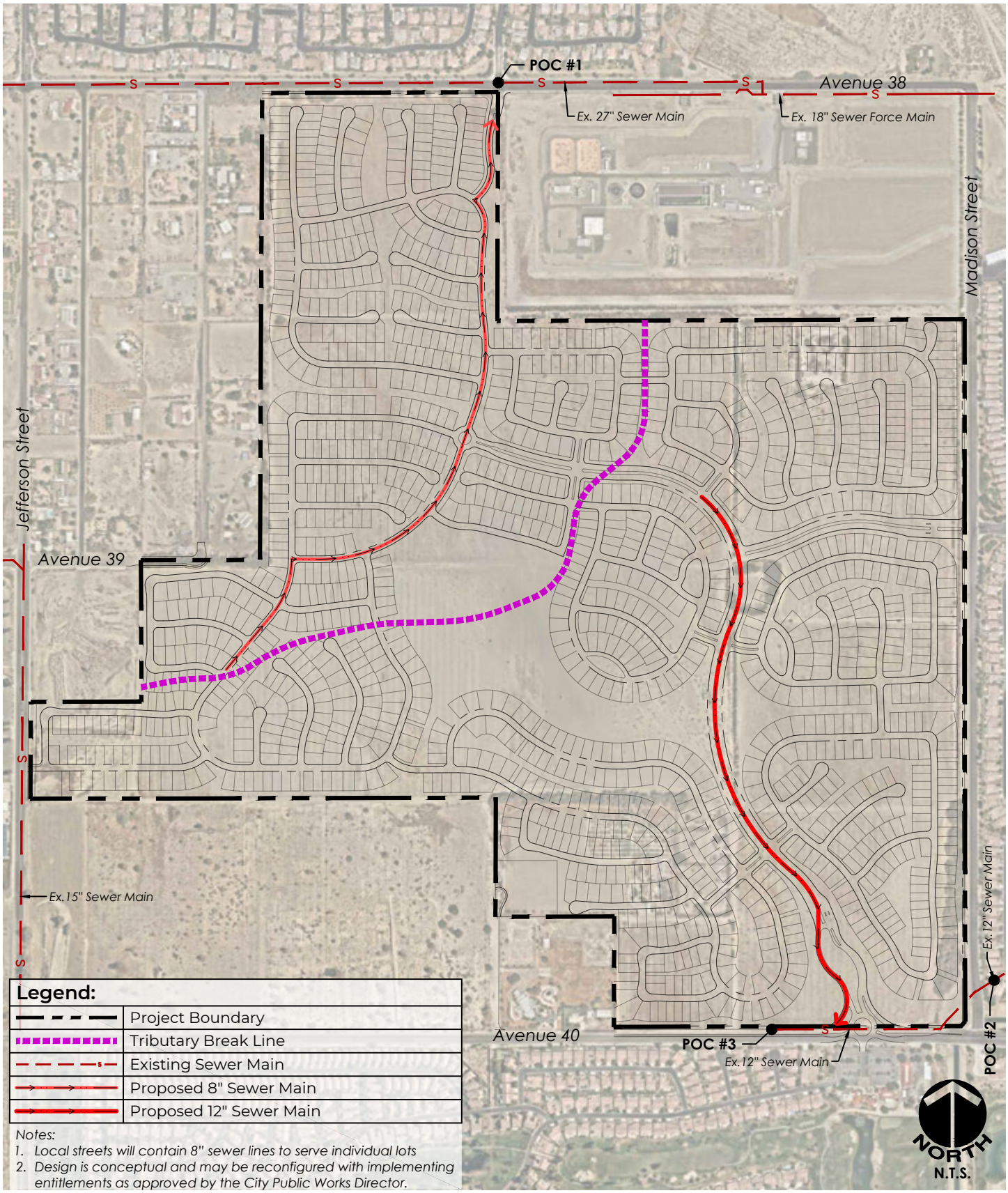
PEDESTRIAN CIRCULATION



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

CONCEPTUAL WATER PLAN



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

CONCEPTUAL SEWER PLAN

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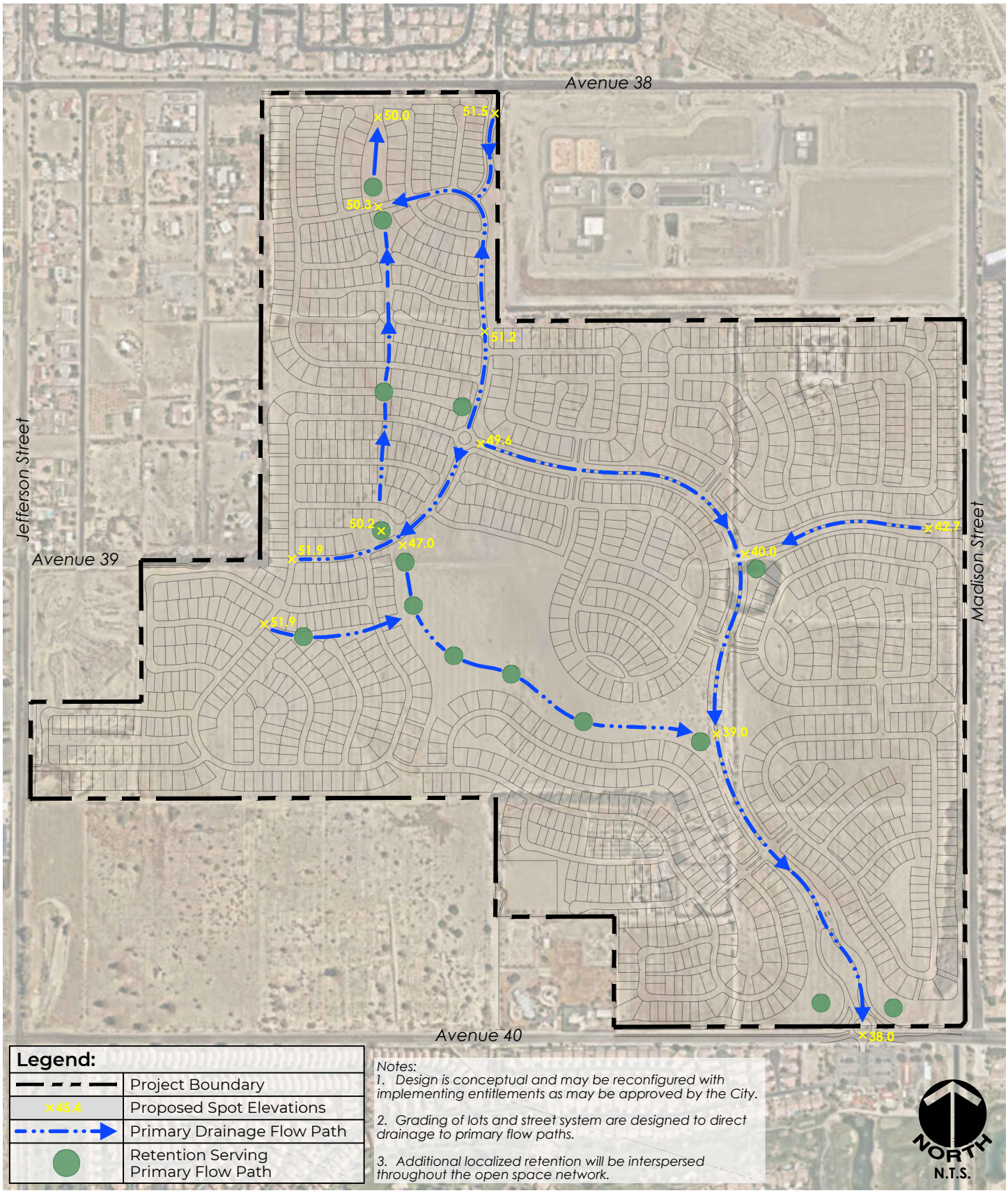
FIGURE 2.6
PAGE 18

2.5 Grading & Drainage

Site topography slopes from northwest to southeast with higher elevations ranging from 52 feet above sea level to a low of 38 feet above sea level. Because grading and drainage are closely interrelated, they are addressed jointly in this section.

Site grading will create building pads while intending to keep the earthwork balanced on site. Because the site is relatively level, grading design will not deviate greatly from existing conditions and will be defined in greater detail as subsequent entitlement projects are proposed. Grading will achieve positive surface flows and protect all structures and physical improvements from the 100-year storm through surface runoff into retention basins either above or below the finished surfaces. Soil erosion and water quality will be protected both during and after construction is completed. The incremental increase in storm water runoff from an existing condition to the new developed condition created by impervious surfaces (roofs, pavement) will be retained on site.

As shown in Figure 2.7, Conceptual Grading and Drainage Plan, "developed condition" surface drainage will generally be split between the northern half and southern half of the property with water flowing north in the northern portion of the property, and south in the southern portion via project roadways and managed using retention facilities within open space paseos. The stormwater system depicts the drainage framework which will be adapted and detailed by implementing Tentative Tract Maps. Adjustments may include the number, location, configuration and depth of drainage pipes and basins as well as the specific flow path through the site. However, the retention basins and storm-drain pipes will be sized appropriately for each phase of the project using standard engineering modelling methods as approved by the Engineering Services Division.



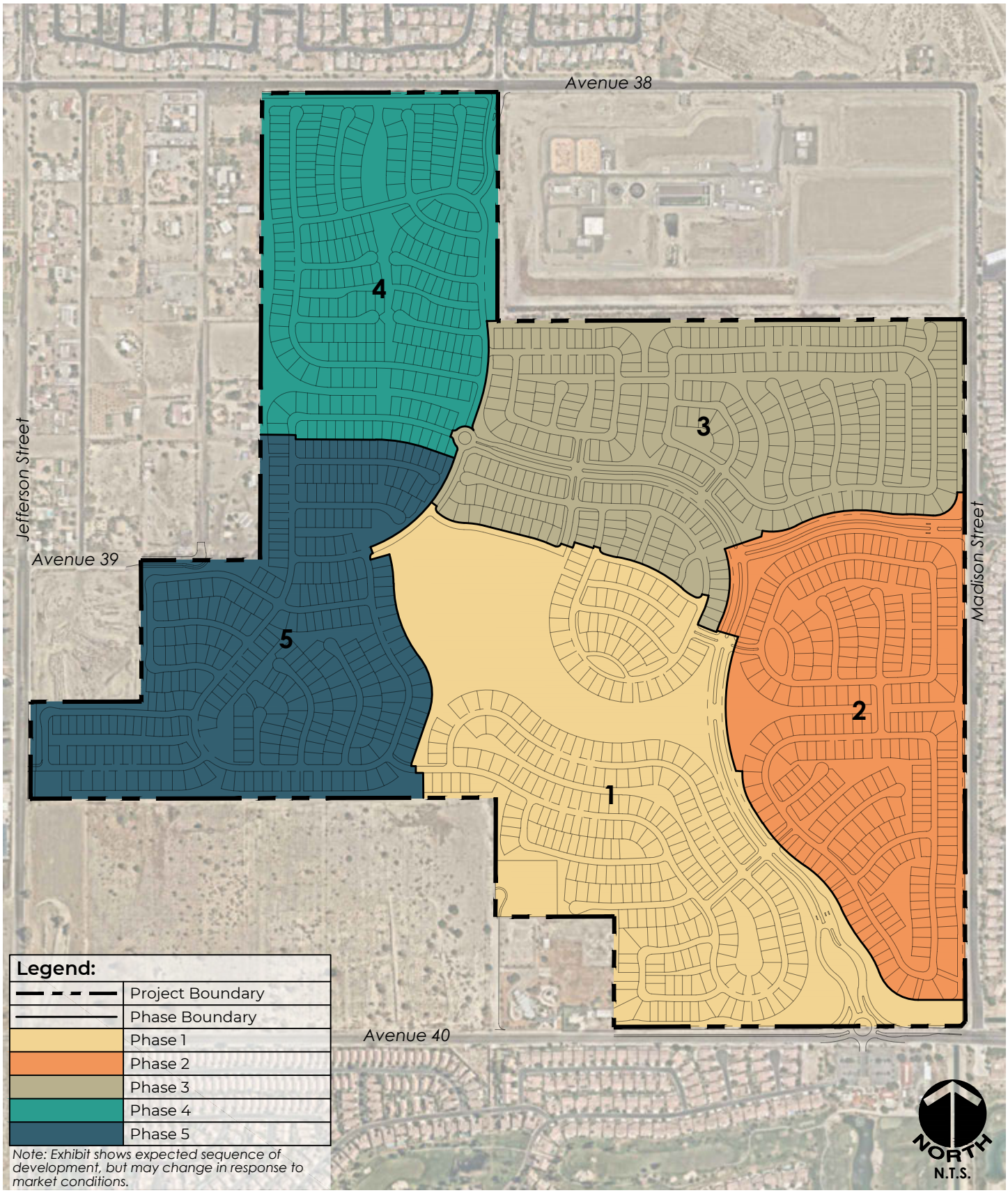
Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

CONCEPTUAL GRADING & DRAINAGE

2.6 Phasing

Development of the Specific Plan is intended to be developed by a single developer. Phasing is allowed so long as each phase accommodates the orderly extension of circulation, utilities, and infrastructure in accordance with the final conditions of approval for each project and the City's Public Works Department. The project is expected to be built in 5 phases as shown in the Phasing Plan Exhibit 2.8



Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

PHASING PLAN

FIGURE 2.8

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CHAPTER 3: DEVELOPMENT STANDARDS

3.1 Overview

This chapter identifies the development standards applicable to the Desert Retreat Specific Plan area. The establishment of the site-specific development standards set forth in this chapter are intended to guide orderly development within the Specific Plan area, while also maintaining some flexibility to respond to changing conditions which may be a factor in any long-term development.

3.2 Allowable Uses

Development standards for the Desert Retreat Specific Plan area are shown in Table 3.1 *Allowable Uses*.

TABLE 3.1
ALLOWABLE USES

	P-Permitted Use
Residential	
Single-Family Homes (Detached)	P
Private Open Space and Recreational Facilities (tennis courts, pools, walk paths, etc.)	P
Clubhouses	P
Accessory Dwelling Units (eg. ADU, Granny Flat, Casita).	P
Sales Office, Model Home Complex.	P
Accessory Buildings Uses or Structures	P
Home occupations	P
The keeping of domestic animals	P
Public or quasi-public utility or public service facilities	P

3.3 Development Standards

Development standards for the Desert Retreat Specific Plan area are shown in Table 3.2 *Development Standards.*

TABLE 3.2
DEVELOPMENT STANDARDS

Lot Standards	
Minimum Lot Area	4,400 ft
Minimum Lot Width	40 ft
Minimum Corner Lot Width	50 ft
Minimum Lot Depth	100 ft
Maximum Lot Coverage	65%
Setbacks	
Front to living area or side loaded garage[1]	10 ft
Front to garage[1]	20 ft
Side	5 ft
Street Side	10 ft
Rear [2]	15 ft
Accessory Structures	See IMC Section 159.689
Parking	
Single Family Residence	4 spaces [3]

Notes:

1. *Measured from right of way*
2. *Accessory structures may encroach into the rear yard up to 5' from rear property line.*
3. *2 garage spaces plus 2 driveway spaces*

CHAPTER 4: DESIGN GUIDELINES

4.1 Overview

Quality development is achieved through attention to detail that is implemented from the initial inception of a project to the final construction of buildings, pathways, entry features, signage, and other design elements. This section outlines the design standards and guidelines for the Desert Retreat Specific Plan that will encourage the highest level of design quality and creativity in site planning and architectural design, while allowing for variation and flexibility.

All development within this Specific Plan needs to address the fundamental elements of design covered in this chapter. The following guidelines establish a design framework to help design professionals and developers understand and implement this project. The Specific Plan intends to allow a variety of design styles and a range of colors, materials, building detailing, and building orientations. However, these guidelines provide the necessary direction to ensure a coherent and complementary project.

Design guidelines that use the word "should" identify actions or outcomes that are encouraged but not mandatory. Only those using the word "shall," are considered mandatory.

4.2 Architectural Guidelines

The overall architectural theme governing the development of the community is founded upon a high level of architectural quality and attention to detail combined with materials appropriate for use in the local desert environment based on durability and building code industry standards. Architectural styles designed for this community should embrace the Indio environment by using materials that are long-lasting and a color palette that enhances the desert beauty. Homes and people-centric spaces should be designed at pedestrian scale and provide visual interest as residents move throughout Desert Retreat.

The common area buildings located at the recreation amenity will have massing reflective of well-grounded, strongly profiled building forms. The following are recommended for these structures:

- Deep recessed windows for passive protection against solar heat gain.
- Deep overhangs and trellis elements also for passive climate control and shade.
- Indoor and outdoor gathering areas.
- Spaces for active and passive recreation.
- Building materials may include stucco (primary material) with accents of stone, tile or siding depending on architecture style. Roof material and pitch shall match the architectural style.

Desert Retreat homes will be primarily one-story and encourage indoor/outdoor living. Homes will address the climatic conditions of Indio by using durable materials and desert appropriate design features.

- The garage should be de-emphasized by having living space closer to the street than garage doors.
- Windows and overhangs should be designed for passive cooling.
- Architectural styles should be identifiable, but may reflect a contemporary adaptation.
- Varied floorplans and elevation styles and or color/material palettes are encouraged for a more diverse street scene.

The following standards and guidelines shall be followed to achieve the overall architectural design theme. Photos to illustrate possible representative architectural character are shown in Figure 4.1 Residential Design Character.

Building Mass, Form and Scale

Residential buildings within the community shall be single story structures and include single story elements and, as a general rule, should be designed with massing consistent with historic desert residential precedents, including recessed and prominent projected elements. The apparent mass of buildings should be reduced through the application of one or more of the following techniques:

- Utilize projections and recesses to provide shadow and relief at exterior walls and roof areas.

- Use simple roof forms; provide interest by jogging the rooflines, varying plate lines and roof heights. Simple roof forms are strongly encouraged to address Title 24 Energy Code requirements more effectively.
- Encourage indoor/outdoor relationship with shaded areas such as California Rooms as well as thoughtfully designed windows and doors that can enhance the indoor/outdoor connection.
- Windows and doors may be recessed to provide depth. Accent trim and color, divided window lights, and raised panels are examples of detailing that provide individuality and interest. Awnings are permitted if they are consistent with the overall architectural style of the building. All window and door details shall be consistent with the architectural style of the home.

- Walls and fencing are discussed in Section 4.3; however, private walls and fencing should be consistent with community wall themes and compatible with the architectural style of the buildings. Foreground plantings, vines, and espaliers are strongly encouraged to soften long stretches of walls and fencing.

- Mechanical equipment such as air conditioning and pool equipment, soft water tanks, gas meters and electric meters shall be screened from public view but accessible for meter reading.

- Gutters and down spouts may be concealed or, if exposed, designed as a continuous architectural feature painted to match or contrast with the adjacent building surface. All flashing, sheet metal, vent stacks and pipes shall be painted to match the adjacent building surface. Skylights should be designed as an integral part of the roof. Their location and color should relate to the building. Patio trellises, pergolas and other exterior structures are encouraged to soften building masses, provide shade and define spaces. As with main buildings, clean forms are encouraged utilizing materials and colors complementary to building architecture and project design themes.

- Accessory structures shall be architecturally compatible with the primary structure.

Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

RESIDENTIAL DESIGN CHARACTER IMAGERY

FIGURE 4.1

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Building Materials and Colors

The primary goal of color and material palettes is to further enhance and define the architectural styles. Equally important is the composition of color and materials to achieve a harmonious and visually interesting community.

Selected colors and materials should be appropriate to the styles they represent and used to further differentiate from other styles.

- Use complementary building materials that promote a harmonious appearance and provide interest and variety consistent with the architectural styles.
- Where possible, use style-appropriate concrete roof tile blends; prohibit overly dramatic blends with extreme contrast.
- Material finishes should express permanence and quality.
- Avoid frequent changes in materials.
- Stucco is permitted as the primary material, but should lean toward a finer finish. Heavy lace stucco finishes are prohibited.
- Architectural screens and accessory structures should be compatible in material, color and texture to the primary buildings.

Use high-quality, durable, low-maintenance materials.

Roofs

Roofs should serve as major structural and architectural design elements, and a variety of roof types and colors are permitted. Roofs shall reflect the selected product type architectural concept and respond to the style, materials and scale of the building. Roof overhangs are encouraged; they provide essential shade and are also aesthetically pleasing. Skylights may be installed provided that they are designed as an integral part of the roof form.

- A variety of roof type is encouraged, including hip roofs, gable roofs and shed roofs. Roof pitches of 3:12 to 5:12 are permitted as well as flat roofs and parapets
- Roof heights and planes should vary to create interplay between the roof and the walls of the structure.
- Acceptable roofing materials include concrete s-tile and concrete slate tile. Standing seam metal roofs may be used for accents.
- Unacceptable roofing materials include wood shakes, clay, and asphalt shingles.

Chimneys

Chimneys may be used as an architectural element. Caps on chimneys shall have low profiles; they should not be visually distractive. The form and materials shall reflect the architectural theme of the structure.

Doors and Windows

By varying the spacing, sizes, shapes and locations of door and window openings in building facades, structures may be made more visually interesting and attractive. However, care must be taken to avoid excessive variety, or the end result will be a chaotic, cluttered building facade. It is especially important to vary the placement of doors and windows on buildings located in close

proximity to each other in the same development. In addition, windows and doors may be recessed into or projected out of structures to emphasize important areas of the building.

To further enhance the individual identity of each structure, pot shelves, window boxes, and built-in planters may be utilized if style appropriate. However, all such containers must be easily accessible for plant maintenance. Window frames, mullions, and doorframes shall be color coordinated with the rest of the building. Decorative wrought iron grills on windows may be used. Doors and windows shall complement the architectural style. .

Garages

Garage setbacks may be varied in order to enhance the streetscape scene. Garages shall be constructed of materials compatible with the architectural style of the structures.

Porches, Arcades and Entryways

Entrances to buildings shall be clear and easily recognizable. Covered entrances, porches, and arcades are desirable because they serve to identify entrances and provide shelter from the sun and inclement weather. A protected entrance is not only functional, but also produces a sense of privacy. Front entrances should be designed as significant architectural features. Porches and entryways may be used to visually break up large, monolithic buildings into smaller units more in keeping with the desired human scale of the community. Porch and railing materials shall be consistent with the architectural style.

Mailboxes

Where common mailbox services are provided for any residential area, they shall be located close to the neighborhood entry in clusters throughout the neighborhood. The architectural character shall be similar to the residential architecture.

4.3 Wall and Fence Guidelines

Walls and fences will be constructed in various settings throughout the community to provide privacy and security. Guidelines related to walls and fences are described below with representative character photos shown in Figure 4.2, *Wall Design Character*.

Community Walls

Walls are a major component in achieving an overall community theme within the Community. Wall and fence materials will be designed to be compatible with adjacent architectural and landscape elements. A strong cohesive appearance is achieved through the use of a community wall design that is compatible with the community buildings' architectural theme.

Perimeter and Community Walls

This project will be a gated community with a perimeter community wall that provides privacy. A solid decorative wall will be used at the perimeter of the project as well as inside the project adjacent to major streets and landscape areas. Tubular steel fencing may be constructed at the perimeter of the project in place of the solid decorative wall where such fences are adjacent to open space or where necessary for drainage purposes.

Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

WALL DESIGN CHARACTER IMAGERY

Open Space Walls

Where view opportunities are adjacent to open space areas, a concrete curb will be used. Wrought iron or tubular steel fencing may be installed on top of this wall at the option of the individual owners, provided the overall height does not exceed 6 feet.

Interior Walls for Single Family Lots

Interior side and rear walls constructed around individual single-family lots will consist of masonry block, or low maintenance tubular steel fencing, with a minimum height of 5 feet above the finish floor elevation of the home. Interior rear walls located adjacent to an open space corridor will be a maximum of 3' high (6' high pool walls/ fences for safety), measured from the highest finish grade. Interior side walls shall be painted stucco or split fence, slump, sack finish or masonry block where they can be viewed from the open space areas.

Special Wall and Fence Requirements

- Walls may be used in association with common area buildings, such as maintenance facilities, for the purpose of sound abatement and visual screening of maintenance activities within the maintenance yard. Walls of up to 8 feet in height will be permitted for their value in isolating maintenance activities from the balance of the community. Additionally, walls of up to 8 feet in height are also permitted in order to screen food service areas and trash enclosures from the balance of the community and where appreciation of the common area amenities would suffer due to the lack of such walls.

- Fences and walls shall not exceed 8 feet in height above the highest adjacent grade, except when used on top of a berm where the maximum wall height will be 6'. The total height shall not exceed 8 feet above the lowest adjacent grade.

- Privacy walls surrounding residences should be a minimum of 5 feet in height and 6' maximum height. Privacy walls may be used in front yards, but it is encouraged to have landscape planting along the exterior side of the wall to soften appearance.

- Fences and screen walls (not including privacy walls, retaining walls or courtyard walls) shall not be located within the front yard area of a residential lot.

- All fences and walls connecting two separate residential dwelling units shall be constructed of the same material and color and shall be compatible with the color of the architecture.

- Barbed wire, electrically charged fences, plain exposed precision concrete block, plastic materials, corrugated metal, chain link, vinyl and grape stake fencing are prohibited.

- Retaining walls and courtyard walls located in the front yard setback area of single family lots shall be limited to 4 feet in height.

4.4 Landscape Guidelines

Landscaping is an integral part of community theming, and architectural enhancement. Landscape guidelines are described below with representative character photos shown in Figure 4.3 *Landscape Design Character*.

Theme

The landscape architectural theme for the Desert Retreat Community will play an important role in creating a community identity as well as continuity throughout the project as it develops. The landscape architectural design for this project will reflect a "desertscape" theme with supplemental ornamental accent landscaping, while providing a commitment to water conservation and low maintenance. This can be accomplished with the proper layout of "water efficient" plant materials and a state-of-the-art irrigation system.

It is the intent of these guidelines to provide flexibility and diversity in plant material selection, while maintaining a limited palette to give greater unity and thematic identity to the community. The landscape materials listed in the Community Plant Palette have been selected for their appropriateness to the project theme, climatic conditions, soil conditions and concern for maintenance. Plant material selection will include ground covers, accent shrubs, functional turf palm trees, and evergreen trees. Flowering vines and espaliers may also be used throughout the project.

Project Entries

The main entry gate will be provided at 40th Avenue, with the secondary entry at Madison Street. The gates themselves will be automatically activated by a security system. Decorative wrought iron gates will be provided at both entries. The gates will be hung on masonry pilasters in keeping with the overall architectural theme and materiality.

The main entry gate at 40th Avenue will establish the initial theme and identification of the overall community. This entry will include a guard house, signage monumentation, landscaping, and community entry water feature. The community water feature and wall signs, as well as selected accent trees will be lighted. The median will be planted with shrubs, ground cover and accent planting. Other features may include landscaped berms, enhanced paving, accent trees and shrubs.

The secondary entry gate at Madison Street will be provided with transponder-activated gates that will provide access for community residents only. Enhanced landscaping will be provided at this entry consistent with the overall community theme. Other features may include landscaped berms, paving, boulders, landscape sculpture elements and a signature monument signage.

Source: MSA Consulting, Inc.

Exhibit Date: August 13, 2022

MSA CONSULTING, INC.
>PLANNING>CIVIL ENGINEERING>LAND SURVEYING
MSACONSULTINGINC.COM

LANDSCAPE DESIGN CHARACTER IMAGERY

FIGURE 4.3

Perimeter Streets

The expansive landscape setback along 38th Avenue, 40th Avenue, Madison Street and Jefferson Street will reflect a drought tolerant, natural dry concept that will fit into the low desert environment. Plant material selection will consist of primarily desert flowering trees with palm tree accents, desert accent shrubs and ground covers. Planting will be organic and free flowing.

Decorative crushed rock and gravel will be used as a continuous inert groundcover along with boulder rock used as accents.

Private Arterial and Collector Streets

Extensive landscaping will be provided for the private arterial streets within the project. Community private streets sections are illustrated in Figures 2.3a and 2.3b.

Single Family Residential Lots

It shall be the responsibility of the Developer to install front yard landscaping. It will be the responsibility of individual homeowners to install landscaping for the entire rear lot within a period of 90 days from the close of escrow. The lot owners will submit landscaping plans for review by the Master Homeowners Association within 30 days after the close of escrow. All individual lot landscaping will comply with the following minimum landscape guidelines, which at the discretion of the homeowner's association, can be increased or made more stringent:

- The use of native or compatible drought tolerant species is strongly encouraged for all yard landscaping. Plants that consume higher amounts of water should be used sparingly and should be grouped together for efficient and proper irrigation.

- All landscape plantings will be maintained by a fully automatic underground watering system. The watering system valves will be brass and not plastic. The irrigation system must be equipped with an upstream pressure regulator. The drip system should also have a filter.

- The following plants will not be allowed in the Community:

Common Name	Botanical Name
Mulberry	Morus alba
Olive/fruit	Olea europaea
Tamarisk	Tamarix
Italian Cyprus	Cupressus sempervirens
Fountain Grass	Pennisetum setaceum

- Front yards shall be provided with a minimum of one tree and a minimum of one shrub or plant for each 200 square feet, or fraction thereof, of the overall lot area. No less than one-half of the minimum amounts of required shrubs or plants are to be located in the front yard. No less than one-quarter of the minimum amounts of required shrubs or plants are

to be located by the homeowner in the rear yard. All shrubs or plants must be at least a five-gallon container size. Trees will be no smaller than 24" box size. Ground cover will be required in all yards. Corner lots will be provided with two trees in the front yard and two trees on the side yard facing the street.

- The ground surfaces of all yards will be covered with inert or living materials or any combination of both. For the purpose of these Design Guidelines, topsoil or decomposed granite (fines) will not be considered inert material. No artificially colored rock will be permitted as ground cover. Ground cover or inert material will not be used to spell out names, nicknames, names of states, city's athletic teams, slogan states, emblems or any other communication.

- If turf is used, common Bermuda grass will not be allowed. There are several hybrid Bermudas available from which to choose. No more than 20% of the total square footage of the lot as described in the recorded tract map may be planted in turf, and only in the rear yard. Narrow or irregular shaped areas should be avoided because they are difficult to irrigate without encountering over-spray problems. Warm season grass such as hybrid Bermuda that goes dormant in winter will be over seeded with Winter Rye at the beginning of the fall season in order to maintain a consistent appearance. Perennial Rye seed is recommended. Owners may install turf that abuts a patio edge provided that such turf is not within four (4) feet from dwelling unit, and two (2) feet from side and rear property lines or any wall. Where turf is adjacent to sidewalks, designs shall eliminate over-spray of the hardscape.

- The use of solid plastic sheeting or polyethylene over ground areas will not be permitted. If landscape fabric is used, it must allow the free flow of water, air, and gases to and from the soil.

- Fountains will be limited in height to 5 feet above the natural grade of the lot unless otherwise approved by the master homeowner's association. They will be of natural materials compatible with the overall architectural theme of the community. Fountains will be permitted in the front yards, street side yards, rear yards, and courtyards of all residential homes. Waterfall features, including waterfall spills for pools or spas, when constructed in the front, side or rear yards, are limited to a maximum of 36 inches in height above the finished floor elevation of the lot. Waterfalls constructed in rear yards enclosed by 5-foot walls or higher can exceed this maximum height as long as they cannot be seen from common areas or neighboring lots.

- Statues and artifacts will not be allowed in the front yard excepting temporary statues, artifacts and other holiday decorative landscaping items which may be allowed within a reasonable time period prior to and after the holiday season. In front enclosed courtyards, artifacts will be allowed with prior approval of the homeowner's association, so long as they are limited to 5-feet in height. Also, with prior approval of the homeowner's association for placement, statues and artifacts are allowed in the back yards of green belt lots so long as they do not exceed 36 inches in height measured from the finish floor elevation to the top of the statue or artifact.

CHAPTER 5: PLAN ADMINISTRATION

5.1 Overview

This chapter describes the procedures for administration and implementation of the Desert Retreat Specific Plan. The City of Indio Community Development Department shall have the responsibility for plan administration and implementation as established in this chapter.

5.2 Implementation

This Specific Plan establishes the general intent and comprehensive framework for the future development of the Desert Retreat project. However, prior to construction, various implementing approvals are required, as noted below.

Specific Plan – The SP will provide comprehensive development guidelines, allowable uses, and development standards for the project as a whole.

Tentative Tract Map (TTM) – TTMs are intended to implement the project and subdivide the property into smaller parcels/lots for development or sale and create common area lots for private streets, the community clubhouse, open space paseos and other facilities.

Design Review (DR) – A Design Review application allows the City to review the architectural and landscape plans in greater detail for buildings such as for the community clubhouse and residential homes.

Development Agreement (DA) – A Development Agreement establishes special terms beneficial and mutually agreeable to both the City and the Developer to facilitate development of the community and to vest the community's approvals.

5.3 Administration

Administrative Changes - Minor modifications that are consistent with the purpose and intent of this Specific Plan are allowed at the discretion of the Community Development Director or designee. Therefore, it is intended that this Specific Plan provide City Staff with the flexibility to interpret the details of project development as well as those items described in general terms in the Specific Plan without requiring a Specific Plan.

Requests for administrative changes shall be made in writing. If/when it is determined that changes or adjustments are necessary or appropriate, these shall be approved administratively by the Community Development Director or designee. After approval, any such administrative change shall be attached to the Specific Plan as an addendum and may be further changed and amended from time to time as necessary.

Representative examples of such changes may include, but are not limited to:

- The addition of new information to the Specific Plan maps or text that do not substantially change the effect of any regulation. The new information may include more detailed, site-specific information.

- Changes to infrastructure such as drainage systems, roads, water and sewer systems, etc.

- Deviations not exceeding 10% of the development regulations set forth in Chapter 3 of this Specific Plan will be considered on a case-by-case basis, subject to the discretion and approval of the Community Development Director.

Formal Amendments - If it has been determined that the proposed change is not in conformance with the intent of the current Specific Plan approval, the Specific Plan may be amended in accordance with the procedures set forth in the City of Indio Municipal Code.

5.4 Interpretation

Uses Not Listed - All uses not listed as allowed in this Specific Plan are prohibited. However, the Community Development Director may determine that a use not listed is included within, similar to or comparable to a listed use and, once so determined; it shall be treated in the same manner as a listed use.

Application of Standards - Where there is ambiguity between the Specific Plan and the Zoning Code, the Community Development Director shall review pertinent information and make a determination as to which code or standard applies. All determinations shall be in writing and shall be attached to the Specific Plan as noted under *Administrative Changes*, earlier in this section.

5.5 Enforcement

The enforcement of the provisions of this Specific Plan shall be by the following:

- The City of Indio Community Development Department shall enforce the development standards and regulations set forth herein.

- Any administrative decision or interpretation of this Specific Plan may be appealed to the Planning Commission per the provisions of Section 150.022 of the City of Indio Municipal Code. Likewise, any decision by the Planning Commission may be appealed to the City Council.

- The City of Indio shall administer the provisions of this Specific Plan in accordance with the State of California Government Code, Subdivision Map Act, the City of Indio General Plan, and the City of Indio Municipal Code.

- The Specific Plan development procedures, regulations, standards, and specifications shall supersede the relevant provisions of the City's Municipal Code, as they currently exist or may be amended in the future.

- All regulations, conditions, and programs contained herein shall be deemed separate distinct and independent provisions of this Specific Plan. In the event that any such provision is held invalid or unconstitutional, the validity of all the remaining provisions of this Specific Plan shall not be affected.

- Any development regulation and building requirement not addressed in this Specific Plan shall be subject to all relevant City of Indio ordinances, codes, and regulations.

APPENDIX C

Correspondence with Michael Kisko of CDFW

From:	Evan Sensibile
To:	jvaughn@szrlaw.com
Cc:	Tony Locacciato
Subject:	FW: FMMP Inquiry about parcels in Riverside County for an Initial Study
Date:	Tuesday, May 31, 2022 11:23:29 AM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png

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Good morning Jim,

Please see the message chain below addressing the status of Important Farmland (IFL) data for our site and timeline for the 2020 FMMP map update per correspondence with the Department of Conservation in yellow highlight.

Best,

Evan

Evan Sensibile
Project Manager
(818) 577-8696
www.meridianconsultantsllc.com

From: Evan Sensibile
Sent: Tuesday, May 31, 2022 9:59 AM
To: Tony Locacciato <TLocacciato@meridianconsultantsllc.com>
Subject: FW: FMMP Inquiry about parcels in Riverside County for an Initial Study

Hey Tony,

I wanted to forward along the most recent response from Dept of Conservation regarding Prime Farmland on our site—please see below. The portions I've highlighted give more detail as to why the 2018 data is still "most" recent. However, if the 2020 Important Farmland (IFL) data updates occur in Fall, we will be able to make an edit to our document with an updated citation, however it seems like the designation of Prime Farmland will not have changed with the 2020 update.

Best,

Evan

Evan Sensibile
Project Manager
(818) 577-8696
www.meridianconsultantsllc.com

From: Kisko, Michael@DOC <Michael.E.Kisko@conservation.ca.gov>
Sent: Friday, May 27, 2022 4:59 PM
To: Evan Sensibile <esensibile@meridianconsultantsllc.com>
Subject: RE: FMMP Inquiry about parcels in Riverside County for an Initial Study

Hello Evan,

The best place to get a snapshot of our Important Farmland (IFL) Data for your project site would be the **California Important Farmland Finder** app located here on our web page: (halfway down the page)

https://www.conservation.ca.gov/dlrp/fmmp

You can type in an address to search for your project site or simply zoom into your county of interest. Then, I would access the Layer List in the upper right and turn off the California Important Farmland layer. Then, access the Basemap Gallery in the upper right and select Imagery Hybrid. Now it will be a lot easier to find your project site. Navigate to your project site using imagery and street names.

Next, access the Polygon Tool in the upper left. Select the Polygon button and draw a boundary around your project site. Doubleclick to complete the polygon around your project site. The hit the Execute button. Even though you turned off the IFL layer earlier, the app will still calculate the IFL categories within your project boundary and give you statistics of the IFL categories and acreages of each category at your project site.

A lot of things have happened in preceding years which have caused us to be a bit behind. Although, we are not technically late at the moment. We cannot start mapping, for example, **2020 update** until we acquire the imagery which is generally taken in the summer of 2020 and we get the imagery from the federal government, hopefully, in fall of 2020 (it didn't arrive until winter for 2020). Then, it takes our small unit of four staff approximately 1.5 years to map all of the land use in the majority of the State of CA. So, it would have been optimum for all of the 2020 IFL maps to be released by the end of 2022 . We will begin releasing 2020 IFL data as soon as next month (we release counties as they are completed) but unfortunately we will not have the whole State of CA released by the end of this year. I apologize for the delay. We are currently streamlining operations and trying to hire another staff member to accelerate our mapping.

However, from looking at your project site, there would have been no change in 2020 given that we would need to see the area fallow for 4 years prior to the map date (2020) to make a change. Therefore, there could have been no irrigated crops grown at the site since 2016 to have an effect on the 2020 IFL data. The 2018 IFL data is the most recent so that is the correct dataset to use at

the moment.

Best,

Michael Kisko
Environmental Scientist | Farmland Mapping and Monitoring Program

California Department of Conservation
715 P Street, MS 1904, Sacramento, CA 95814
Email: Michael.E.Kisko@conservation.ca.gov
Phone: (916) 617-0696

From: Evan Sensibile <esensibile@meridianconsultantsllc.com>
Sent: Thursday, May 26, 2022 2:51 PM
To: Kisko, Michael@DOC <Michael.E.Kisko@conservation.ca.gov>
Subject: RE: FMMP Inquiry about parcels in Riverside County for an Initial Study

Hello Michael,

Thank you so much for the quick response and information about the IFL data for the site. The proposed project I am writing about is expected to be approximately 377 acres within the bounds of the streets I provided (Jefferson Street, 40th Avenue, Madison Street, 38th Avenue).
As you mentioned, there are 75 acres of Prime Farmland on the site within those boundaries. Do you happen to have any maps and/or data that could depict where the designated Prime Farmland is within those bounds so I can get a more accurate snapshot? (This would be in addition to the publicly available IFL/FMMP maps of course).

Also, was there any cause for a mapping delay for 2020 IFL data? I understand updates typically happen every two years; I am just asking so that my team can appropriately cite why 2018's IFL data is still applicable.

Many thanks again for all your help with this.

Best,

Evan

Meridian Consultants 2012–2022 YEARS

Evan Sensibile
Project Manager
(818) 577-8696

www.meridianconsultantsllc.com

From: Kisko, Michael@DOC <Michael.E.Kisko@conservation.ca.gov>
Sent: Wednesday, May 25, 2022 4:44 PM
To: Evan Sensibile <esensibile@meridianconsultantsllc.com>
Subject: RE: FMMP Inquiry about parcels in Riverside County for an Initial Study

Hello Evan,

Thanks for your interest in our Important Farmland (IFL) Data.

I took a look at our 2018 IFL data (the most current) for the property described below and see that there is approximately 75 acres of Prime Farmland. I also looked at DWR crop data which showed that carrots were grown there in 2018. So, the mapping of Prime Farmland seems to be correct. The area would need to be unirrigated for 4 years (two map update cycles) to be removed from an irrigated category on our maps, such as Prime Farmland. We automatically track areas of irrigated farmland when they are fallow and look unmaintained as if they are transitioning away from irrigated agriculture.

We have currently started mapping the 2020 update and will begin releasing 2020 IFL Data in coming months. However, mapping of Riverside County has not been started yet. If I were to estimate, Riverside County 2020 IFL data will likely be released around the end of the year. However there would be no change on the 2020 IFL Data on your site given what I saw and the corroborating DWR data. At most the property would be tracked as being fallow in 2020 if there are no sign of irrigation or crops.

Best,

Michael Kisko
Environmental Scientist | Farmland Mapping and Monitoring Program

California Department of Conservation
715 P Street, MS 1904, Sacramento, CA 95814
Email: Michael.E.Kisko@conservation.ca.gov
Phone: (916) 617-0696

From: Evan Sensibile <esensibile@meridianconsultantsllc.com>
Sent: Wednesday, May 25, 2022 12:33 PM
To: FMMP@DOC <fmmp@conservation.ca.gov>
Subject: FMMP Inquiry about parcels in Riverside County for an Initial Study

Hello,

I am trying to gain information about the parcels bound by Jefferson Street on the west, 38th Avenue, Madison Street, and 40th Avenue in Indio, Riverside County, California for an Initial Study.

The FMMP shows this site designated as Prime Farmland as of 2018. Can you provide me with a more updated status of the site? I know that the FMMP is usually updated every two years.

Best,

Evan Sensibile

Meridian Consultants 2012–2022 10 YEARS

Evan Sensibile
Project Manager
(818) 577-8696
www.meridianconsultantsllc.com

APPENDIX D

Air Quality and Greenhouse Gas Emissions Model Output

Air Quality

APPENDIX D.1

Mass Grading Summer

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Mass Grading/Off-site Street Improvements

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	264.00	1000sqft	6.06	264,000.00	0
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Mass grading/street improvement phase only. Approximately 6 month duration.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment -

Trips and VMT - Per applicant - 300 roundtrips hauling per day. 30 workers on-site.

Soil imported from adjacent parcels and Stormwater Channel Project (24 mi roundtrip)

Grading - Mass grading phase requires max soil import of 450,000 cubic yards.

Vehicle Trips - Construction only.

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	620.00	131.00
tblConstructionPhase	NumDays	440.00	131.00
tblGrading	MaterialImported	0.00	450,000.00
tblLandUse	LotAcreage	300.00	377.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripNumber	56,250.00	39,300.00
tblTripsAndVMT	WorkerTripNumber	73.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.2230	213.9732	152.0206	0.5606	44.2659	7.6273	51.8932	13.8844	7.0423	20.9267	0.0000	56,208.7372	56,208.7372	11.5617	3.2526	57,467.0621
Maximum	**19.2230**	**213.9732**	**152.0206**	**0.5606**	**44.2659**	**7.6273**	**51.8932**	**13.8844**	**7.0423**	**20.9267**	**0.0000**	**56,208.7372**	**56,208.7372**	**11.5617**	**3.2526**	**57,467.0621**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.2230	213.9732	152.0206	0.5606	19.1368	7.6273	26.7641	5.8238	7.0423	12.8661	0.0000	56,208.7371	56,208.7371	11.5617	3.2526	57,467.0621
Maximum	**19.2230**	**213.9732**	**152.0206**	**0.5606**	**19.1368**	**7.6273**	**26.7641**	**5.8238**	**7.0423**	**12.8661**	**0.0000**	**56,208.7371**	**56,208.7371**	**11.5617**	**3.2526**	**57,467.0621**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.77**	**0.00**	**48.42**	**58.06**	**0.00**	**38.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143
Total	**169.6028**	**40.6216**	**430.3243**	**0.8724**	**17.0147**	**35.6570**	**52.6717**	**4.5393**	**35.6486**	**40.1879**	**4,121.9444**	**50,179.8319**	**54,301.7763**	**14.3976**	**1.5803**	**55,132.6567**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143
Total	**169.6028**	**40.6216**	**430.3243**	**0.8724**	**17.0147**	**35.6570**	**52.6717**	**4.5393**	**35.6486**	**40.1879**	**4,121.9444**	**50,179.8319**	**54,301.7763**	**14.3976**	**1.5803**	**55,132.6567**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mass Grading	Grading	3/1/2024	8/30/2024	5	131	
2	Street Improvements	Paving	3/1/2024	8/30/2024	5	131	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2358

Acres of Paving: 6.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading	Graders	3	8.00	187	0.41
Mass Grading	Off-Highway Trucks	4	8.00	402	0.38
Mass Grading	Pumps	1	8.00	84	0.74
Mass Grading	Rubber Tired Dozers	3	8.00	247	0.40
Mass Grading	Scrapers	15	8.00	367	0.48
Mass Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Street Improvements	Pavers	2	8.00	130	0.42
Street Improvements	Paving Equipment	2	8.00	132	0.36
Street Improvements	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mass Grading	29	30.00	0.00	39,300.00	11.00	5.40	24.00	LD_Mix	HDT_Mix	HHDT
Street Improvements	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Mass Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.5903	0.0000	37.5903	12.0577	0.0000	12.0577			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976		33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**37.5903**	**6.7264**	**44.3166**	**12.0577**	**6.1976**	**18.2553**		**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7065	34.8559	8.8990	0.1926	6.2991	0.4307	6.7298	1.7268	0.4121	2.1389		20,586.4266	20,586.4266	0.3122	3.2447	21,561.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0876	0.0483	0.8005	2.1500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		217.3944	217.3944	5.4200e-003	5.3200e-003	219.1140
Total	**0.7941**	**34.9043**	**9.6995**	**0.1948**	**6.5501**	**0.4318**	**6.9820**	**1.7934**	**0.4131**	**2.2065**		**20,803.8210**	**20,803.8210**	**0.3176**	**3.2500**	**21,780.2507**

Date: 11/3/2022 8:46 AM

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.4612	0.0000	12.4612	3.9971	0.0000	3.9971			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976	0.0000	33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**12.4612**	**6.7264**	**19.1875**	**3.9971**	**6.1976**	**10.1948**	**0.0000**	**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7065	34.8559	8.8990	0.1926	6.2991	0.4307	6.7298	1.7268	0.4121	2.1389		20,586.4266	20,586.4266	0.3122	3.2447	21,561.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0876	0.0483	0.8005	2.1500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		217.3944	217.3944	5.4200e-003	5.3200e-003	219.1140
Total	**0.7941**	**34.9043**	**9.6995**	**0.1948**	**6.5501**	**0.4318**	**6.9820**	**1.7934**	**0.4131**	**2.2065**		**20,803.8210**	**20,803.8210**	**0.3176**	**3.2500**	**21,780.2507**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Street Improvements - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0242	0.4003	1.0800e-003	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		108.6972	108.6972	2.7100e-003	2.6600e-003	109.5570
Total	**0.0438**	**0.0242**	**0.4003**	**1.0800e-003**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**108.6972**	**108.6972**	**2.7100e-003**	**2.6600e-003**	**109.5570**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0242	0.4003	1.0800e-003	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		108.6972	108.6972	2.7100e-003	2.6600e-003	109.5570
Total	**0.0438**	**0.0242**	**0.4003**	**1.0800e-003**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**108.6972**	**108.6972**	**2.7100e-003**	**2.6600e-003**	**109.5570**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143
Baseline	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Baseline	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

7.0 Water Detail

7.1 Mitigation Measures Water

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.2

Mass Grading Winter

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Mass Grading/Off-site Street Improvements

Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	264.00	1000sqft	6.06	264,000.00	0
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Mass grading/street improvement phase only. Approximately 6 month duration.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment -

Trips and VMT - Per applicant - 300 roundtrips hauling per day. 30 workers on-site.

Soil imported from adjacent parcels and Stormwater Channel Project (24 mi roundtrip)

Grading - Mass grading phase requires max soil import of 450,000 cubic yards.

Vehicle Trips - Construction only.

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	620.00	131.00
tblConstructionPhase	NumDays	440.00	131.00
tblGrading	MaterialImported	0.00	450,000.00
tblLandUse	LotAcreage	300.00	377.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripNumber	56,250.00	39,300.00
tblTripsAndVMT	WorkerTripNumber	73.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.1592	216.0218	151.9837	0.5605	44.2659	7.6278	51.8937	13.8844	7.0428	20.9272	0.0000	56,205.4951	56,205.4951	11.5594	3.2571	57,465.0998
Maximum	**19.1592**	**216.0218**	**151.9837**	**0.5605**	**44.2659**	**7.6278**	**51.8937**	**13.8844**	**7.0428**	**20.9272**	**0.0000**	**56,205.4951**	**56,205.4951**	**11.5594**	**3.2571**	**57,465.0998**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.1592	216.0218	151.9837	0.5605	19.1368	7.6278	26.7646	5.8238	7.0428	12.8666	0.0000	56,205.4951	56,205.4951	11.5594	3.2571	57,465.0997
Maximum	**19.1592**	**216.0218**	**151.9837**	**0.5605**	**19.1368**	**7.6278**	**26.7646**	**5.8238**	**7.0428**	**12.8666**	**0.0000**	**56,205.4951**	**56,205.4951**	**11.5594**	**3.2571**	**57,465.0997**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.77**	**0.00**	**48.42**	**58.06**	**0.00**	**38.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Total	**167.9820**	**41.2644**	**422.7362**	**0.8605**	**17.0147**	**35.6571**	**52.6718**	**4.5393**	**35.6488**	**40.1880**	**4,121.9444**	**48,972.1520**	**53,094.0964**	**14.4349**	**1.5989**	**53,931.4328**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Total	**167.9820**	**41.2644**	**422.7362**	**0.8605**	**17.0147**	**35.6571**	**52.6718**	**4.5393**	**35.6488**	**40.1880**	**4,121.9444**	**48,972.1520**	**53,094.0964**	**14.4349**	**1.5989**	**53,931.4328**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mass Grading	Grading	3/1/2024	8/30/2024	5	131	
2	Street Improvements	Paving	3/1/2024	8/30/2024	5	131	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2358

Acres of Paving: 6.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading	Graders	3	8.00	187	0.41
Mass Grading	Off-Highway Trucks	4	8.00	402	0.38
Mass Grading	Pumps	1	8.00	84	0.74
Mass Grading	Rubber Tired Dozers	3	8.00	247	0.40
Mass Grading	Scrapers	15	8.00	367	0.48
Mass Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Street Improvements	Pavers	2	8.00	130	0.42
Street Improvements	Paving Equipment	2	8.00	132	0.36
Street Improvements	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mass Grading	29	30.00	0.00	39,300.00	11.00	5.40	24.00	LD_Mix	HDT_Mix	HHDT
Street Improvements	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Mass Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.5903	0.0000	37.5903	12.0577	0.0000	12.0577			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976		33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**37.5903**	**6.7264**	**44.3166**	**12.0577**	**6.1976**	**18.2553**		**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6535	36.9018	9.0714	0.1929	6.2991	0.4312	6.7303	1.7268	0.4125	2.1393		20,613.6060	20,613.6060	0.3096	3.2490	21,589.5351
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0804	0.0501	0.6610	1.9500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		197.1134	197.1134	5.5400e-003	5.4400e-003	198.8735
Total	**0.7339**	**36.9520**	**9.7323**	**0.1948**	**6.5501**	**0.4323**	**6.9825**	**1.7934**	**0.4136**	**2.2070**		**20,810.7194**	**20,810.7194**	**0.3152**	**3.2544**	**21,788.4086**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.4612	0.0000	12.4612	3.9971	0.0000	3.9971			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976	0.0000	33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**12.4612**	**6.7264**	**19.1875**	**3.9971**	**6.1976**	**10.1948**	**0.0000**	**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6535	36.9018	9.0714	0.1929	6.2991	0.4312	6.7303	1.7268	0.4125	2.1393		20,613.6060	20,613.6060	0.3096	3.2490	21,589.5351
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0804	0.0501	0.6610	1.9500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		197.1134	197.1134	5.5400e-003	5.4400e-003	198.8735
Total	**0.7339**	**36.9520**	**9.7323**	**0.1948**	**6.5501**	**0.4323**	**6.9825**	**1.7934**	**0.4136**	**2.2070**		**20,810.7194**	**20,810.7194**	**0.3152**	**3.2544**	**21,788.4086**

3.3 Street Improvements - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Date: 11/3/2022 8:45 AM

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0251	0.3305	9.8000e-004	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		98.5567	98.5567	2.7700e-003	2.7200e-003	99.4367
Total	**0.0402**	**0.0251**	**0.3305**	**9.8000e-004**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**98.5567**	**98.5567**	**2.7700e-003**	**2.7200e-003**	**99.4367**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0251	0.3305	9.8000e-004	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		98.5567	98.5567	2.7700e-003	2.7200e-003	99.4367
Total	**0.0402**	**0.0251**	**0.3305**	**9.8000e-004**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**98.5567**	**98.5567**	**2.7700e-003**	**2.7200e-003**	**99.4367**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Baseline	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Baseline	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.3

Mass Grading Mitigated Summer

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated)

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	264.00	1000sqft	6.06	264,000.00	0
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Mass grading/street improvement phase only. Approximately 6 month duration.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment -

Trips and VMT - Per applicant - 300 roundtrips hauling per day. 30 workers on-site.
Soil imported from adjacent parcels and Stormwater Channel Project (24 mi roundtrip)

Grading - Mass grading phase requires max soil import of 450,000 cubic yards.

Vehicle Trips - Construction only.

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Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Coating -

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls. Tier 4 mitigation.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	620.00	131.00
tblConstructionPhase	NumDays	440.00	131.00
tblGrading	MaterialImported	0.00	450,000.00

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	300.00	377.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripNumber	56,250.00	39,300.00
tblTripsAndVMT	WorkerTripNumber	73.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.2230	213.9732	152.0206	0.5606	44.2659	7.6273	51.8932	13.8844	7.0423	20.9267	0.0000	56,208.7372	56,208.7372	11.5617	3.2526	57,467.0621
Maximum	**19.2230**	**213.9732**	**152.0206**	**0.5606**	**44.2659**	**7.6273**	**51.8932**	**13.8844**	**7.0423**	**20.9267**	**0.0000**	**56,208.7372**	**56,208.7372**	**11.5617**	**3.2526**	**57,467.0621**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	5.4192	54.2555	185.1413	0.5606	19.1368	1.0271	20.1639	5.8238	1.0083	6.8321	0.0000	56,208.7371	56,208.7371	11.5617	3.2526	57,467.0621
Maximum	**5.4192**	**54.2555**	**185.1413**	**0.5606**	**19.1368**	**1.0271**	**20.1639**	**5.8238**	**1.0083**	**6.8321**	**0.0000**	**56,208.7371**	**56,208.7371**	**11.5617**	**3.2526**	**57,467.0621**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**71.81**	**74.64**	**-21.79**	**0.00**	**56.77**	**86.53**	**61.14**	**58.06**	**85.68**	**67.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143
Total	**169.6028**	**40.6216**	**430.3243**	**0.8724**	**17.0147**	**35.6570**	**52.6717**	**4.5393**	**35.6486**	**40.1879**	**4,121.9444**	**50,179.8319**	**54,301.7763**	**14.3976**	**1.5803**	**55,132.6567**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0899	0.9395	0.8548	17,510.3143
Total	**169.6028**	**40.6216**	**430.3243**	**0.8724**	**17.0147**	**35.6570**	**52.6717**	**4.5393**	**35.6486**	**40.1879**	**4,121.9444**	**50,179.8319**	**54,301.7763**	**14.3976**	**1.5803**	**55,132.6567**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mass Grading	Grading	3/1/2024	8/30/2024	5	131	
2	Street Improvements	Paving	3/1/2024	8/30/2024	5	131	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2358

Acres of Paving: 6.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading	Graders	3	8.00	187	0.41
Mass Grading	Off-Highway Trucks	4	8.00	402	0.38
Mass Grading	Pumps	1	8.00	84	0.74
Mass Grading	Rubber Tired Dozers	3	8.00	247	0.40
Mass Grading	Scrapers	15	8.00	367	0.48
Mass Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Street Improvements	Pavers	2	8.00	130	0.42
Street Improvements	Paving Equipment	2	8.00	132	0.36
Street Improvements	Rollers	2	8.00	80	0.38

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mass Grading	29	30.00	0.00	39,300.00	11.00	5.40	24.00	LD_Mix	HDT_Mix	HHDT
Street Improvements	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mass Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.5903	0.0000	37.5903	12.0577	0.0000	12.0577			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976		33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**37.5903**	**6.7264**	**44.3166**	**12.0577**	**6.1976**	**18.2553**		**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

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Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7065	34.8559	8.8990	0.1926	6.2991	0.4307	6.7298	1.7268	0.4121	2.1389		20,586.4266	20,586.4266	0.3122	3.2447	21,561.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0876	0.0483	0.8005	2.1500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		217.3944	217.3944	5.4200e-003	5.3200e-003	219.1140
Total	**0.7941**	**34.9043**	**9.6995**	**0.1948**	**6.5501**	**0.4318**	**6.9820**	**1.7934**	**0.4131**	**2.2065**		**20,803.8210**	**20,803.8210**	**0.3176**	**3.2500**	**21,780.2507**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.4612	0.0000	12.4612	3.9971	0.0000	3.9971			0.0000			0.0000
Off-Road	4.1796	18.1117	157.7459	0.3419		0.5573	0.5573		0.5573	0.5573	0.0000	33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**4.1796**	**18.1117**	**157.7459**	**0.3419**	**12.4612**	**0.5573**	**13.0185**	**3.9971**	**0.5573**	**4.5544**	**0.0000**	**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7065	34.8559	8.8990	0.1926	6.2991	0.4307	6.7298	1.7268	0.4121	2.1389		20,586.4266	20,586.4266	0.3122	3.2447	21,561.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0876	0.0483	0.8005	2.1500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		217.3944	217.3944	5.4200e-003	5.3200e-003	219.1140
Total	**0.7941**	**34.9043**	**9.6995**	**0.1948**	**6.5501**	**0.4318**	**6.9820**	**1.7934**	**0.4131**	**2.2065**		**20,803.8210**	**20,803.8210**	**0.3176**	**3.2500**	**21,780.2507**

3.3 Street Improvements - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0438	0.0242	0.4003	1.0800e-003	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		108.6972	108.6972	2.7100e-003	2.6600e-003	109.5570
Total	**0.0438**	**0.0242**	**0.4003**	**1.0800e-003**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**108.6972**	**108.6972**	**2.7100e-003**	**2.6600e-003**	**109.5570**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4017**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0242	0.4003	1.0800e-003	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		108.6972	108.6972	2.7100e-003	2.6600e-003	109.5570
Total	**0.0438**	**0.0242**	**0.4003**	**1.0800e-003**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**108.6972**	**108.6972**	**2.7100e-003**	**2.6600e-003**	**109.5570**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0890	0.9395	0.8548	17,510.3143
Baseline	9.5925	10.6449	77.8776	0.1691	17.0147	0.1320	17.1467	4.5393	0.1236	4.6629		17,232.0899	17,232.0890	0.9395	0.8548	17,510.3143

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Baseline	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

APPENDIX D.4

Mass Grading Mitigated Winter

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated)

Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	264.00	1000sqft	6.06	264,000.00	0
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Mass grading/street improvement phase only. Approximately 6 month duration.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment -

Trips and VMT - Per applicant - 300 roundtrips hauling per day. 30 workers on-site.
Soil imported from adjacent parcels and Stormwater Channel Project (24 mi roundtrip)

Grading - Mass grading phase requires max soil import of 450,000 cubic yards.

Vehicle Trips - Construction only.

Date: 11/3/2022 9:57 AM

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Coating -

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls. Tier 4 mitigation.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	620.00	131.00
tblConstructionPhase	NumDays	440.00	131.00
tblGrading	MaterialImported	0.00	450,000.00

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	300.00	377.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripNumber	56,250.00	39,300.00
tblTripsAndVMT	WorkerTripNumber	73.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	19.1592	216.0218	151.9837	0.5605	44.2659	7.6278	51.8937	13.8844	7.0428	20.9272	0.0000	56,205.4951	56,205.4951	11.5594	3.2571	57,465.0998
Maximum	**19.1592**	**216.0218**	**151.9837**	**0.5605**	**44.2659**	**7.6278**	**51.8937**	**13.8844**	**7.0428**	**20.9272**	**0.0000**	**56,205.4951**	**56,205.4951**	**11.5594**	**3.2571**	**57,465.0998**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	5.3554	56.3041	185.1044	0.5605	19.1368	1.0276	20.1644	5.8238	1.0088	6.8326	0.0000	56,205.4951	56,205.4951	11.5594	3.2571	57,465.0997
Maximum	**5.3554**	**56.3041**	**185.1044**	**0.5605**	**19.1368**	**1.0276**	**20.1644**	**5.8238**	**1.0088**	**6.8326**	**0.0000**	**56,205.4951**	**56,205.4951**	**11.5594**	**3.2571**	**57,465.0997**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**72.05**	**73.94**	**-21.79**	**0.00**	**56.77**	**86.53**	**61.14**	**58.06**	**85.68**	**67.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Total	**167.9820**	**41.2644**	**422.7362**	**0.8605**	**17.0147**	**35.6571**	**52.6718**	**4.5393**	**35.6488**	**40.1880**	**4,121.9444**	**48,972.1520**	**53,094.0964**	**14.4349**	**1.5989**	**53,931.4328**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Total	**167.9820**	**41.2644**	**422.7362**	**0.8605**	**17.0147**	**35.6571**	**52.6718**	**4.5393**	**35.6488**	**40.1880**	**4,121.9444**	**48,972.1520**	**53,094.0964**	**14.4349**	**1.5989**	**53,931.4328**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mass Grading	Grading	3/1/2024	8/30/2024	5	131	
2	Street Improvements	Paving	3/1/2024	8/30/2024	5	131	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2358

Acres of Paving: 6.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading	Graders	3	8.00	187	0.41
Mass Grading	Off-Highway Trucks	4	8.00	402	0.38
Mass Grading	Pumps	1	8.00	84	0.74
Mass Grading	Rubber Tired Dozers	3	8.00	247	0.40
Mass Grading	Scrapers	15	8.00	367	0.48
Mass Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Street Improvements	Pavers	2	8.00	130	0.42
Street Improvements	Paving Equipment	2	8.00	132	0.36
Street Improvements	Rollers	2	8.00	80	0.38

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mass Grading	29	30.00	0.00	39,300.00	11.00	5.40	24.00	LD_Mix	HDT_Mix	HHDT
Street Improvements	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mass Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.5903	0.0000	37.5903	12.0577	0.0000	12.0577			0.0000			0.0000
Off-Road	17.2757	169.5202	127.2951	0.3419		6.7264	6.7264		6.1976	6.1976		33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**17.2757**	**169.5202**	**127.2951**	**0.3419**	**37.5903**	**6.7264**	**44.3166**	**12.0577**	**6.1976**	**18.2553**		**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6535	36.9018	9.0714	0.1929	6.2991	0.4312	6.7303	1.7268	0.4125	2.1393		20,613.6060	20,613.6060	0.3096	3.2490	21,589.5351
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0804	0.0501	0.6610	1.9500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		197.1134	197.1134	5.5400e-003	5.4400e-003	198.8735
Total	**0.7339**	**36.9520**	**9.7323**	**0.1948**	**6.5501**	**0.4323**	**6.9825**	**1.7934**	**0.4136**	**2.2070**		**20,810.7194**	**20,810.7194**	**0.3152**	**3.2544**	**21,788.4086**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.4612	0.0000	12.4612	3.9971	0.0000	3.9971			0.0000			0.0000
Off-Road	4.1796	18.1117	157.7459	0.3419		0.5573	0.5573		0.5573	0.5573	0.0000	33,088.6718	33,088.6718	10.5275		33,351.8581
Total	**4.1796**	**18.1117**	**157.7459**	**0.3419**	**12.4612**	**0.5573**	**13.0185**	**3.9971**	**0.5573**	**4.5544**	**0.0000**	**33,088.6718**	**33,088.6718**	**10.5275**		**33,351.8581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6535	36.9018	9.0714	0.1929	6.2991	0.4312	6.7303	1.7268	0.4125	2.1393		20,613.6060	20,613.6060	0.3096	3.2490	21,589.5351
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0804	0.0501	0.6610	1.9500e-003	0.2510	1.1500e-003	0.2522	0.0666	1.0600e-003	0.0676		197.1134	197.1134	5.5400e-003	5.4400e-003	198.8735
Total	**0.7339**	**36.9520**	**9.7323**	**0.1948**	**6.5501**	**0.4323**	**6.9825**	**1.7934**	**0.4136**	**2.2070**		**20,810.7194**	**20,810.7194**	**0.3152**	**3.2544**	**21,788.4086**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Street Improvements - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1094**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0251	0.3305	9.8000e-004	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		98.5567	98.5567	2.7700e-003	2.7200e-003	99.4367
Total	**0.0402**	**0.0251**	**0.3305**	**9.8000e-004**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**98.5567**	**98.5567**	**2.7700e-003**	**2.7200e-003**	**99.4367**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.1212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4017**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0251	0.3305	9.8000e-004	0.1255	5.8000e-004	0.1261	0.0333	5.3000e-004	0.0338		98.5567	98.5567	2.7700e-003	2.7200e-003	99.4367
Total	**0.0402**	**0.0251**	**0.3305**	**9.8000e-004**	**0.1255**	**5.8000e-004**	**0.1261**	**0.0333**	**5.3000e-004**	**0.0338**		**98.5567**	**98.5567**	**2.7700e-003**	**2.7200e-003**	**99.4367**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904
Baseline	7.9717	11.2877	70.2895	0.1572	17.0147	0.1321	17.1468	4.5393	0.1238	4.6630		16,024.4100	16,024.4100	0.9768	0.8734	16,309.0904

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933
Baseline	159.3399	24.2481	350.0090	0.6667		35.0619	35.0619		35.0619	35.0619	4,121.9444	25,634.6509	29,756.5953	13.3179	0.5914	30,265.7933

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1935					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	110.5169	22.8226	226.2822	0.6602		34.3761	34.3761		34.3761	34.3761	4,121.9444	25,411.7647	29,533.7091	13.1040	0.5914	30,037.5582
Landscaping	3.7219	1.4255	123.7268	6.5400e-003		0.6857	0.6857		0.6857	0.6857		222.8862	222.8862	0.2140		228.2351
Total	**159.3399**	**24.2481**	**350.0090**	**0.6667**		**35.0619**	**35.0619**		**35.0619**	**35.0619**	**4,121.9444**	**25,634.6509**	**29,756.5953**	**13.3179**	**0.5914**	**30,265.7933**

Desert Retreat - Mass Grading/Off-site Street Improvements (Mitigated) - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.5

Individual Phase Summer

Date: 11/3/2022 8:38 AM

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Individual Phase Construction

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Retirement Community	20.00	Dwelling Unit	2.52	20,000.00	57

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Aprox. 20 houses built per phase plus street improvments. 3 acres developed per phase.

Construction Phase - Phase durations provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - On-road trips provided by applicant.

Grading - 3-acre development areas.

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Construction only.

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Area Mitigation -

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	220.00	44.00
tblConstructionPhase	NumDays	6.00	44.00
tblConstructionPhase	NumDays	10.00	44.00
tblLandUse	LotAcreage	4.00	2.52
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	VendorTripNumber	6.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblTripsAndVMT	WorkerTripNumber	23.00	125.00
tblTripsAndVMT	WorkerTripNumber	38.00	25.00
tblTripsAndVMT	WorkerTripNumber	5.00	35.00

Date: 11/3/2022 8:38 AM

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.1316	20.7738	28.1935	0.0695	1.1462	0.8749	2.0211	0.3063	0.8480	1.1543	0.0000	6,643.3311	6,643.3311	1.0779	0.0655	6,689.8006
2025	3.7943	21.7351	22.6946	0.0617	0.3430	0.8266	1.0609	0.0921	0.7670	0.8297	0.0000	5,880.4659	5,880.4659	1.7639	0.0271	5,928.9636
Maximum	**3.7943**	**21.7351**	**28.1935**	**0.0695**	**1.1462**	**0.8749**	**2.0211**	**0.3063**	**0.8480**	**1.1543**	**0.0000**	**6,643.3311**	**6,643.3311**	**1.7639**	**0.0655**	**6,689.8006**

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.1316	20.7738	28.1935	0.0695	1.1462	0.8749	2.0211	0.3063	0.8480	1.1543	0.0000	6,643.3311	6,643.3311	1.0779	0.0655	6,689.8006
2025	3.7943	21.7351	22.6946	0.0617	0.3430	0.8266	1.0609	0.0921	0.7670	0.8297	0.0000	5,880.4659	5,880.4659	1.7639	0.0271	5,928.9636
Maximum	**3.7943**	**21.7351**	**28.1935**	**0.0695**	**1.1462**	**0.8749**	**2.0211**	**0.3063**	**0.8480**	**1.1543**	**0.0000**	**6,643.3311**	**6,643.3311**	**1.7639**	**0.0655**	**6,689.8006**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Energy	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Mobile	0.1279	0.1419	1.0384	2.2600e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		229.7612	229.7612	0.0125	0.0114	233.4709
Total	**2.2711**	**0.5416**	**5.7394**	**0.0116**	**0.2269**	**0.4754**	**0.7023**	**0.0605**	**0.4753**	**0.5359**	**54.9593**	**669.0683**	**724.0275**	**0.1920**	**0.0211**	**735.1062**

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Energy	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Mobile	0.1279	0.1419	1.0384	2.2600e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		229.7612	229.7612	0.0125	0.0114	233.4709
Total	**2.2711**	**0.5416**	**5.7394**	**0.0116**	**0.2269**	**0.4754**	**0.7023**	**0.0605**	**0.4753**	**0.5359**	**54.9593**	**669.0683**	**724.0275**	**0.1920**	**0.0211**	**735.1062**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Precise Grading	Grading	8/30/2024	10/30/2024	5	44	
2	Building Construction	Building Construction	10/31/2024	12/31/2024	5	44	
3	On-Site Paving	Paving	1/1/2025	3/3/2025	5	44	
4	Finishings	Architectural Coating	3/4/2025	5/2/2025	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.48

Residential Indoor: 40,500; Residential Outdoor: 13,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,260

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Precise Grading	Dumpers/Tenders	5	8.00	16	0.38
Precise Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	2	8.00	402	0.38
On-Site Paving	Cement and Mortar Mixers	5	8.00	9	0.56
On-Site Paving	Graders	2	8.00	187	0.41
On-Site Paving	Off-Highway Trucks	2	8.00	402	0.38
On-Site Paving	Paving Equipment	1	8.00	132	0.36

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

On-Site Paving	Plate Compactors	1	8.00	8	0.43
On-Site Paving	Rollers	2	8.00	80	0.38
On-Site Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finishings	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Precise Grading	7	8.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	125.00	20.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
On-Site Paving	15	25.00	5.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Finishings	3	35.00	10.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Precise Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0723	0.0000	0.0723	7.8100e-003	0.0000	7.8100e-003			0.0000			0.0000

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.6192	4.8571	5.1669	9.2100e-003		0.2026	0.2026		0.1933	0.1933		832.7934	832.7934	0.2035		837.8809
Total	**0.6192**	**4.8571**	**5.1669**	**9.2100e-003**	**0.0723**	**0.2026**	**0.2750**	**7.8100e-003**	**0.1933**	**0.2011**		**832.7934**	**832.7934**	**0.2035**		**837.8809**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0234	0.0129	0.2135	5.7000e-004	0.0669	3.1000e-004	0.0672	0.0178	2.8000e-004	0.0180		57.9718	57.9718	1.4500e-003	1.4200e-003	58.4304
Total	**0.0234**	**0.0129**	**0.2135**	**5.7000e-004**	**0.0669**	**3.1000e-004**	**0.0672**	**0.0178**	**2.8000e-004**	**0.0180**		**57.9718**	**57.9718**	**1.4500e-003**	**1.4200e-003**	**58.4304**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0240	0.0000	0.0240	2.5900e-003	0.0000	2.5900e-003			0.0000			0.0000
Off-Road	0.6192	4.8571	5.1669	9.2100e-003		0.2026	0.2026		0.1933	0.1933	0.0000	832.7934	832.7934	0.2035		837.8809
Total	**0.6192**	**4.8571**	**5.1669**	**9.2100e-003**	**0.0240**	**0.2026**	**0.2266**	**2.5900e-003**	**0.1933**	**0.1959**	**0.0000**	**832.7934**	**832.7934**	**0.2035**		**837.8809**

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0234	0.0129	0.2135	5.7000e-004	0.0669	3.1000e-004	0.0672	0.0178	2.8000e-004	0.0180		57.9718	57.9718	1.4500e-003	1.4200e-003	58.4304
Total	**0.0234**	**0.0129**	**0.2135**	**5.7000e-004**	**0.0669**	**3.1000e-004**	**0.0672**	**0.0178**	**2.8000e-004**	**0.0180**		**57.9718**	**57.9718**	**1.4500e-003**	**1.4200e-003**	**58.4304**

3.3 Building Construction - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7458	20.0071	24.6043	0.0577		0.8656	0.8656		0.8393	0.8393		5,444.1977	5,444.1977	1.0520		5,470.4980
Total	**2.7458**	**20.0071**	**24.6043**	**0.0577**		**0.8656**	**0.8656**		**0.8393**	**0.8393**		**5,444.1977**	**5,444.1977**	**1.0520**		**5,470.4980**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0207	0.5653	0.2536	2.7700e-003	0.1004	4.4500e-003	0.1048	0.0289	4.2600e-003	0.0332		293.3235	293.3235	3.2600e-003	0.0434	306.3277
Worker	0.3652	0.2014	3.3355	8.9600e-003	1.0458	4.8000e-003	1.0506	0.2774	4.4200e-003	0.2818		905.8099	905.8099	0.0226	0.0222	912.9750
Total	**0.3858**	**0.7667**	**3.5892**	**0.0117**	**1.1462**	**9.2500e-003**	**1.1555**	**0.3063**	**8.6800e-003**	**0.3150**		**1,199.1334**	**1,199.1334**	**0.0259**	**0.0655**	**1,219.3026**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7458	20.0071	24.6043	0.0577		0.8656	0.8656		0.8393	0.8393	0.0000	5,444.1977	5,444.1977	1.0520		5,470.4980
Total	**2.7458**	**20.0071**	**24.6043**	**0.0577**		**0.8656**	**0.8656**		**0.8393**	**0.8393**	**0.0000**	**5,444.1977**	**5,444.1977**	**1.0520**		**5,470.4980**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0207	0.5653	0.2536	2.7700e-003	0.1004	4.4500e-003	0.1048	0.0289	4.2600e-003	0.0332		293.3235	293.3235	3.2600e-003	0.0434	306.3277
Worker	0.3652	0.2014	3.3355	8.9600e-003	1.0458	4.8000e-003	1.0506	0.2774	4.4200e-003	0.2818		905.8099	905.8099	0.0226	0.0222	912.9750
Total	**0.3858**	**0.7667**	**3.5892**	**0.0117**	**1.1462**	**9.2500e-003**	**1.1555**	**0.3063**	**8.6800e-003**	**0.3150**		**1,199.1334**	**1,199.1334**	**0.0259**	**0.0655**	**1,219.3026**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 On-Site Paving - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5962	21.5587	22.0107	0.0593		0.8246	0.8246		0.7651	0.7651		5,633.4440	5,633.4440	1.7589		5,677.4173
Paving	0.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6248**	**21.5587**	**22.0107**	**0.0593**		**0.8246**	**0.8246**		**0.7651**	**0.7651**		**5,633.4440**	**5,633.4440**	**1.7589**		**5,677.4173**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-003	0.1402	0.0628	6.8000e-004	0.0251	1.1100e-003	0.0262	7.2300e-003	1.0700e-003	8.2900e-003		72.0373	72.0373	8.4000e-004	0.0106	75.2259
Worker	0.0682	0.0362	0.6212	1.7300e-003	0.2092	9.1000e-004	0.2101	0.0555	8.4000e-004	0.0563		174.9846	174.9846	4.0900e-003	4.1400e-003	176.3204
Total	**0.0733**	**0.1764**	**0.6839**	**2.4100e-003**	**0.2343**	**2.0200e-003**	**0.2363**	**0.0627**	**1.9100e-003**	**0.0646**		**247.0218**	**247.0218**	**4.9300e-003**	**0.0148**	**251.5463**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5962	21.5587	22.0107	0.0593		0.8246	0.8246		0.7651	0.7651	0.0000	5,633.4440	5,633.4440	1.7589		5,677.4173
Paving	0.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6248**	**21.5587**	**22.0107**	**0.0593**		**0.8246**	**0.8246**		**0.7651**	**0.7651**	**0.0000**	**5,633.4440**	**5,633.4440**	**1.7589**		**5,677.4173**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-003	0.1402	0.0628	6.8000e-004	0.0251	1.1100e-003	0.0262	7.2300e-003	1.0700e-003	8.2900e-003		72.0373	72.0373	8.4000e-004	0.0106	75.2259
Worker	0.0682	0.0362	0.6212	1.7300e-003	0.2092	9.1000e-004	0.2101	0.0555	8.4000e-004	0.0563		174.9846	174.9846	4.0900e-003	4.1400e-003	176.3204
Total	**0.0733**	**0.1764**	**0.6839**	**2.4100e-003**	**0.2343**	**2.0200e-003**	**0.2363**	**0.0627**	**1.9100e-003**	**0.0646**		**247.0218**	**247.0218**	**4.9300e-003**	**0.0148**	**251.5463**

3.5 Finishings - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5126	3.4365	5.4274	8.9100e-003		0.1545	0.1545		0.1545	0.1545		844.3442	844.3442	0.0461		845.4956
Total	**3.6886**	**3.4365**	**5.4274**	**8.9100e-003**		**0.1545**	**0.1545**		**0.1545**	**0.1545**		**844.3442**	**844.3442**	**0.0461**		**845.4956**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vendor	0.0102	0.2804	0.1255	1.3600e-003	0.0502	2.2300e-003	0.0524	0.0145	2.1300e-003	0.0166		144.0745	144.0745	1.6900e-003	0.0213	150.4518
Worker	0.0954	0.0507	0.8697	2.4200e-003	0.2928	1.2800e-003	0.2941	0.0777	1.1700e-003	0.0789		244.9784	244.9784	5.7200e-003	5.8000e-003	246.8486
Total	**0.1056**	**0.3311**	**0.9952**	**3.7800e-003**	**0.3430**	**3.5100e-003**	**0.3465**	**0.0921**	**3.3000e-003**	**0.0954**		**389.0529**	**389.0529**	**7.4100e-003**	**0.0271**	**397.3003**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5126	3.4365	5.4274	8.9100e-003		0.1545	0.1545		0.1545	0.1545	0.0000	844.3441	844.3441	0.0461		845.4956
Total	**3.6886**	**3.4365**	**5.4274**	**8.9100e-003**		**0.1545**	**0.1545**		**0.1545**	**0.1545**	**0.0000**	**844.3441**	**844.3441**	**0.0461**		**845.4956**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0102	0.2804	0.1255	1.3600e-003	0.0502	2.2300e-003	0.0524	0.0145	2.1300e-003	0.0166		144.0745	144.0745	1.6900e-003	0.0213	150.4518
Worker	0.0954	0.0507	0.8697	2.4200e-003	0.2928	1.2800e-003	0.2941	0.0777	1.1700e-003	0.0789		244.9784	244.9784	5.7200e-003	5.8000e-003	246.8486
Total	**0.1056**	**0.3311**	**0.9952**	**3.7800e-003**	**0.3430**	**3.5100e-003**	**0.3465**	**0.0921**	**3.3000e-003**	**0.0954**		**389.0529**	**389.0529**	**7.4100e-003**	**0.0271**	**397.3003**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	0.1279	0.1419	1.0384	2.2600e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		229.7612	229.7612	0.0125	0.0114	233.4709
Baseline	0.1279	0.1419	1.0384	2.2600e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		229.7612	229.7612	0.0125	0.0114	233.4709

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	48.00	40.60	39.00	102,131	102,131
Total	48.00	40.60	39.00	102,131	102,131

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
NaturalGas Baseline	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	828.817	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Total		**8.9400e-003**	**0.0764**	**0.0325**	**4.9000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**		**97.5079**	**97.5079**	**1.8700e-003**	**1.7900e-003**	**98.0873**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Retirement Community	0.828817	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Total		**8.9400e-003**	**0.0764**	**0.0325**	**4.9000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**		**97.5079**	**97.5079**	**1.8700e-003**	**1.7900e-003**	**98.0873**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Baseline	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4736	0.3043	3.0171	8.8000e-003		0.4584	0.4584		0.4584	0.4584	54.9593	338.8235	393.7828	0.1747	7.8900e-003	400.5008
Landscaping	0.0498	0.0190	1.6515	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003		2.9756	2.9756	2.8600e-003		3.0472
Total	**2.1342**	**0.3233**	**4.6686**	**8.8900e-003**		**0.4675**	**0.4675**		**0.4675**	**0.4675**	**54.9593**	**341.7992**	**396.7584**	**0.1776**	**7.8900e-003**	**403.5480**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4736	0.3043	3.0171	8.8000e-003		0.4584	0.4584		0.4584	0.4584	54.9593	338.8235	393.7828	0.1747	7.8900e-003	400.5008
Landscaping	0.0498	0.0190	1.6515	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003		2.9756	2.9756	2.8600e-003		3.0472
Total	**2.1342**	**0.3233**	**4.6686**	**8.8900e-003**		**0.4675**	**0.4675**		**0.4675**	**0.4675**	**54.9593**	**341.7992**	**396.7584**	**0.1776**	**7.8900e-003**	**403.5480**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.6

Individual Phase Winter

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Individual Phase Construction

Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Retirement Community	20.00	Dwelling Unit	2.52	20,000.00	57

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Aprox. 20 houses built per phase plus street improvments. 3 acres developed per phase.

Construction Phase - Phase durations provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - On-road trips provided by applicant.

Grading - 3-acre development areas.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Construction only.

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Area Mitigation -

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	220.00	44.00
tblConstructionPhase	NumDays	6.00	44.00
tblConstructionPhase	NumDays	10.00	44.00
tblLandUse	LotAcreage	4.00	2.52
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	VendorTripNumber	6.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblTripsAndVMT	WorkerTripNumber	23.00	125.00
tblTripsAndVMT	WorkerTripNumber	38.00	25.00
tblTripsAndVMT	WorkerTripNumber	5.00	35.00

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.0998	20.8162	27.6212	0.0686	1.1462	0.8749	2.0211	0.3063	0.8480	1.1543	0.0000	6,559.7391	6,559.7391	1.0783	0.0662	6,606.4264
2025	3.7857	21.7451	22.5895	0.0615	0.3430	0.8266	1.0609	0.0921	0.7670	0.8298	0.0000	5,864.4084	5,864.4084	1.7640	0.0273	5,912.9497
Maximum	**3.7857**	**21.7451**	**27.6212**	**0.0686**	**1.1462**	**0.8749**	**2.0211**	**0.3063**	**0.8480**	**1.1543**	**0.0000**	**6,559.7391**	**6,559.7391**	**1.7640**	**0.0662**	**6,606.4264**

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.0998	20.8162	27.6212	0.0686	1.1462	0.8749	2.0211	0.3063	0.8480	1.1543	0.0000	6,559.7391	6,559.7391	1.0783	0.0662	6,606.4264
2025	3.7857	21.7451	22.5895	0.0615	0.3430	0.8266	1.0609	0.0921	0.7670	0.8298	0.0000	5,864.4084	5,864.4084	1.7640	0.0273	5,912.9497
Maximum	**3.7857**	**21.7451**	**27.6212**	**0.0686**	**1.1462**	**0.8749**	**2.0211**	**0.3063**	**0.8480**	**1.1543**	**0.0000**	**6,559.7391**	**6,559.7391**	**1.7640**	**0.0662**	**6,606.4264**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Energy	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Mobile	0.1063	0.1505	0.9372	2.1000e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		213.6588	213.6588	0.0130	0.0116	217.4545
Total	**2.2495**	**0.5502**	**5.6383**	**0.0115**	**0.2269**	**0.4754**	**0.7023**	**0.0605**	**0.4753**	**0.5359**	**54.9593**	**652.9659**	**707.9251**	**0.1925**	**0.0213**	**719.0899**

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Energy	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Mobile	0.1063	0.1505	0.9372	2.1000e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		213.6588	213.6588	0.0130	0.0116	217.4545
Total	**2.2495**	**0.5502**	**5.6383**	**0.0115**	**0.2269**	**0.4754**	**0.7023**	**0.0605**	**0.4753**	**0.5359**	**54.9593**	**652.9659**	**707.9251**	**0.1925**	**0.0213**	**719.0899**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Precise Grading	Grading	8/30/2024	10/30/2024	5	44	
2	Building Construction	Building Construction	10/31/2024	12/31/2024	5	44	
3	On-Site Paving	Paving	1/1/2025	3/3/2025	5	44	
4	Finishings	Architectural Coating	3/4/2025	5/2/2025	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.48

Residential Indoor: 40,500; Residential Outdoor: 13,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,260

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Precise Grading	Dumpers/Tenders	5	8.00	16	0.38
Precise Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	2	8.00	402	0.38
On-Site Paving	Cement and Mortar Mixers	5	8.00	9	0.56
On-Site Paving	Graders	2	8.00	187	0.41
On-Site Paving	Off-Highway Trucks	2	8.00	402	0.38
On-Site Paving	Paving Equipment	1	8.00	132	0.36

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

On-Site Paving	Plate Compactors	1	8.00	8	0.43
On-Site Paving	Rollers	2	8.00	80	0.38
On-Site Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finishings	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Precise Grading	7	8.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	125.00	20.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
On-Site Paving	15	25.00	5.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Finishings	3	35.00	10.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Precise Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0723	0.0000	0.0723	7.8100e-003	0.0000	7.8100e-003			0.0000			0.0000

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.6192	4.8571	5.1669	9.2100e-003		0.2026	0.2026		0.1933	0.1933		832.7934	832.7934	0.2035		837.8809
Total	**0.6192**	**4.8571**	**5.1669**	**9.2100e-003**	**0.0723**	**0.2026**	**0.2750**	**7.8100e-003**	**0.1933**	**0.2011**		**832.7934**	**832.7934**	**0.2035**		**837.8809**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0214	0.0134	0.1763	5.2000e-004	0.0669	3.1000e-004	0.0672	0.0178	2.8000e-004	0.0180		52.5636	52.5636	1.4800e-003	1.4500e-003	53.0329
Total	**0.0214**	**0.0134**	**0.1763**	**5.2000e-004**	**0.0669**	**3.1000e-004**	**0.0672**	**0.0178**	**2.8000e-004**	**0.0180**		**52.5636**	**52.5636**	**1.4800e-003**	**1.4500e-003**	**53.0329**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0240	0.0000	0.0240	2.5900e-003	0.0000	2.5900e-003			0.0000			0.0000
Off-Road	0.6192	4.8571	5.1669	9.2100e-003		0.2026	0.2026		0.1933	0.1933	0.0000	832.7934	832.7934	0.2035		837.8809
Total	**0.6192**	**4.8571**	**5.1669**	**9.2100e-003**	**0.0240**	**0.2026**	**0.2266**	**2.5900e-003**	**0.1933**	**0.1959**	**0.0000**	**832.7934**	**832.7934**	**0.2035**		**837.8809**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0214	0.0134	0.1763	5.2000e-004	0.0669	3.1000e-004	0.0672	0.0178	2.8000e-004	0.0180		52.5636	52.5636	1.4800e-003	1.4500e-003	53.0329
Total	**0.0214**	**0.0134**	**0.1763**	**5.2000e-004**	**0.0669**	**3.1000e-004**	**0.0672**	**0.0178**	**2.8000e-004**	**0.0180**		**52.5636**	**52.5636**	**1.4800e-003**	**1.4500e-003**	**53.0329**

3.3 Building Construction - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7458	20.0071	24.6043	0.0577		0.8656	0.8656		0.8393	0.8393		5,444.1977	5,444.1977	1.0520		5,470.4980
Total	**2.7458**	**20.0071**	**24.6043**	**0.0577**		**0.8656**	**0.8656**		**0.8393**	**0.8393**		**5,444.1977**	**5,444.1977**	**1.0520**		**5,470.4980**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0190	0.6002	0.2628	2.7700e-003	0.1004	4.4700e-003	0.1048	0.0289	4.2800e-003	0.0332		294.2355	294.2355	3.1900e-003	0.0435	307.2889
Worker	0.3350	0.2089	2.7541	8.1300e-003	1.0458	4.8000e-003	1.0506	0.2774	4.4200e-003	0.2818		821.3059	821.3059	0.0231	0.0227	828.6395
Total	**0.3540**	**0.8091**	**3.0169**	**0.0109**	**1.1462**	**9.2700e-003**	**1.1555**	**0.3063**	**8.7000e-003**	**0.3150**		**1,115.5414**	**1,115.5414**	**0.0263**	**0.0662**	**1,135.9284**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7458	20.0071	24.6043	0.0577		0.8656	0.8656		0.8393	0.8393	0.0000	5,444.1977	5,444.1977	1.0520		5,470.4980
Total	**2.7458**	**20.0071**	**24.6043**	**0.0577**		**0.8656**	**0.8656**		**0.8393**	**0.8393**	**0.0000**	**5,444.1977**	**5,444.1977**	**1.0520**		**5,470.4980**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0190	0.6002	0.2628	2.7700e-003	0.1004	4.4700e-003	0.1048	0.0289	4.2800e-003	0.0332		294.2355	294.2355	3.1900e-003	0.0435	307.2889
Worker	0.3350	0.2089	2.7541	8.1300e-003	1.0458	4.8000e-003	1.0506	0.2774	4.4200e-003	0.2818		821.3059	821.3059	0.0231	0.0227	828.6395
Total	**0.3540**	**0.8091**	**3.0169**	**0.0109**	**1.1462**	**9.2700e-003**	**1.1555**	**0.3063**	**8.7000e-003**	**0.3150**		**1,115.5414**	**1,115.5414**	**0.0263**	**0.0662**	**1,135.9284**

3.4 On-Site Paving - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5962	21.5587	22.0107	0.0593		0.8246	0.8246		0.7651	0.7651		5,633.4440	5,633.4440	1.7589		5,677.4173
Paving	0.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6248**	**21.5587**	**22.0107**	**0.0593**		**0.8246**	**0.8246**		**0.7651**	**0.7651**		**5,633.4440**	**5,633.4440**	**1.7589**		**5,677.4173**

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Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6800e-003	0.1489	0.0650	6.8000e-004	0.0251	1.1200e-003	0.0262	7.2300e-003	1.0700e-003	8.3000e-003		72.2625	72.2625	8.3000e-004	0.0107	75.4632
Worker	0.0627	0.0375	0.5138	1.5700e-003	0.2092	9.1000e-004	0.2101	0.0555	8.4000e-004	0.0563		158.7019	158.7019	4.1900e-003	4.2400e-003	160.0692
Total	**0.0674**	**0.1864**	**0.5788**	**2.2500e-003**	**0.2343**	**2.0300e-003**	**0.2363**	**0.0627**	**1.9100e-003**	**0.0646**		**230.9644**	**230.9644**	**5.0200e-003**	**0.0149**	**235.5324**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5962	21.5587	22.0107	0.0593		0.8246	0.8246		0.7651	0.7651	0.0000	5,633.4440	5,633.4440	1.7589		5,677.4173
Paving	0.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6248**	**21.5587**	**22.0107**	**0.0593**		**0.8246**	**0.8246**		**0.7651**	**0.7651**	**0.0000**	**5,633.4440**	**5,633.4440**	**1.7589**		**5,677.4173**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6800e-003	0.1489	0.0650	6.8000e-004	0.0251	1.1200e-003	0.0262	7.2300e-003	1.0700e-003	8.3000e-003		72.2625	72.2625	8.3000e-004	0.0107	75.4632

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0627	0.0375	0.5138	1.5700e-003	0.2092	9.1000e-004	0.2101	0.0555	8.4000e-004	0.0563		158.7019	158.7019	4.1900e-003	4.2400e-003	160.0692
Total	**0.0674**	**0.1864**	**0.5788**	**2.2500e-003**	**0.2343**	**2.0300e-003**	**0.2363**	**0.0627**	**1.9100e-003**	**0.0646**		**230.9644**	**230.9644**	**5.0200e-003**	**0.0149**	**235.5324**

3.5 Finishings - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5126	3.4365	5.4274	8.9100e-003		0.1545	0.1545		0.1545	0.1545		844.3442	844.3442	0.0461		845.4956
Total	**3.6886**	**3.4365**	**5.4274**	**8.9100e-003**		**0.1545**	**0.1545**		**0.1545**	**0.1545**		**844.3442**	**844.3442**	**0.0461**		**845.4956**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3600e-003	0.2978	0.1301	1.3600e-003	0.0502	2.2400e-003	0.0524	0.0145	2.1400e-003	0.0166		144.5251	144.5251	1.6500e-003	0.0213	150.9264
Worker	0.0877	0.0525	0.7193	2.2000e-003	0.2928	1.2800e-003	0.2941	0.0777	1.1700e-003	0.0789		222.1826	222.1826	5.8600e-003	5.9300e-003	224.0969
Total	**0.0971**	**0.3503**	**0.8493**	**3.5600e-003**	**0.3430**	**3.5200e-003**	**0.3465**	**0.0921**	**3.3100e-003**	**0.0955**		**366.7077**	**366.7077**	**7.5100e-003**	**0.0273**	**375.0233**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5126	3.4365	5.4274	8.9100e-003		0.1545	0.1545		0.1545	0.1545	0.0000	844.3441	844.3441	0.0461		845.4956
Total	**3.6886**	**3.4365**	**5.4274**	**8.9100e-003**		**0.1545**	**0.1545**		**0.1545**	**0.1545**	**0.0000**	**844.3441**	**844.3441**	**0.0461**		**845.4956**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3600e-003	0.2978	0.1301	1.3600e-003	0.0502	2.2400e-003	0.0524	0.0145	2.1400e-003	0.0166		144.5251	144.5251	1.6500e-003	0.0213	150.9264
Worker	0.0877	0.0525	0.7193	2.2000e-003	0.2928	1.2800e-003	0.2941	0.0777	1.1700e-003	0.0789		222.1826	222.1826	5.8600e-003	5.9300e-003	224.0969
Total	**0.0971**	**0.3503**	**0.8493**	**3.5600e-003**	**0.3430**	**3.5200e-003**	**0.3465**	**0.0921**	**3.3100e-003**	**0.0955**		**366.7077**	**366.7077**	**7.5100e-003**	**0.0273**	**375.0233**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	0.1063	0.1505	0.9372	2.1000e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		213.6588	213.6588	0.0130	0.0116	217.4545
Baseline	0.1063	0.1505	0.9372	2.1000e-003	0.2269	1.7600e-003	0.2286	0.0605	1.6500e-003	0.0622		213.6588	213.6588	0.0130	0.0116	217.4545

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	48.00	40.60	39.00	102,131	102,131
Total	48.00	40.60	39.00	102,131	102,131

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
NaturalGas Baseline	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	828.817	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Total		**8.9400e-003**	**0.0764**	**0.0325**	**4.9000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**		**97.5079**	**97.5079**	**1.8700e-003**	**1.7900e-003**	**98.0873**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	0.828817	8.9400e-003	0.0764	0.0325	4.9000e-004		6.1800e-003	6.1800e-003		6.1800e-003	6.1800e-003		97.5079	97.5079	1.8700e-003	1.7900e-003	98.0873
Total		**8.9400e-003**	**0.0764**	**0.0325**	**4.9000e-004**		**6.1800e-003**	**6.1800e-003**		**6.1800e-003**	**6.1800e-003**		**97.5079**	**97.5079**	**1.8700e-003**	**1.7900e-003**	**98.0873**

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480
Baseline	2.1342	0.3233	4.6686	8.8900e-003		0.4675	0.4675		0.4675	0.4675	54.9593	341.7992	396.7584	0.1776	7.8900e-003	403.5480

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4736	0.3043	3.0171	8.8000e-003		0.4584	0.4584		0.4584	0.4584	54.9593	338.8235	393.7828	0.1747	7.8900e-003	400.5008
Landscaping	0.0498	0.0190	1.6515	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003		2.9756	2.9756	2.8600e-003		3.0472
Total	**2.1342**	**0.3233**	**4.6686**	**8.8900e-003**		**0.4675**	**0.4675**		**0.4675**	**0.4675**	**54.9593**	**341.7992**	**396.7584**	**0.1776**	**7.8900e-003**	**403.5480**

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	0.4354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4736	0.3043	3.0171	8.8000e-003		0.4584	0.4584		0.4584	0.4584	54.9593	338.8235	393.7828	0.1747	7.8900e-003	400.5008
Landscaping	0.0498	0.0190	1.6515	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003		2.9756	2.9756	2.8600e-003		3.0472
Total	**2.1342**	**0.3233**	**4.6686**	**8.8900e-003**		**0.4675**	**0.4675**		**0.4675**	**0.4675**	**54.9593**	**341.7992**	**396.7584**	**0.1776**	**7.8900e-003**	**403.5480**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

Desert Retreat - Individual Phase Construction - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

APPENDIX D.7

Operation Summer

Date: 11/3/2022 11:03 AM

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Desert Retreat - Operation

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Operation only.

Vehicle Trips - The Project is expected to generate approximately 6,470 daily trips. (Fehr and Peers, Pulte Homes Development North Indio Transportation Study, June 2022)

Woodstoves - Per SCAQMD Rule 445, no woodburning fireplaces would be installed. Space heating accounted for under energy module.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Area Mitigation - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Energy Mitigation -

Water Mitigation -

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstructionPhase	NumDays	400.00	0.00
tblFireplaces	FireplaceWoodMass	457.60	0.00
tblFireplaces	NumberGas	1,200.00	0.00
tblFireplaces	NumberNoFireplace	150.00	0.00
tblFireplaces	NumberWood	150.00	0.00
tblLandUse	LotAcreage	300.00	377.00
tblVehicleTrips	ST_TR	2.03	4.36
tblVehicleTrips	SU_TR	1.95	3.91
tblVehicleTrips	WD_TR	2.40	4.31
tblWoodstoves	NumberCatalytic	75.00	0.00
tblWoodstoves	NumberNoncatalytic	75.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.9607	0.0000	0.0000	0.8927	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.9607**	**0.0000**	**0.0000**	**0.8927**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.9607	0.0000	0.0000	0.8927	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.9607**	**0.0000**	**0.0000**	**0.8927**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	38.3632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	13.1420	13.1164	110.3938	0.2481	30.8743	0.1647	31.0390	8.2319	0.1544	8.3862		26,944.3370	26,944.3370	1.2815	1.2003	27,334.0611
Total	**52.1756**	**20.2678**	**236.2563**	**0.2912**	**30.8743**	**1.3141**	**32.1885**	**8.2319**	**1.3038**	**9.5357**	**0.0000**	**34,480.2566**	**34,480.2566**	**1.6339**	**1.3344**	**34,918.7461**

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	35.9632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	13.1420	13.1164	110.3938	0.2481	30.8743	0.1647	31.0390	8.2319	0.1544	8.3862		26,944.3370	26,944.3370	1.2815	1.2003	27,334.0611
Total	**49.7756**	**20.2678**	**236.2563**	**0.2912**	**30.8743**	**1.3141**	**32.1885**	**8.2319**	**1.3038**	**9.5357**	**0.0000**	**34,480.2566**	**34,480.2566**	**1.6339**	**1.3344**	**34,918.7461**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2024	2/29/2024	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 11/3/2022 11:03 AM

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	13.1420	13.1164	110.3938	0.2481	30.8743	0.1647	31.0390	8.2319	0.1544	8.3862		26,944.3370	26,944.3370	1.2815	1.2003	27,334.0611
Baseline	13.1420	13.1164	110.3938	0.2481	30.8743	0.1647	31.0390	8.2319	0.1544	8.3862		26,944.3370	26,944.3370	1.2815	1.2003	27,334.0611

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	6,465.00	6,540.00	5865.00	14,293,926	14,293,926
Total	6,465.00	6,540.00	5,865.00	14,293,926	14,293,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.551512	0.058170	0.178297	0.126510	0.022409	0.006479	0.011491	0.017248	0.000593	0.000271	0.022353	0.001062	0.003606

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	35.9632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Baseline	38.3632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6917	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863		222.8285	222.8285	0.2123		228.1359
Total	**38.3632**	**1.4229**	**123.4249**	**6.5300e-003**		**0.6863**	**0.6863**		**0.6863**	**0.6863**	**0.0000**	**222.8285**	**222.8285**	**0.2123**	**0.0000**	**228.1359**

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	29.7000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6917	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863		222.8285	222.8285	0.2123		228.1359
Total	**35.9632**	**1.4229**	**123.4249**	**6.5300e-003**		**0.6863**	**0.6863**		**0.6863**	**0.6863**	**0.0000**	**222.8285**	**222.8285**	**0.2123**	**0.0000**	**228.1359**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Desert Retreat - Operation - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.8

Operation Winter

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Desert Retreat - Operation

Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Operation only.

Vehicle Trips - The Project is expected to generate approximately 6,470 daily trips. (Fehr and Peers, Pulte Homes Development North Indio Transportation Study, June 2022)

Woodstoves - Per SCAQMD Rule 445, no woodburning fireplaces would be installed. Space heating accounted for under energy module.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Area Mitigation - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Energy Mitigation -

Water Mitigation -

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstructionPhase	NumDays	400.00	0.00
tblFireplaces	FireplaceWoodMass	457.60	0.00
tblFireplaces	NumberGas	1,200.00	0.00
tblFireplaces	NumberNoFireplace	150.00	0.00
tblFireplaces	NumberWood	150.00	0.00
tblLandUse	LotAcreage	300.00	377.00
tblVehicleTrips	ST_TR	2.03	4.36
tblVehicleTrips	SU_TR	1.95	3.91
tblVehicleTrips	WD_TR	2.40	4.31
tblWoodstoves	NumberCatalytic	75.00	0.00
tblWoodstoves	NumberNoncatalytic	75.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.9607	0.0000	0.0000	0.8927	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.9607**	**0.0000**	**0.0000**	**0.8927**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.9607	0.0000	0.0000	0.8927	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.9607**	**0.0000**	**0.0000**	**0.8927**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	38.3632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	10.7998	13.9861	100.2364	0.2305	30.8743	0.1649	31.0392	8.2319	0.1545	8.3864		25,018.7457	25,018.7457	1.3241	1.2268	25,417.4378
Total	**49.8333**	**21.1376**	**226.0989**	**0.2736**	**30.8743**	**1.3143**	**32.1886**	**8.2319**	**1.3040**	**9.5358**	**0.0000**	**32,554.6652**	**32,554.6652**	**1.6765**	**1.3609**	**33,002.1228**

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	35.9632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Energy	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Mobile	10.7998	13.9861	100.2364	0.2305	30.8743	0.1649	31.0392	8.2319	0.1545	8.3864		25,018.7457	25,018.7457	1.3241	1.2268	25,417.4378
Total	**47.4333**	**21.1376**	**226.0989**	**0.2736**	**30.8743**	**1.3143**	**32.1886**	**8.2319**	**1.3040**	**9.5358**	**0.0000**	**32,554.6652**	**32,554.6652**	**1.6765**	**1.3609**	**33,002.1228**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2024	2/29/2024	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	10.7998	13.9861	100.2364	0.2305	30.8743	0.1649	31.0392	8.2319	0.1545	8.3864		25,018.7457	25,018.7457	1.3241	1.2268	25,417.4378
Baseline	10.7998	13.9861	100.2364	0.2305	30.8743	0.1649	31.0392	8.2319	0.1545	8.3864		25,018.7457	25,018.7457	1.3241	1.2268	25,417.4378

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	6,465.00	6,540.00	5865.00	14,293,926	14,293,926
Total	6,465.00	6,540.00	5,865.00	14,293,926	14,293,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.551512	0.058170	0.178297	0.126510	0.022409	0.006479	0.011491	0.017248	0.000593	0.000271	0.022353	0.001062	0.003606

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Compliance	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
NaturalGas Baseline	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	62161.3	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	62.1613	0.6704	5.7286	2.4377	0.0366		0.4632	0.4632		0.4632	0.4632		7,313.0911	7,313.0911	0.1402	0.1341	7,356.5491
Total		**0.6704**	**5.7286**	**2.4377**	**0.0366**		**0.4632**	**0.4632**		**0.4632**	**0.4632**		**7,313.0911**	**7,313.0911**	**0.1402**	**0.1341**	**7,356.5491**

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	35.9632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359
Baseline	38.3632	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863	0.0000	222.8285	222.8285	0.2123	0.0000	228.1359

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6917	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863		222.8285	222.8285	0.2123		228.1359
Total	**38.3632**	**1.4229**	**123.4249**	**6.5300e-003**		**0.6863**	**0.6863**		**0.6863**	**0.6863**	**0.0000**	**222.8285**	**222.8285**	**0.2123**	**0.0000**	**228.1359**

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5715					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	29.7000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6917	1.4229	123.4249	6.5300e-003		0.6863	0.6863		0.6863	0.6863		222.8285	222.8285	0.2123		228.1359
Total	**35.9632**	**1.4229**	**123.4249**	**6.5300e-003**		**0.6863**	**0.6863**		**0.6863**	**0.6863**	**0.0000**	**222.8285**	**222.8285**	**0.2123**	**0.0000**	**228.1359**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Desert Retreat - Operation - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Greenhouse Gases

APPENDIX D.9

Total Phase Annual

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Total Phase Construction

Riverside-Salton Sea County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1,575.00	1000sqft	36.16	1,575,000.00	0
Retirement Community	1,500.00	Dwelling Unit	340.84	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Phases would begin September 2024 and end March 2032.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - On-road trips provided by applicant.

Grading - The Project Site is approximately 377 acres in size.

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Vehicle Trips - Construction only.

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	440.00	1,847.00
tblConstructionPhase	NumDays	6,200.00	1,847.00
tblConstructionPhase	NumDays	620.00	1,847.00
tblConstructionPhase	NumDays	440.00	1,847.00
tblLandUse	LotAcreage	300.00	340.84
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	VendorTripNumber	418.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblTripsAndVMT	WorkerTripNumber	1,742.00	125.00
tblTripsAndVMT	WorkerTripNumber	38.00	25.00
tblTripsAndVMT	WorkerTripNumber	348.00	35.00

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0981	0.6930	0.8769	1.9900e-003	0.2276	0.0292	0.2568	0.0290	0.0281	0.0571	0.0000	170.4268	170.4268	0.0309	1.3900e-003	171.6127
2025	1.5062	6.4282	8.0169	0.0198	0.4223	0.2509	0.6732	0.0812	0.2389	0.3200	0.0000	1,707.1287	1,707.1287	0.3693	0.0122	1,720.0017
2026	1.6407	6.5066	8.1219	0.0200	0.4297	0.2543	0.6841	0.0831	0.2423	0.3254	0.0000	1,725.6876	1,725.6876	0.3700	0.0124	1,738.6207
2027	1.6373	6.5022	8.0928	0.0199	0.4297	0.2543	0.6840	0.0831	0.2422	0.3254	0.0000	1,720.4125	1,720.4125	0.3698	0.0120	1,733.2270
2028	1.6280	6.4738	8.0377	0.0198	0.4289	0.2532	0.6821	0.0829	0.2412	0.3242	0.0000	1,709.0878	1,709.0878	0.3681	0.0116	1,721.7474
2029	1.6313	6.4955	8.0474	0.0198	0.4297	0.2542	0.6839	0.0831	0.2421	0.3253	0.0000	1,711.3934	1,711.3934	0.3693	0.0113	1,724.0066
2030	1.6630	4.1951	8.0238	0.0210	0.4297	0.1221	0.5518	0.0831	0.1220	0.2051	0.0000	1,913.2004	1,913.2004	0.0728	0.0111	1,918.3194
2031	1.6042	3.8970	7.5026	0.0198	0.4146	0.1139	0.5285	0.0791	0.1138	0.1929	0.0000	1,804.4799	1,804.4799	0.0682	0.0102	1,809.2331
2032	0.2317	0.2182	0.4346	1.1100e-003	0.0134	6.3500e-003	0.0197	3.6000e-003	6.3400e-003	9.9400e-003	0.0000	99.9608	99.9608	3.7200e-003	8.0000e-004	100.2919
Maximum	**1.6630**	**6.5066**	**8.1219**	**0.0210**	**0.4297**	**0.2543**	**0.6841**	**0.0831**	**0.2423**	**0.3254**	**0.0000**	**1,913.2004**	**1,913.2004**	**0.3700**	**0.0124**	**1,918.3194**

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0981	0.6930	0.8769	1.9900e-003	0.0940	0.0292	0.1232	0.0146	0.0281	0.0427	0.0000	170.4266	170.4266	0.0309	1.3900e-003	171.6126
2025	1.5062	6.4282	8.0169	0.0198	0.2887	0.2509	0.5396	0.0667	0.2389	0.3056	0.0000	1,707.1269	1,707.1269	0.3693	0.0122	1,719.9999

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2026	1.6407	6.5066	8.1219	0.0200	0.2961	0.2543	0.5504	0.0687	0.2423	0.3110	0.0000	1,725.6857	1,725.6857	0.3700	0.0124	1,738.6189
2027	1.6373	6.5022	8.0928	0.0199	0.2961	0.2543	0.5504	0.0687	0.2422	0.3109	0.0000	1,720.4107	1,720.4107	0.3698	0.0120	1,733.2252
2028	1.6280	6.4738	8.0377	0.0198	0.2952	0.2532	0.5485	0.0685	0.2412	0.3097	0.0000	1,709.0860	1,709.0860	0.3681	0.0116	1,721.7456
2029	1.6313	6.4955	8.0474	0.0198	0.2961	0.2542	0.5503	0.0687	0.2421	0.3108	0.0000	1,711.3916	1,711.3916	0.3693	0.0113	1,724.0047
2030	1.6630	4.1951	8.0238	0.0210	0.2961	0.1221	0.4181	0.0687	0.1220	0.1907	0.0000	1,913.1983	1,913.1983	0.0728	0.0111	1,918.3173
2031	1.6042	3.8970	7.5025	0.0198	0.2809	0.1139	0.3948	0.0647	0.1138	0.1785	0.0000	1,804.4779	1,804.4779	0.0682	0.0102	1,809.2311
2032	0.2317	0.2182	0.4346	1.1100e-003	0.0134	6.3500e-003	0.0197	3.6000e-003	6.3400e-003	9.9400e-003	0.0000	99.9607	99.9607	3.7200e-003	8.0000e-004	100.2917
Maximum	**1.6630**	**6.5066**	**8.1219**	**0.0210**	**0.2961**	**0.2543**	**0.5504**	**0.0687**	**0.2423**	**0.3110**	**0.0000**	**1,913.1983**	**1,913.1983**	**0.3700**	**0.0124**	**1,918.3173**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.14**	**0.00**	**22.44**	**18.98**	**0.00**	**5.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Baseline ROG + NOX (tons/quarter)	Maximum Regulatory Compliance ROG + NOX (tons/quarter)
1	**9-2-2024**	**12-1-2024**	0.4682	0.4682
2	**12-2-2024**	**3-1-2025**	1.4462	1.4462
3	**3-2-2025**	**6-1-2025**	2.0466	2.0466
4	**6-2-2025**	**9-1-2025**	2.0535	2.0535
5	**9-2-2025**	**12-1-2025**	2.0318	2.0318
6	**12-2-2025**	**3-1-2026**	2.0083	2.0083
7	**3-2-2026**	**6-1-2026**	2.0516	2.0516

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8	**6-2-2026**	**9-1-2026**	2.0513	2.0513
9	**9-2-2026**	**12-1-2026**	2.0296	2.0296
10	**12-2-2026**	**3-1-2027**	2.0063	2.0063
11	**3-2-2027**	**6-1-2027**	2.0496	2.0496
12	**6-2-2027**	**9-1-2027**	2.0493	2.0493
13	**9-2-2027**	**12-1-2027**	2.0277	2.0277
14	**12-2-2027**	**3-1-2028**	2.0269	2.0269
15	**3-2-2028**	**6-1-2028**	2.0479	2.0479
16	**6-2-2028**	**9-1-2028**	2.0475	2.0475
17	**9-2-2028**	**12-1-2028**	2.0260	2.0260
18	**12-2-2028**	**3-1-2029**	2.0031	2.0031
19	**3-2-2029**	**6-1-2029**	2.0463	2.0463
20	**6-2-2029**	**9-1-2029**	2.0460	2.0460
21	**9-2-2029**	**12-1-2029**	2.0245	2.0245
22	**12-2-2029**	**3-1-2030**	1.6300	1.6300
23	**3-2-2030**	**6-1-2030**	1.4750	1.4750
24	**6-2-2030**	**9-1-2030**	1.4747	1.4747
25	**9-2-2030**	**12-1-2030**	1.4594	1.4594
26	**12-2-2030**	**3-1-2031**	1.4430	1.4430
27	**3-2-2031**	**6-1-2031**	1.4739	1.4739
28	**6-2-2031**	**9-1-2031**	1.4735	1.4735
29	**9-2-2031**	**12-1-2031**	1.3264	1.3264
30	**12-2-2031**	**3-1-2032**	0.6082	0.6082
31	**3-2-2032**	**6-1-2032**	0.0966	0.0966
		Highest	2.0535	2.0535

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.2286	1.0641	20.4250	0.0277		1.4712	1.4712		1.4712	1.4712	153.3140	963.4011	1,116.7151	0.5049	0.0220	1,135.8938
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,774.4280	1,774.4280	0.1211	0.0341	1,787.6073
Mobile	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021
Water						0.0000	0.0000		0.0000	0.0000	31.0056	168.6481	199.6537	3.2139	0.0788	303.4663
Total	**14.7476**	**4.0696**	**33.3838**	**0.0620**	**2.8970**	**1.5785**	**4.4755**	**0.7739**	**1.5771**	**2.3510**	**324.3833**	**5,462.0685**	**5,786.4518**	**12.2701**	**0.2725**	**6,174.4109**

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.2286	1.0641	20.4250	0.0277		1.4712	1.4712		1.4712	1.4712	153.3140	963.4011	1,116.7151	0.5049	0.0220	1,135.8938
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,774.4280	1,774.4280	0.1211	0.0341	1,787.6073
Mobile	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021
Water						0.0000	0.0000		0.0000	0.0000	31.0056	168.6481	199.6537	3.2139	0.0788	303.4663
Total	**14.7476**	**4.0696**	**33.3838**	**0.0620**	**2.8970**	**1.5785**	**4.4755**	**0.7739**	**1.5771**	**2.3510**	**324.3833**	**5,462.0685**	**5,786.4518**	**12.2701**	**0.2725**	**6,174.4109**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Precise Grading	Grading	8/30/2024	9/29/2031	5	1847	1
2	Building Construction	Building Construction	10/31/2024	11/28/2031	5	1847	2
3	On-Site Paving	Paving	1/1/2025	1/29/2032	5	1847	3
4	Finishings	Architectural Coating	3/4/2025	3/31/2032	5	1847	4

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 377

Acres of Paving: 36.16

Residential Indoor: 3,037,500; Residential Outdoor: 1,012,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 94,500

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Precise Grading	Dumpers/Tenders	5	8.00	16	0.38
Precise Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	2	8.00	402	0.38

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

On-Site Paving	Cement and Mortar Mixers	5	8.00	9	0.56
On-Site Paving	Graders	2	8.00	187	0.41
On-Site Paving	Off-Highway Trucks	2	8.00	402	0.38
On-Site Paving	Paving Equipment	1	8.00	132	0.36
On-Site Paving	Plate Compactors	1	8.00	8	0.43
On-Site Paving	Rollers	2	8.00	80	0.38
On-Site Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finishings	Air Compressors	3	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Precise Grading	7	8.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	125.00	20.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
On-Site Paving	15	25.00	5.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Finishings	3	35.00	10.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Precise Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0288	0.2296	0.2519	4.4000e-004		9.6500e-003	9.6500e-003		9.1800e-003	9.1800e-003	0.0000	36.2532	36.2532	9.1000e-003	0.0000	36.4807
Total	**0.0288**	**0.2296**	**0.2519**	**4.4000e-004**	**0.1999**	**9.6500e-003**	**0.2096**	**0.0216**	**9.1800e-003**	**0.0308**	**0.0000**	**36.2532**	**36.2532**	**9.1000e-003**	**0.0000**	**36.4807**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	6.0000e-004	8.1400e-003	2.0000e-005	2.9000e-003	1.0000e-005	2.9100e-003	7.7000e-004	1.0000e-005	7.8000e-004	0.0000	2.1467	2.1467	6.0000e-005	6.0000e-005	2.1657
Total	**9.0000e-004**	**6.0000e-004**	**8.1400e-003**	**2.0000e-005**	**2.9000e-003**	**1.0000e-005**	**2.9100e-003**	**7.7000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.1467**	**2.1467**	**6.0000e-005**	**6.0000e-005**	**2.1657**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0288	0.2296	0.2519	4.4000e-004		9.6500e-003	9.6500e-003		9.1800e-003	9.1800e-003	0.0000	36.2532	36.2532	9.1000e-003	0.0000	36.4806
Total	**0.0288**	**0.2296**	**0.2519**	**4.4000e-004**	**0.0663**	**9.6500e-003**	**0.0759**	**7.1600e-003**	**9.1800e-003**	**0.0163**	**0.0000**	**36.2532**	**36.2532**	**9.1000e-003**	**0.0000**	**36.4806**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	6.0000e-004	8.1400e-003	2.0000e-005	2.9000e-003	1.0000e-005	2.9100e-003	7.7000e-004	1.0000e-005	7.8000e-004	0.0000	2.1467	2.1467	6.0000e-005	6.0000e-005	2.1657
Total	**9.0000e-004**	**6.0000e-004**	**8.1400e-003**	**2.0000e-005**	**2.9000e-003**	**1.0000e-005**	**2.9100e-003**	**7.7000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.1467**	**2.1467**	**6.0000e-005**	**6.0000e-005**	**2.1657**

3.2 Precise Grading - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5922	107.5922	0.0270	0.0000	108.2673
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.1999**	**0.0254**	**0.2253**	**0.0216**	**0.0243**	**0.0458**	**0.0000**	**107.5922**	**107.5922**	**0.0270**	**0.0000**	**108.2673**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	2.5000e-003	1.6000e-003	0.0225	7.0000e-005	8.5900e-003	4.0000e-005	8.6300e-003	2.2800e-003	4.0000e-005	2.3200e-003	0.0000	6.1509	6.1509	1.6000e-004	1.6000e-004	6.2035
Total	**2.5000e-003**	**1.6000e-003**	**0.0225**	**7.0000e-005**	**8.5900e-003**	**4.0000e-005**	**8.6300e-003**	**2.2800e-003**	**4.0000e-005**	**2.3200e-003**	**0.0000**	**6.1509**	**6.1509**	**1.6000e-004**	**1.6000e-004**	**6.2035**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5921	107.5921	0.0270	0.0000	108.2672
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.0663**	**0.0254**	**0.0917**	**7.1600e-003**	**0.0243**	**0.0314**	**0.0000**	**107.5921**	**107.5921**	**0.0270**	**0.0000**	**108.2672**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-003	1.6000e-003	0.0225	7.0000e-005	8.5900e-003	4.0000e-005	8.6300e-003	2.2800e-003	4.0000e-005	2.3200e-003	0.0000	6.1509	6.1509	1.6000e-004	1.6000e-004	6.2035
Total	**2.5000e-003**	**1.6000e-003**	**0.0225**	**7.0000e-005**	**8.5900e-003**	**4.0000e-005**	**8.6300e-003**	**2.2800e-003**	**4.0000e-005**	**2.3200e-003**	**0.0000**	**6.1509**	**6.1509**	**1.6000e-004**	**1.6000e-004**	**6.2035**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Precise Grading - 2026

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5922	107.5922	0.0270	0.0000	108.2673
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.1999**	**0.0254**	**0.2253**	**0.0216**	**0.0243**	**0.0458**	**0.0000**	**107.5922**	**107.5922**	**0.0270**	**0.0000**	**108.2673**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	1.4500e-003	0.0211	6.0000e-005	8.5900e-003	4.0000e-005	8.6300e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.9594	5.9594	1.4000e-004	1.5000e-004	6.0088
Total	**2.3400e-003**	**1.4500e-003**	**0.0211**	**6.0000e-005**	**8.5900e-003**	**4.0000e-005**	**8.6300e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.9594**	**5.9594**	**1.4000e-004**	**1.5000e-004**	**6.0088**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5921	107.5921	0.0270	0.0000	108.2672
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.0663**	**0.0254**	**0.0917**	**7.1600e-003**	**0.0243**	**0.0314**	**0.0000**	**107.5921**	**107.5921**	**0.0270**	**0.0000**	**108.2672**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	1.4500e-003	0.0211	6.0000e-005	8.5900e-003	4.0000e-005	8.6300e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.9594	5.9594	1.4000e-004	1.5000e-004	6.0088
Total	**2.3400e-003**	**1.4500e-003**	**0.0211**	**6.0000e-005**	**8.5900e-003**	**4.0000e-005**	**8.6300e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.9594**	**5.9594**	**1.4000e-004**	**1.5000e-004**	**6.0088**

3.2 Precise Grading - 2027

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5922	107.5922	0.0270	0.0000	108.2673
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.1999**	**0.0254**	**0.2253**	**0.0216**	**0.0243**	**0.0458**	**0.0000**	**107.5922**	**107.5922**	**0.0270**	**0.0000**	**108.2673**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.3300e-003	0.0200	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.7882	5.7882	1.3000e-004	1.5000e-004	5.8349
Total	**2.2000e-003**	**1.3300e-003**	**0.0200**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.7882**	**5.7882**	**1.3000e-004**	**1.5000e-004**	**5.8349**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5921	107.5921	0.0270	0.0000	108.2672
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.0663**	**0.0254**	**0.0917**	**7.1600e-003**	**0.0243**	**0.0314**	**0.0000**	**107.5921**	**107.5921**	**0.0270**	**0.0000**	**108.2672**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.3300e-003	0.0200	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.7882	5.7882	1.3000e-004	1.5000e-004	5.8349
Total	**2.2000e-003**	**1.3300e-003**	**0.0200**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.7882**	**5.7882**	**1.3000e-004**	**1.5000e-004**	**5.8349**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Precise Grading - 2028

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0821	0.6491	0.7427	1.3000e-003		0.0253	0.0253		0.0242	0.0242	0.0000	107.1800	107.1800	0.0269	0.0000	107.8525
Total	**0.0821**	**0.6491**	**0.7427**	**1.3000e-003**	**0.1999**	**0.0253**	**0.2252**	**0.0216**	**0.0242**	**0.0457**	**0.0000**	**107.1800**	**107.1800**	**0.0269**	**0.0000**	**107.8525**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0700e-003	1.2200e-003	0.0189	6.0000e-005	8.5600e-003	3.0000e-005	8.5900e-003	2.2700e-003	3.0000e-005	2.3000e-003	0.0000	5.6152	5.6152	1.2000e-004	1.4000e-004	5.6595
Total	**2.0700e-003**	**1.2200e-003**	**0.0189**	**6.0000e-005**	**8.5600e-003**	**3.0000e-005**	**8.5900e-003**	**2.2700e-003**	**3.0000e-005**	**2.3000e-003**	**0.0000**	**5.6152**	**5.6152**	**1.2000e-004**	**1.4000e-004**	**5.6595**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0821	0.6491	0.7427	1.3000e-003		0.0253	0.0253		0.0242	0.0242	0.0000	107.1799	107.1799	0.0269	0.0000	107.8524
Total	**0.0821**	**0.6491**	**0.7427**	**1.3000e-003**	**0.0663**	**0.0253**	**0.0916**	**7.1600e-003**	**0.0242**	**0.0313**	**0.0000**	**107.1799**	**107.1799**	**0.0269**	**0.0000**	**107.8524**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0700e-003	1.2200e-003	0.0189	6.0000e-005	8.5600e-003	3.0000e-005	8.5900e-003	2.2700e-003	3.0000e-005	2.3000e-003	0.0000	5.6152	5.6152	1.2000e-004	1.4000e-004	5.6595
Total	**2.0700e-003**	**1.2200e-003**	**0.0189**	**6.0000e-005**	**8.5600e-003**	**3.0000e-005**	**8.5900e-003**	**2.2700e-003**	**3.0000e-005**	**2.3000e-003**	**0.0000**	**5.6152**	**5.6152**	**1.2000e-004**	**1.4000e-004**	**5.6595**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Precise Grading - 2029

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5922	107.5922	0.0270	0.0000	108.2673
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.1999**	**0.0254**	**0.2253**	**0.0216**	**0.0243**	**0.0458**	**0.0000**	**107.5922**	**107.5922**	**0.0270**	**0.0000**	**108.2673**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.1300e-003	0.0181	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.5028	5.5028	1.1000e-004	1.3000e-004	5.5453
Total	**1.9600e-003**	**1.1300e-003**	**0.0181**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.5028**	**5.5028**	**1.1000e-004**	**1.3000e-004**	**5.5453**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0824	0.6516	0.7456	1.3000e-003		0.0254	0.0254		0.0243	0.0243	0.0000	107.5921	107.5921	0.0270	0.0000	108.2672
Total	**0.0824**	**0.6516**	**0.7456**	**1.3000e-003**	**0.0663**	**0.0254**	**0.0917**	**7.1600e-003**	**0.0243**	**0.0314**	**0.0000**	**107.5921**	**107.5921**	**0.0270**	**0.0000**	**108.2672**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.1300e-003	0.0181	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.5028	5.5028	1.1000e-004	1.3000e-004	5.5453
Total	**1.9600e-003**	**1.1300e-003**	**0.0181**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.5028**	**5.5028**	**1.1000e-004**	**1.3000e-004**	**5.5453**

3.2 Precise Grading - 2030

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0929	0.5714	0.7758	1.4800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	121.2476	121.2476	7.4700e-003	0.0000	121.4344

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0929**	**0.5714**	**0.7758**	**1.4800e-003**	**0.1999**	**0.0162**	**0.2161**	**0.0216**	**0.0162**	**0.0378**	**0.0000**	**121.2476**	**121.2476**	**7.4700e-003**	**0.0000**	**121.4344**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8500e-003	1.0500e-003	0.0173	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.3845	5.3845	1.0000e-004	1.3000e-004	5.4254
Total	**1.8500e-003**	**1.0500e-003**	**0.0173**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.3845**	**5.3845**	**1.0000e-004**	**1.3000e-004**	**5.4254**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0929	0.5714	0.7758	1.4800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	121.2475	121.2475	7.4700e-003	0.0000	121.4342
Total	**0.0929**	**0.5714**	**0.7758**	**1.4800e-003**	**0.0663**	**0.0162**	**0.0825**	**7.1600e-003**	**0.0162**	**0.0234**	**0.0000**	**121.2475**	**121.2475**	**7.4700e-003**	**0.0000**	**121.4342**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8500e-003	1.0500e-003	0.0173	6.0000e-005	8.5900e-003	3.0000e-005	8.6200e-003	2.2800e-003	3.0000e-005	2.3100e-003	0.0000	5.3845	5.3845	1.0000e-004	1.3000e-004	5.4254
Total	**1.8500e-003**	**1.0500e-003**	**0.0173**	**6.0000e-005**	**8.5900e-003**	**3.0000e-005**	**8.6200e-003**	**2.2800e-003**	**3.0000e-005**	**2.3100e-003**	**0.0000**	**5.3845**	**5.3845**	**1.0000e-004**	**1.3000e-004**	**5.4254**

3.2 Precise Grading - 2031

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1999	0.0000	0.1999	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0690	0.4247	0.5767	1.1000e-003		0.0121	0.0121		0.0121	0.0121	0.0000	90.1228	90.1228	5.5500e-003	0.0000	90.2616
Total	**0.0690**	**0.4247**	**0.5767**	**1.1000e-003**	**0.1999**	**0.0121**	**0.2120**	**0.0216**	**0.0121**	**0.0336**	**0.0000**	**90.1228**	**90.1228**	**5.5500e-003**	**0.0000**	**90.2616**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	7.3000e-004	0.0125	4.0000e-005	6.3800e-003	2.0000e-005	6.4000e-003	1.7000e-003	2.0000e-005	1.7100e-003	0.0000	3.9321	3.9321	7.0000e-005	9.0000e-005	3.9616
Total	**1.2900e-003**	**7.3000e-004**	**0.0125**	**4.0000e-005**	**6.3800e-003**	**2.0000e-005**	**6.4000e-003**	**1.7000e-003**	**2.0000e-005**	**1.7100e-003**	**0.0000**	**3.9321**	**3.9321**	**7.0000e-005**	**9.0000e-005**	**3.9616**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	7.1600e-003	0.0000	7.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0690	0.4247	0.5767	1.1000e-003		0.0121	0.0121		0.0121	0.0121	0.0000	90.1227	90.1227	5.5500e-003	0.0000	90.2615
Total	**0.0690**	**0.4247**	**0.5767**	**1.1000e-003**	**0.0663**	**0.0121**	**0.0783**	**7.1600e-003**	**0.0121**	**0.0192**	**0.0000**	**90.1227**	**90.1227**	**5.5500e-003**	**0.0000**	**90.2615**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	7.3000e-004	0.0125	4.0000e-005	6.3800e-003	2.0000e-005	6.4000e-003	1.7000e-003	2.0000e-005	1.7100e-003	0.0000	3.9321	3.9321	7.0000e-005	9.0000e-005	3.9616
Total	**1.2900e-003**	**7.3000e-004**	**0.0125**	**4.0000e-005**	**6.3800e-003**	**2.0000e-005**	**6.4000e-003**	**1.7000e-003**	**2.0000e-005**	**1.7100e-003**	**0.0000**	**3.9321**	**3.9321**	**7.0000e-005**	**9.0000e-005**	**3.9616**

3.3 Building Construction - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0609	0.4450	0.5476	1.2800e-003		0.0193	0.0193		0.0187	0.0187	0.0000	109.3943	109.3943	0.0212	0.0000	109.9251
Total	**0.0609**	**0.4450**	**0.5476**	**1.2800e-003**		**0.0193**	**0.0193**		**0.0187**	**0.0187**	**0.0000**	**109.3943**	**109.3943**	**0.0212**	**0.0000**	**109.9251**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-004	0.0130	5.6700e-003	6.0000e-005	2.1800e-003	1.0000e-004	2.2800e-003	6.3000e-004	9.0000e-005	7.2000e-004	0.0000	5.8618	5.8618	6.0000e-005	8.7000e-004	6.1219
Worker	7.0400e-003	4.7100e-003	0.0636	1.8000e-004	0.0226	1.1000e-004	0.0227	6.0100e-003	1.0000e-004	6.1100e-003	0.0000	16.7708	16.7708	4.6000e-004	4.6000e-004	16.9194
Total	**7.4800e-003**	**0.0177**	**0.0693**	**2.4000e-004**	**0.0248**	**2.1000e-004**	**0.0250**	**6.6400e-003**	**1.9000e-004**	**6.8300e-003**	**0.0000**	**22.6327**	**22.6327**	**5.2000e-004**	**1.3300e-003**	**23.0413**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0609	0.4450	0.5476	1.2800e-003		0.0193	0.0193		0.0187	0.0187	0.0000	109.3941	109.3941	0.0212	0.0000	109.9250
Total	**0.0609**	**0.4450**	**0.5476**	**1.2800e-003**		**0.0193**	**0.0193**		**0.0187**	**0.0187**	**0.0000**	**109.3941**	**109.3941**	**0.0212**	**0.0000**	**109.9250**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-004	0.0130	5.6700e-003	6.0000e-005	2.1800e-003	1.0000e-004	2.2800e-003	6.3000e-004	9.0000e-005	7.2000e-004	0.0000	5.8618	5.8618	6.0000e-005	8.7000e-004	6.1219
Worker	7.0400e-003	4.7100e-003	0.0636	1.8000e-004	0.0226	1.1000e-004	0.0227	6.0100e-003	1.0000e-004	6.1100e-003	0.0000	16.7708	16.7708	4.6000e-004	4.6000e-004	16.9194

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**7.4800e-003**	**0.0177**	**0.0693**	**2.4000e-004**	**0.0248**	**2.1000e-004**	**0.0250**	**6.6400e-003**	**1.9000e-004**	**6.8300e-003**	**0.0000**	**22.6327**	**22.6327**	**5.2000e-004**	**1.3300e-003**	**23.0413**

3.3 Building Construction - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7470	648.7470	0.1252	0.0000	651.8759
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7470**	**648.7470**	**0.1252**	**0.0000**	**651.8759**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5500e-003	0.0767	0.0333	3.5000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.6000e-004	4.2900e-003	0.0000	34.1582	34.1582	4.0000e-004	5.0400e-003	35.6709
Worker	0.0390	0.0251	0.3518	1.0500e-003	0.1342	5.9000e-004	0.1348	0.0356	5.5000e-004	0.0362	0.0000	96.1076	96.1076	2.4700e-003	2.5500e-003	96.9294
Total	**0.0416**	**0.1018**	**0.3851**	**1.4000e-003**	**0.1471**	**1.1700e-003**	**0.1483**	**0.0394**	**1.1100e-003**	**0.0405**	**0.0000**	**130.2658**	**130.2658**	**2.8700e-003**	**7.5900e-003**	**132.6003**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7462	648.7462	0.1252	0.0000	651.8751

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7462**	**648.7462**	**0.1252**	**0.0000**	**651.8751**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5500e-003	0.0767	0.0333	3.5000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.6000e-004	4.2900e-003	0.0000	34.1582	34.1582	4.0000e-004	5.0400e-003	35.6709
Worker	0.0390	0.0251	0.3518	1.0500e-003	0.1342	5.9000e-004	0.1348	0.0356	5.5000e-004	0.0362	0.0000	96.1076	96.1076	2.4700e-003	2.5500e-003	96.9294
Total	**0.0416**	**0.1018**	**0.3851**	**1.4000e-003**	**0.1471**	**1.1700e-003**	**0.1483**	**0.0394**	**1.1100e-003**	**0.0405**	**0.0000**	**130.2658**	**130.2658**	**2.8700e-003**	**7.5900e-003**	**132.6003**

3.3 Building Construction - 2026

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7470	648.7470	0.1252	0.0000	651.8759
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7470**	**648.7470**	**0.1252**	**0.0000**	**651.8759**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vendor	2.5300e-003	0.0760	0.0330	3.5000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.6000e-004	4.2800e-003	0.0000	33.5358	33.5358	4.1000e-004	4.9400e-003	35.0188
Worker	0.0366	0.0227	0.3302	1.0200e-003	0.1342	5.6000e-004	0.1348	0.0356	5.2000e-004	0.0362	0.0000	93.1158	93.1158	2.2500e-003	2.4000e-003	93.8877
Total	**0.0392**	**0.0987**	**0.3632**	**1.3700e-003**	**0.1471**	**1.1400e-003**	**0.1483**	**0.0394**	**1.0800e-003**	**0.0404**	**0.0000**	**126.6516**	**126.6516**	**2.6600e-003**	**7.3400e-003**	**128.9065**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7462	648.7462	0.1252	0.0000	651.8751
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7462**	**648.7462**	**0.1252**	**0.0000**	**651.8751**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5300e-003	0.0760	0.0330	3.5000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.6000e-004	4.2800e-003	0.0000	33.5358	33.5358	4.1000e-004	4.9400e-003	35.0188
Worker	0.0366	0.0227	0.3302	1.0200e-003	0.1342	5.6000e-004	0.1348	0.0356	5.2000e-004	0.0362	0.0000	93.1158	93.1158	2.2500e-003	2.4000e-003	93.8877
Total	**0.0392**	**0.0987**	**0.3632**	**1.3700e-003**	**0.1471**	**1.1400e-003**	**0.1483**	**0.0394**	**1.0800e-003**	**0.0404**	**0.0000**	**126.6516**	**126.6516**	**2.6600e-003**	**7.3400e-003**	**128.9065**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2027

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7470	648.7470	0.1252	0.0000	651.8759
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7470**	**648.7470**	**0.1252**	**0.0000**	**651.8759**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0752	0.0328	3.4000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.5000e-004	4.2800e-003	0.0000	32.8825	32.8825	4.2000e-004	4.8400e-003	34.3346
Worker	0.0344	0.0208	0.3117	9.9000e-004	0.1342	5.3000e-004	0.1347	0.0356	4.9000e-004	0.0361	0.0000	90.4398	90.4398	2.0600e-003	2.2800e-003	91.1698
Total	**0.0369**	**0.0960**	**0.3444**	**1.3300e-003**	**0.1471**	**1.1100e-003**	**0.1482**	**0.0394**	**1.0400e-003**	**0.0404**	**0.0000**	**123.3223**	**123.3223**	**2.4800e-003**	**7.1200e-003**	**125.5044**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7462	648.7462	0.1252	0.0000	651.8751
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7462**	**648.7462**	**0.1252**	**0.0000**	**651.8751**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-003	0.0752	0.0328	3.4000e-004	0.0129	5.8000e-004	0.0135	3.7300e-003	5.5000e-004	4.2800e-003	0.0000	32.8825	32.8825	4.2000e-004	4.8400e-003	34.3346
Worker	0.0344	0.0208	0.3117	9.9000e-004	0.1342	5.3000e-004	0.1347	0.0356	4.9000e-004	0.0361	0.0000	90.4398	90.4398	2.0600e-003	2.2800e-003	91.1698
Total	**0.0369**	**0.0960**	**0.3444**	**1.3300e-003**	**0.1471**	**1.1100e-003**	**0.1482**	**0.0394**	**1.0400e-003**	**0.0404**	**0.0000**	**123.3223**	**123.3223**	**2.4800e-003**	**7.1200e-003**	**125.5044**

3.3 Building Construction - 2028

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3431	2.4158	3.2157	7.5500e-003		0.0989	0.0989		0.0959	0.0959	0.0000	646.2614	646.2614	0.1247	0.0000	649.3783
Total	**0.3431**	**2.4158**	**3.2157**	**7.5500e-003**		**0.0989**	**0.0989**		**0.0959**	**0.0959**	**0.0000**	**646.2614**	**646.2614**	**0.1247**	**0.0000**	**649.3783**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4700e-003	0.0744	0.0325	3.3000e-004	0.0129	5.7000e-004	0.0134	3.7100e-003	5.5000e-004	4.2600e-003	0.0000	32.1309	32.1309	4.3000e-004	4.7200e-003	33.5479
Worker	0.0324	0.0190	0.2950	9.6000e-004	0.1337	4.9000e-004	0.1342	0.0355	4.5000e-004	0.0360	0.0000	87.7369	87.7369	1.8900e-003	2.1600e-003	88.4291

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0348**	**0.0934**	**0.3275**	**1.2900e-003**	**0.1466**	**1.0600e-003**	**0.1476**	**0.0392**	**1.0000e-003**	**0.0402**	**0.0000**	**119.8678**	**119.8678**	**2.3200e-003**	**6.8800e-003**	**121.9770**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3431	2.4158	3.2157	7.5500e-003		0.0989	0.0989		0.0959	0.0959	0.0000	646.2606	646.2606	0.1247	0.0000	649.3775
Total	**0.3431**	**2.4158**	**3.2157**	**7.5500e-003**		**0.0989**	**0.0989**		**0.0959**	**0.0959**	**0.0000**	**646.2606**	**646.2606**	**0.1247**	**0.0000**	**649.3775**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4700e-003	0.0744	0.0325	3.3000e-004	0.0129	5.7000e-004	0.0134	3.7100e-003	5.5000e-004	4.2600e-003	0.0000	32.1309	32.1309	4.3000e-004	4.7200e-003	33.5479
Worker	0.0324	0.0190	0.2950	9.6000e-004	0.1337	4.9000e-004	0.1342	0.0355	4.5000e-004	0.0360	0.0000	87.7369	87.7369	1.8900e-003	2.1600e-003	88.4291
Total	**0.0348**	**0.0934**	**0.3275**	**1.2900e-003**	**0.1466**	**1.0600e-003**	**0.1476**	**0.0392**	**1.0000e-003**	**0.0402**	**0.0000**	**119.8678**	**119.8678**	**2.3200e-003**	**6.8800e-003**	**121.9770**

3.3 Building Construction - 2029

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7470	648.7470	0.1252	0.0000	651.8759

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7470**	**648.7470**	**0.1252**	**0.0000**	**651.8759**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4700e-003	0.0741	0.0325	3.3000e-004	0.0129	5.7000e-004	0.0135	3.7300e-003	5.5000e-004	4.2800e-003	0.0000	31.6628	31.6628	4.5000e-004	4.6400e-003	33.0572
Worker	0.0306	0.0177	0.2826	9.4000e-004	0.1342	4.6000e-004	0.1347	0.0356	4.2000e-004	0.0361	0.0000	85.9809	85.9809	1.7500e-003	2.0800e-003	86.6458
Total	**0.0331**	**0.0918**	**0.3150**	**1.2700e-003**	**0.1471**	**1.0300e-003**	**0.1482**	**0.0394**	**9.7000e-004**	**0.0404**	**0.0000**	**117.6436**	**117.6436**	**2.2000e-003**	**6.7200e-003**	**119.7031**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	2.4251	3.2280	7.5800e-003		0.0993	0.0993		0.0962	0.0962	0.0000	648.7462	648.7462	0.1252	0.0000	651.8751
Total	**0.3444**	**2.4251**	**3.2280**	**7.5800e-003**		**0.0993**	**0.0993**		**0.0962**	**0.0962**	**0.0000**	**648.7462**	**648.7462**	**0.1252**	**0.0000**	**651.8751**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4700e-003	0.0741	0.0325	3.3000e-004	0.0129	5.7000e-004	0.0135	3.7300e-003	5.5000e-004	4.2800e-003	0.0000	31.6628	31.6628	4.5000e-004	4.6400e-003	33.0572

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0306	0.0177	0.2826	9.4000e-004	0.1342	4.6000e-004	0.1347	0.0356	4.2000e-004	0.0361	0.0000	85.9809	85.9809	1.7500e-003	2.0800e-003	86.6458
Total	**0.0331**	**0.0918**	**0.3150**	**1.2700e-003**	**0.1471**	**1.0300e-003**	**0.1482**	**0.0394**	**9.7000e-004**	**0.0404**	**0.0000**	**117.6436**	**117.6436**	**2.2000e-003**	**6.7200e-003**	**119.7031**

3.3 Building Construction - 2030

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3326	1.6074	3.1761	7.7400e-003		0.0433	0.0433		0.0433	0.0433	0.0000	715.4774	715.4774	0.0266	0.0000	716.1431
Total	**0.3326**	**1.6074**	**3.1761**	**7.7400e-003**		**0.0433**	**0.0433**		**0.0433**	**0.0433**	**0.0000**	**715.4774**	**715.4774**	**0.0266**	**0.0000**	**716.1431**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4600e-003	0.0736	0.0324	3.2000e-004	0.0129	5.7000e-004	0.0135	3.7300e-003	5.4000e-004	4.2700e-003	0.0000	31.1061	31.1061	4.6000e-004	4.5500e-003	32.4743
Worker	0.0289	0.0165	0.2710	9.2000e-004	0.1342	4.3000e-004	0.1346	0.0356	3.9000e-004	0.0360	0.0000	84.1322	84.1322	1.6200e-003	2.0100e-003	84.7718
Total	**0.0314**	**0.0901**	**0.3033**	**1.2400e-003**	**0.1471**	**1.0000e-003**	**0.1481**	**0.0394**	**9.3000e-004**	**0.0403**	**0.0000**	**115.2383**	**115.2383**	**2.0800e-003**	**6.5600e-003**	**117.2461**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3326	1.6074	3.1761	7.7400e-003		0.0433	0.0433		0.0433	0.0433	0.0000	715.4765	715.4765	0.0266	0.0000	716.1423
Total	**0.3326**	**1.6074**	**3.1761**	**7.7400e-003**		**0.0433**	**0.0433**		**0.0433**	**0.0433**	**0.0000**	**715.4765**	**715.4765**	**0.0266**	**0.0000**	**716.1423**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4600e-003	0.0736	0.0324	3.2000e-004	0.0129	5.7000e-004	0.0135	3.7300e-003	5.4000e-004	4.2700e-003	0.0000	31.1061	31.1061	4.6000e-004	4.5500e-003	32.4743
Worker	0.0289	0.0165	0.2710	9.2000e-004	0.1342	4.3000e-004	0.1346	0.0356	3.9000e-004	0.0360	0.0000	84.1322	84.1322	1.6200e-003	2.0100e-003	84.7718
Total	**0.0314**	**0.0901**	**0.3033**	**1.2400e-003**	**0.1471**	**1.0000e-003**	**0.1481**	**0.0394**	**9.3000e-004**	**0.0403**	**0.0000**	**115.2383**	**115.2383**	**2.0800e-003**	**6.5600e-003**	**117.2461**

3.3 Building Construction - 2031

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3033	1.4657	2.8962	7.0600e-003		0.0395	0.0395		0.0395	0.0395	0.0000	652.4276	652.4276	0.0243	0.0000	653.0347
Total	**0.3033**	**1.4657**	**2.8962**	**7.0600e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**	**0.0000**	**652.4276**	**652.4276**	**0.0243**	**0.0000**	**653.0347**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2300e-003	0.0672	0.0296	2.9000e-004	0.0118	5.0000e-004	0.0123	3.4000e-003	4.8000e-004	3.8800e-003	0.0000	27.8781	27.8781	4.3000e-004	4.0700e-003	29.1030
Worker	0.0248	0.0140	0.2401	8.2000e-004	0.1224	3.7000e-004	0.1228	0.0325	3.4000e-004	0.0328	0.0000	75.3745	75.3745	1.3800e-003	1.7800e-003	75.9385
Total	**0.0271**	**0.0812**	**0.2696**	**1.1100e-003**	**0.1342**	**8.7000e-004**	**0.1350**	**0.0359**	**8.2000e-004**	**0.0367**	**0.0000**	**103.2525**	**103.2525**	**1.8100e-003**	**5.8500e-003**	**105.0415**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3033	1.4657	2.8962	7.0600e-003		0.0395	0.0395		0.0395	0.0395	0.0000	652.4268	652.4268	0.0243	0.0000	653.0339
Total	**0.3033**	**1.4657**	**2.8962**	**7.0600e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**	**0.0000**	**652.4268**	**652.4268**	**0.0243**	**0.0000**	**653.0339**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2300e-003	0.0672	0.0296	2.9000e-004	0.0118	5.0000e-004	0.0123	3.4000e-003	4.8000e-004	3.8800e-003	0.0000	27.8781	27.8781	4.3000e-004	4.0700e-003	29.1030
Worker	0.0248	0.0140	0.2401	8.2000e-004	0.1224	3.7000e-004	0.1228	0.0325	3.4000e-004	0.0328	0.0000	75.3745	75.3745	1.3800e-003	1.7800e-003	75.9385

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0271**	**0.0812**	**0.2696**	**1.1100e-003**	**0.1342**	**8.7000e-004**	**0.1350**	**0.0359**	**8.2000e-004**	**0.0367**	**0.0000**	**103.2525**	**103.2525**	**1.8100e-003**	**5.8500e-003**	**105.0415**

3.4 On-Site Paving - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9300	666.9300	0.2082	0.0000	672.1359
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9300**	**666.9300**	**0.2082**	**0.0000**	**672.1359**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0192	8.3200e-003	9.0000e-005	3.2300e-003	1.5000e-004	3.3800e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.5395	8.5395	1.0000e-004	1.2600e-003	8.9177
Worker	7.8000e-003	5.0200e-003	0.0704	2.1000e-004	0.0268	1.2000e-004	0.0270	7.1300e-003	1.1000e-004	7.2400e-003	0.0000	19.2215	19.2215	4.9000e-004	5.1000e-004	19.3859
Total	**8.4400e-003**	**0.0242**	**0.0787**	**3.0000e-004**	**0.0301**	**2.7000e-004**	**0.0303**	**8.0600e-003**	**2.5000e-004**	**8.3100e-003**	**0.0000**	**27.7611**	**27.7611**	**5.9000e-004**	**1.7700e-003**	**28.3036**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9292	666.9292	0.2082	0.0000	672.1351

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9292**	**666.9292**	**0.2082**	**0.0000**	**672.1351**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0192	8.3200e-003	9.0000e-005	3.2300e-003	1.5000e-004	3.3800e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.5395	8.5395	1.0000e-004	1.2600e-003	8.9177
Worker	7.8000e-003	5.0200e-003	0.0704	2.1000e-004	0.0268	1.2000e-004	0.0270	7.1300e-003	1.1000e-004	7.2400e-003	0.0000	19.2215	19.2215	4.9000e-004	5.1000e-004	19.3859
Total	**8.4400e-003**	**0.0242**	**0.0787**	**3.0000e-004**	**0.0301**	**2.7000e-004**	**0.0303**	**8.0600e-003**	**2.5000e-004**	**8.3100e-003**	**0.0000**	**27.7611**	**27.7611**	**5.9000e-004**	**1.7700e-003**	**28.3036**

3.4 On-Site Paving - 2026

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9300	666.9300	0.2082	0.0000	672.1359
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9300**	**666.9300**	**0.2082**	**0.0000**	**672.1359**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0190	8.2500e-003	9.0000e-005	3.2300e-003	1.5000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.3840	8.3840	1.0000e-004	1.2400e-003	8.7547
Worker	7.3200e-003	4.5500e-003	0.0660	2.0000e-004	0.0268	1.1000e-004	0.0270	7.1300e-003	1.0000e-004	7.2300e-003	0.0000	18.6232	18.6232	4.5000e-004	4.8000e-004	18.7776
Total	**7.9500e-003**	**0.0235**	**0.0743**	**2.9000e-004**	**0.0301**	**2.6000e-004**	**0.0303**	**8.0600e-003**	**2.4000e-004**	**8.3000e-003**	**0.0000**	**27.0071**	**27.0071**	**5.5000e-004**	**1.7200e-003**	**27.5322**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9292	666.9292	0.2082	0.0000	672.1351
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9292**	**666.9292**	**0.2082**	**0.0000**	**672.1351**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0190	8.2500e-003	9.0000e-005	3.2300e-003	1.5000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.3840	8.3840	1.0000e-004	1.2400e-003	8.7547
Worker	7.3200e-003	4.5500e-003	0.0660	2.0000e-004	0.0268	1.1000e-004	0.0270	7.1300e-003	1.0000e-004	7.2300e-003	0.0000	18.6232	18.6232	4.5000e-004	4.8000e-004	18.7776

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**7.9500e-003**	**0.0235**	**0.0743**	**2.9000e-004**	**0.0301**	**2.6000e-004**	**0.0303**	**8.0600e-003**	**2.4000e-004**	**8.3000e-003**	**0.0000**	**27.0071**	**27.0071**	**5.5000e-004**	**1.7200e-003**	**27.5322**

3.4 On-Site Paving - 2027

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9300	666.9300	0.2082	0.0000	672.1359
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9300**	**666.9300**	**0.2082**	**0.0000**	**672.1359**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0188	8.1900e-003	9.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.2206	8.2206	1.1000e-004	1.2100e-003	8.5837
Worker	6.8900e-003	4.1500e-003	0.0623	2.0000e-004	0.0268	1.1000e-004	0.0270	7.1300e-003	1.0000e-004	7.2300e-003	0.0000	18.0880	18.0880	4.1000e-004	4.6000e-004	18.2340
Total	**7.5200e-003**	**0.0230**	**0.0705**	**2.9000e-004**	**0.0301**	**2.5000e-004**	**0.0303**	**8.0600e-003**	**2.4000e-004**	**8.3000e-003**	**0.0000**	**26.3086**	**26.3086**	**5.2000e-004**	**1.6700e-003**	**26.8176**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9292	666.9292	0.2082	0.0000	672.1351
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9292**	**666.9292**	**0.2082**	**0.0000**	**672.1351**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0188	8.1900e-003	9.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.2206	8.2206	1.1000e-004	1.2100e-003	8.5837
Worker	6.8900e-003	4.1500e-003	0.0623	2.0000e-004	0.0268	1.1000e-004	0.0270	7.1300e-003	1.0000e-004	7.2300e-003	0.0000	18.0880	18.0880	4.1000e-004	4.6000e-004	18.2340
Total	**7.5200e-003**	**0.0230**	**0.0705**	**2.9000e-004**	**0.0301**	**2.5000e-004**	**0.0303**	**8.0600e-003**	**2.4000e-004**	**8.3000e-003**	**0.0000**	**26.3086**	**26.3086**	**5.2000e-004**	**1.6700e-003**	**26.8176**

3.4 On-Site Paving - 2028

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3375	2.8026	2.8614	7.7100e-003		0.1072	0.1072		0.0995	0.0995	0.0000	664.3747	664.3747	0.2074	0.0000	669.5606
Paving	6.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3442**	**2.8026**	**2.8614**	**7.7100e-003**		**0.1072**	**0.1072**		**0.0995**	**0.0995**	**0.0000**	**664.3747**	**664.3747**	**0.2074**	**0.0000**	**669.5606**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0186	8.1200e-003	8.0000e-005	3.2200e-003	1.4000e-004	3.3600e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.0327	8.0327	1.1000e-004	1.1800e-003	8.3870
Worker	6.4700e-003	3.8000e-003	0.0590	1.9000e-004	0.0267	1.0000e-004	0.0268	7.1000e-003	9.0000e-005	7.1900e-003	0.0000	17.5474	17.5474	3.8000e-004	4.3000e-004	17.6858
Total	**7.0900e-003**	**0.0224**	**0.0671**	**2.7000e-004**	**0.0300**	**2.4000e-004**	**0.0302**	**8.0300e-003**	**2.3000e-004**	**8.2600e-003**	**0.0000**	**25.5801**	**25.5801**	**4.9000e-004**	**1.6100e-003**	**26.0728**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3375	2.8026	2.8614	7.7100e-003		0.1072	0.1072		0.0995	0.0995	0.0000	664.3739	664.3739	0.2074	0.0000	669.5598
Paving	6.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3442**	**2.8026**	**2.8614**	**7.7100e-003**		**0.1072**	**0.1072**		**0.0995**	**0.0995**	**0.0000**	**664.3739**	**664.3739**	**0.2074**	**0.0000**	**669.5598**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0186	8.1200e-003	8.0000e-005	3.2200e-003	1.4000e-004	3.3600e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	8.0327	8.0327	1.1000e-004	1.1800e-003	8.3870
Worker	6.4700e-003	3.8000e-003	0.0590	1.9000e-004	0.0267	1.0000e-004	0.0268	7.1000e-003	9.0000e-005	7.1900e-003	0.0000	17.5474	17.5474	3.8000e-004	4.3000e-004	17.6858

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**7.0900e-003**	**0.0224**	**0.0671**	**2.7000e-004**	**0.0300**	**2.4000e-004**	**0.0302**	**8.0300e-003**	**2.3000e-004**	**8.2600e-003**	**0.0000**	**25.5801**	**25.5801**	**4.9000e-004**	**1.6100e-003**	**26.0728**

3.4 On-Site Paving - 2029

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9300	666.9300	0.2082	0.0000	672.1359
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9300**	**666.9300**	**0.2082**	**0.0000**	**672.1359**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0185	8.1200e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	7.9157	7.9157	1.1000e-004	1.1600e-003	8.2643
Worker	6.1200e-003	3.5300e-003	0.0565	1.9000e-004	0.0268	9.0000e-005	0.0269	7.1300e-003	8.0000e-005	7.2100e-003	0.0000	17.1962	17.1962	3.5000e-004	4.2000e-004	17.3292
Total	**6.7400e-003**	**0.0221**	**0.0646**	**2.7000e-004**	**0.0301**	**2.3000e-004**	**0.0303**	**8.0600e-003**	**2.2000e-004**	**8.2800e-003**	**0.0000**	**25.1119**	**25.1119**	**4.6000e-004**	**1.5800e-003**	**25.5935**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.3388	2.8134	2.8724	7.7400e-003		0.1076	0.1076		0.0999	0.0999	0.0000	666.9292	666.9292	0.2082	0.0000	672.1351
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3455**	**2.8134**	**2.8724**	**7.7400e-003**		**0.1076**	**0.1076**		**0.0999**	**0.0999**	**0.0000**	**666.9292**	**666.9292**	**0.2082**	**0.0000**	**672.1351**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0185	8.1200e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	7.9157	7.9157	1.1000e-004	1.1600e-003	8.2643
Worker	6.1200e-003	3.5300e-003	0.0565	1.9000e-004	0.0268	9.0000e-005	0.0269	7.1300e-003	8.0000e-005	7.2100e-003	0.0000	17.1962	17.1962	3.5000e-004	4.2000e-004	17.3292
Total	**6.7400e-003**	**0.0221**	**0.0646**	**2.7000e-004**	**0.0301**	**2.3000e-004**	**0.0303**	**8.0600e-003**	**2.2000e-004**	**8.2800e-003**	**0.0000**	**25.1119**	**25.1119**	**4.6000e-004**	**1.5800e-003**	**25.5935**

3.4 On-Site Paving - 2030

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3902	1.5268	2.8931	8.6500e-003		0.0529	0.0529		0.0529	0.0529	0.0000	792.1797	792.1797	0.0313	0.0000	792.9631
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3969**	**1.5268**	**2.8931**	**8.6500e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**792.1797**	**792.1797**	**0.0313**	**0.0000**	**792.9631**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0184	8.0900e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	7.7765	7.7765	1.1000e-004	1.1400e-003	8.1186
Worker	5.7800e-003	3.2900e-003	0.0542	1.8000e-004	0.0268	9.0000e-005	0.0269	7.1300e-003	8.0000e-005	7.2100e-003	0.0000	16.8264	16.8264	3.2000e-004	4.0000e-004	16.9544
Total	**6.3900e-003**	**0.0217**	**0.0623**	**2.6000e-004**	**0.0301**	**2.3000e-004**	**0.0303**	**8.0600e-003**	**2.2000e-004**	**8.2800e-003**	**0.0000**	**24.6030**	**24.6030**	**4.3000e-004**	**1.5400e-003**	**25.0729**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3902	1.5268	2.8931	8.6500e-003		0.0529	0.0529		0.0529	0.0529	0.0000	792.1788	792.1788	0.0313	0.0000	792.9622
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3969**	**1.5268**	**2.8931**	**8.6500e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**792.1788**	**792.1788**	**0.0313**	**0.0000**	**792.9622**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0184	8.0900e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.4000e-004	1.0700e-003	0.0000	7.7765	7.7765	1.1000e-004	1.1400e-003	8.1186
Worker	5.7800e-003	3.2900e-003	0.0542	1.8000e-004	0.0268	9.0000e-005	0.0269	7.1300e-003	8.0000e-005	7.2100e-003	0.0000	16.8264	16.8264	3.2000e-004	4.0000e-004	16.9544

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**6.3900e-003**	**0.0217**	**0.0623**	**2.6000e-004**	**0.0301**	**2.3000e-004**	**0.0303**	**8.0600e-003**	**2.2000e-004**	**8.2800e-003**	**0.0000**	**24.6030**	**24.6030**	**4.3000e-004**	**1.5400e-003**	**25.0729**

3.4 On-Site Paving - 2031

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3902	1.5268	2.8931	8.6500e-003		0.0529	0.0529		0.0529	0.0529	0.0000	792.1797	792.1797	0.0313	0.0000	792.9631
Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3969**	**1.5268**	**2.8931**	**8.6500e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**792.1797**	**792.1797**	**0.0313**	**0.0000**	**792.9631**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0184	8.1000e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.3000e-004	1.0600e-003	0.0000	7.6430	7.6430	1.2000e-004	1.1200e-003	7.9789
Worker	5.4400e-003	3.0800e-003	0.0527	1.8000e-004	0.0268	8.0000e-005	0.0269	7.1300e-003	7.0000e-005	7.2000e-003	0.0000	16.5317	16.5317	3.0000e-004	3.9000e-004	16.6554
Total	**6.0500e-003**	**0.0215**	**0.0608**	**2.6000e-004**	**0.0301**	**2.2000e-004**	**0.0303**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**	**0.0000**	**24.1748**	**24.1748**	**4.2000e-004**	**1.5100e-003**	**24.6343**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3902	1.5268	2.8931	8.6500e-003		0.0529	0.0529		0.0529	0.0529	0.0000	792.1788	792.1788	0.0313	0.0000	792.9622

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	6.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3969**	**1.5268**	**2.8931**	**8.6500e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**792.1788**	**792.1788**	**0.0313**	**0.0000**	**792.9622**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0184	8.1000e-003	8.0000e-005	3.2300e-003	1.4000e-004	3.3700e-003	9.3000e-004	1.3000e-004	1.0600e-003	0.0000	7.6430	7.6430	1.2000e-004	1.1200e-003	7.9789
Worker	5.4400e-003	3.0800e-003	0.0527	1.8000e-004	0.0268	8.0000e-005	0.0269	7.1300e-003	7.0000e-005	7.2000e-003	0.0000	16.5317	16.5317	3.0000e-004	3.9000e-004	16.6554
Total	**6.0500e-003**	**0.0215**	**0.0608**	**2.6000e-004**	**0.0301**	**2.2000e-004**	**0.0303**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**	**0.0000**	**24.1748**	**24.1748**	**4.2000e-004**	**1.5100e-003**	**24.6343**

3.4 On-Site Paving - 2032

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0314	0.1228	0.2328	7.0000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	63.7386	63.7386	2.5200e-003	0.0000	63.8016
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0319**	**0.1228**	**0.2328**	**7.0000e-004**		**4.2600e-003**	**4.2600e-003**		**4.2600e-003**	**4.2600e-003**	**0.0000**	**63.7386**	**63.7386**	**2.5200e-003**	**0.0000**	**63.8016**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.4700e-003	6.5000e-004	1.0000e-005	2.6000e-004	1.0000e-005	2.7000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.6060	0.6060	1.0000e-005	9.0000e-005	0.6326
Worker	4.1000e-004	2.3000e-004	4.0900e-003	1.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.3070	1.3070	2.0000e-005	3.0000e-005	1.3166
Total	**4.6000e-004**	**1.7000e-003**	**4.7400e-003**	**2.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4400e-003**	**6.4000e-004**	**2.0000e-005**	**6.7000e-004**	**0.0000**	**1.9130**	**1.9130**	**3.0000e-005**	**1.2000e-004**	**1.9492**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0314	0.1228	0.2328	7.0000e-004		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	63.7385	63.7385	2.5200e-003	0.0000	63.8016
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0319**	**0.1228**	**0.2328**	**7.0000e-004**		**4.2600e-003**	**4.2600e-003**		**4.2600e-003**	**4.2600e-003**	**0.0000**	**63.7385**	**63.7385**	**2.5200e-003**	**0.0000**	**63.8016**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.4700e-003	6.5000e-004	1.0000e-005	2.6000e-004	1.0000e-005	2.7000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.6060	0.6060	1.0000e-005	9.0000e-005	0.6326
Worker	4.1000e-004	2.3000e-004	4.0900e-003	1.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.3070	1.3070	2.0000e-005	3.0000e-005	1.3166

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**4.6000e-004**	**1.7000e-003**	**4.7400e-003**	**2.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4400e-003**	**6.4000e-004**	**2.0000e-005**	**6.7000e-004**	**0.0000**	**1.9130**	**1.9130**	**3.0000e-005**	**1.2000e-004**	**1.9492**

3.5 Finishings - 2025

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0556	0.3729	0.5889	9.7000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	83.1084	83.1084	4.5300e-003	0.0000	83.2218
Total	**0.6713**	**0.3729**	**0.5889**	**9.7000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**83.1084**	**83.1084**	**4.5300e-003**	**0.0000**	**83.2218**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0600e-003	0.0319	0.0138	1.5000e-004	5.3700e-003	2.4000e-004	5.6100e-003	1.5500e-003	2.3000e-004	1.7800e-003	0.0000	14.1999	14.1999	1.6000e-004	2.1000e-003	14.8287
Worker	9.0800e-003	5.8400e-003	0.0819	2.4000e-004	0.0312	1.4000e-004	0.0314	8.3000e-003	1.3000e-004	8.4200e-003	0.0000	22.3736	22.3736	5.8000e-004	5.9000e-004	22.5649
Total	**0.0101**	**0.0377**	**0.0957**	**3.9000e-004**	**0.0366**	**3.8000e-004**	**0.0370**	**9.8500e-003**	**3.6000e-004**	**0.0102**	**0.0000**	**36.5734**	**36.5734**	**7.4000e-004**	**2.6900e-003**	**37.3936**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.0556	0.3729	0.5889	9.7000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	83.1083	83.1083	4.5300e-003	0.0000	83.2217
Total	**0.6713**	**0.3729**	**0.5889**	**9.7000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**83.1083**	**83.1083**	**4.5300e-003**	**0.0000**	**83.2217**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0600e-003	0.0319	0.0138	1.5000e-004	5.3700e-003	2.4000e-004	5.6100e-003	1.5500e-003	2.3000e-004	1.7800e-003	0.0000	14.1999	14.1999	1.6000e-004	2.1000e-003	14.8287
Worker	9.0800e-003	5.8400e-003	0.0819	2.4000e-004	0.0312	1.4000e-004	0.0314	8.3000e-003	1.3000e-004	8.4200e-003	0.0000	22.3736	22.3736	5.8000e-004	5.9000e-004	22.5649
Total	**0.0101**	**0.0377**	**0.0957**	**3.9000e-004**	**0.0366**	**3.8000e-004**	**0.0370**	**9.8500e-003**	**3.6000e-004**	**0.0102**	**0.0000**	**36.5734**	**36.5734**	**7.4000e-004**	**2.6900e-003**	**37.3936**

3.5 Finishings - 2026

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9599	99.9599	5.4500e-003	0.0000	100.0962
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9599**	**99.9599**	**5.4500e-003**	**0.0000**	**100.0962**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0380	0.0165	1.7000e-004	6.4600e-003	2.9000e-004	6.7500e-003	1.8600e-003	2.8000e-004	2.1400e-003	0.0000	16.7679	16.7679	2.0000e-004	2.4700e-003	17.5094
Worker	0.0103	6.3700e-003	0.0925	2.8000e-004	0.0376	1.6000e-004	0.0377	9.9800e-003	1.5000e-004	0.0101	0.0000	26.0724	26.0724	6.3000e-004	6.7000e-004	26.2886
Total	**0.0115**	**0.0444**	**0.1090**	**4.5000e-004**	**0.0440**	**4.5000e-004**	**0.0445**	**0.0118**	**4.3000e-004**	**0.0123**	**0.0000**	**42.8403**	**42.8403**	**8.3000e-004**	**3.1400e-003**	**43.7979**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9598	99.9598	5.4500e-003	0.0000	100.0961
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9598**	**99.9598**	**5.4500e-003**	**0.0000**	**100.0961**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2600e-003	0.0380	0.0165	1.7000e-004	6.4600e-003	2.9000e-004	6.7500e-003	1.8600e-003	2.8000e-004	2.1400e-003	0.0000	16.7679	16.7679	2.0000e-004	2.4700e-003	17.5094

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.0103	6.3700e-003	0.0925	2.8000e-004	0.0376	1.6000e-004	0.0377	9.9800e-003	1.5000e-004	0.0101	0.0000	26.0724	26.0724	6.3000e-004	6.7000e-004	26.2886
Total	**0.0115**	**0.0444**	**0.1090**	**4.5000e-004**	**0.0440**	**4.5000e-004**	**0.0445**	**0.0118**	**4.3000e-004**	**0.0123**	**0.0000**	**42.8403**	**42.8403**	**8.3000e-004**	**3.1400e-003**	**43.7979**

3.5 Finishings - 2027

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9599	99.9599	5.4500e-003	0.0000	100.0962
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9599**	**99.9599**	**5.4500e-003**	**0.0000**	**100.0962**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2500e-003	0.0376	0.0164	1.7000e-004	6.4600e-003	2.9000e-004	6.7500e-003	1.8600e-003	2.8000e-004	2.1400e-003	0.0000	16.4412	16.4412	2.1000e-004	2.4200e-003	17.1673
Worker	9.6400e-003	5.8100e-003	0.0873	2.8000e-004	0.0376	1.5000e-004	0.0377	9.9800e-003	1.4000e-004	0.0101	0.0000	25.3232	25.3232	5.8000e-004	6.4000e-004	25.5276
Total	**0.0109**	**0.0434**	**0.1036**	**4.5000e-004**	**0.0440**	**4.4000e-004**	**0.0445**	**0.0118**	**4.2000e-004**	**0.0123**	**0.0000**	**41.7644**	**41.7644**	**7.9000e-004**	**3.0600e-003**	**42.6949**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9598	99.9598	5.4500e-003	0.0000	100.0961
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9598**	**99.9598**	**5.4500e-003**	**0.0000**	**100.0961**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2500e-003	0.0376	0.0164	1.7000e-004	6.4600e-003	2.9000e-004	6.7500e-003	1.8600e-003	2.8000e-004	2.1400e-003	0.0000	16.4412	16.4412	2.1000e-004	2.4200e-003	17.1673
Worker	9.6400e-003	5.8100e-003	0.0873	2.8000e-004	0.0376	1.5000e-004	0.0377	9.9800e-003	1.4000e-004	0.0101	0.0000	25.3232	25.3232	5.8000e-004	6.4000e-004	25.5276
Total	**0.0109**	**0.0434**	**0.1036**	**4.5000e-004**	**0.0440**	**4.4000e-004**	**0.0445**	**0.0118**	**4.2000e-004**	**0.0123**	**0.0000**	**41.7644**	**41.7644**	**7.9000e-004**	**3.0600e-003**	**42.6949**

3.5 Finishings - 2028

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7377					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0666	0.4468	0.7056	1.1600e-003		0.0201	0.0201		0.0201	0.0201	0.0000	99.5769	99.5769	5.4300e-003	0.0000	99.7127
Total	**0.8043**	**0.4468**	**0.7056**	**1.1600e-003**		**0.0201**	**0.0201**		**0.0201**	**0.0201**	**0.0000**	**99.5769**	**99.5769**	**5.4300e-003**	**0.0000**	**99.7127**

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Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2400e-003	0.0372	0.0162	1.7000e-004	6.4300e-003	2.9000e-004	6.7200e-003	1.8600e-003	2.7000e-004	2.1300e-003	0.0000	16.0655	16.0655	2.2000e-004	2.3600e-003	16.7739
Worker	9.0600e-003	5.3300e-003	0.0826	2.7000e-004	0.0374	1.4000e-004	0.0376	9.9400e-003	1.3000e-004	0.0101	0.0000	24.5663	24.5663	5.3000e-004	6.1000e-004	24.7602
Total	**0.0103**	**0.0425**	**0.0988**	**4.4000e-004**	**0.0439**	**4.3000e-004**	**0.0443**	**0.0118**	**4.0000e-004**	**0.0122**	**0.0000**	**40.6318**	**40.6318**	**7.5000e-004**	**2.9700e-003**	**41.5341**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7377					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0666	0.4468	0.7056	1.1600e-003		0.0201	0.0201		0.0201	0.0201	0.0000	99.5768	99.5768	5.4300e-003	0.0000	99.7126
Total	**0.8043**	**0.4468**	**0.7056**	**1.1600e-003**		**0.0201**	**0.0201**		**0.0201**	**0.0201**	**0.0000**	**99.5768**	**99.5768**	**5.4300e-003**	**0.0000**	**99.7126**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2400e-003	0.0372	0.0162	1.7000e-004	6.4300e-003	2.9000e-004	6.7200e-003	1.8600e-003	2.7000e-004	2.1300e-003	0.0000	16.0655	16.0655	2.2000e-004	2.3600e-003	16.7739
Worker	9.0600e-003	5.3300e-003	0.0826	2.7000e-004	0.0374	1.4000e-004	0.0376	9.9400e-003	1.3000e-004	0.0101	0.0000	24.5663	24.5663	5.3000e-004	6.1000e-004	24.7602

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.0103**	**0.0425**	**0.0988**	**4.4000e-004**	**0.0439**	**4.3000e-004**	**0.0443**	**0.0118**	**4.0000e-004**	**0.0122**	**0.0000**	**40.6318**	**40.6318**	**7.5000e-004**	**2.9700e-003**	**41.5341**

3.5 Finishings - 2029

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9599	99.9599	5.4500e-003	0.0000	100.0962
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9599**	**99.9599**	**5.4500e-003**	**0.0000**	**100.0962**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0371	0.0162	1.6000e-004	6.4600e-003	2.9000e-004	6.7400e-003	1.8600e-003	2.7000e-004	2.1400e-003	0.0000	15.8314	15.8314	2.2000e-004	2.3200e-003	16.5286
Worker	8.5700e-003	4.9500e-003	0.0791	2.6000e-004	0.0376	1.3000e-004	0.0377	9.9800e-003	1.2000e-004	0.0101	0.0000	24.0747	24.0747	4.9000e-004	5.8000e-004	24.2608
Total	**9.8000e-003**	**0.0420**	**0.0954**	**4.2000e-004**	**0.0440**	**4.2000e-004**	**0.0445**	**0.0118**	**3.9000e-004**	**0.0122**	**0.0000**	**39.9060**	**39.9060**	**7.1000e-004**	**2.9000e-003**	**40.7895**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-Road	0.0669	0.4485	0.7083	1.1600e-003		0.0202	0.0202		0.0202	0.0202	0.0000	99.9598	99.9598	5.4500e-003	0.0000	100.0961
Total	**0.8074**	**0.4485**	**0.7083**	**1.1600e-003**		**0.0202**	**0.0202**		**0.0202**	**0.0202**	**0.0000**	**99.9598**	**99.9598**	**5.4500e-003**	**0.0000**	**100.0961**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0371	0.0162	1.6000e-004	6.4600e-003	2.9000e-004	6.7400e-003	1.8600e-003	2.7000e-004	2.1400e-003	0.0000	15.8314	15.8314	2.2000e-004	2.3200e-003	16.5286
Worker	8.5700e-003	4.9500e-003	0.0791	2.6000e-004	0.0376	1.3000e-004	0.0377	9.9800e-003	1.2000e-004	0.0101	0.0000	24.0747	24.0747	4.9000e-004	5.8000e-004	24.2608
Total	**9.8000e-003**	**0.0420**	**0.0954**	**4.2000e-004**	**0.0440**	**4.2000e-004**	**0.0445**	**0.0118**	**3.9000e-004**	**0.0122**	**0.0000**	**39.9060**	**39.9060**	**7.1000e-004**	**2.9000e-003**	**40.7895**

3.5 Finishings - 2030

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.3352	0.7038	1.1600e-003		7.9500e-003	7.9500e-003		7.9500e-003	7.9500e-003	0.0000	99.9599	99.9599	4.0500e-003	0.0000	100.0610
Total	**0.7917**	**0.3352**	**0.7038**	**1.1600e-003**		**7.9500e-003**	**7.9500e-003**		**7.9500e-003**	**7.9500e-003**	**0.0000**	**99.9599**	**99.9599**	**4.0500e-003**	**0.0000**	**100.0610**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0368	0.0162	1.6000e-004	6.4600e-003	2.8000e-004	6.7400e-003	1.8600e-003	2.7000e-004	2.1400e-003	0.0000	15.5531	15.5531	2.3000e-004	2.2800e-003	16.2372
Worker	8.0900e-003	4.6100e-003	0.0759	2.6000e-004	0.0376	1.2000e-004	0.0377	9.9800e-003	1.1000e-004	0.0101	0.0000	23.5570	23.5570	4.5000e-004	5.6000e-004	23.7361
Total	**9.3200e-003**	**0.0414**	**0.0921**	**4.2000e-004**	**0.0440**	**4.0000e-004**	**0.0444**	**0.0118**	**3.8000e-004**	**0.0122**	**0.0000**	**39.1101**	**39.1101**	**6.8000e-004**	**2.8400e-003**	**39.9733**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.3352	0.7038	1.1600e-003		7.9500e-003	7.9500e-003		7.9500e-003	7.9500e-003	0.0000	99.9598	99.9598	4.0500e-003	0.0000	100.0609
Total	**0.7917**	**0.3352**	**0.7038**	**1.1600e-003**		**7.9500e-003**	**7.9500e-003**		**7.9500e-003**	**7.9500e-003**	**0.0000**	**99.9598**	**99.9598**	**4.0500e-003**	**0.0000**	**100.0609**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0368	0.0162	1.6000e-004	6.4600e-003	2.8000e-004	6.7400e-003	1.8600e-003	2.7000e-004	2.1400e-003	0.0000	15.5531	15.5531	2.3000e-004	2.2800e-003	16.2372
Worker	8.0900e-003	4.6100e-003	0.0759	2.6000e-004	0.0376	1.2000e-004	0.0377	9.9800e-003	1.1000e-004	0.0101	0.0000	23.5570	23.5570	4.5000e-004	5.6000e-004	23.7361
Total	**9.3200e-003**	**0.0414**	**0.0921**	**4.2000e-004**	**0.0440**	**4.0000e-004**	**0.0444**	**0.0118**	**3.8000e-004**	**0.0122**	**0.0000**	**39.1101**	**39.1101**	**6.8000e-004**	**2.8400e-003**	**39.9733**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Finishings - 2031

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.3352	0.7038	1.1600e-003		7.9500e-003	7.9500e-003		7.9500e-003	7.9500e-003	0.0000	99.9599	99.9599	4.0500e-003	0.0000	100.0610
Total	**0.7917**	**0.3352**	**0.7038**	**1.1600e-003**		**7.9500e-003**	**7.9500e-003**		**7.9500e-003**	**7.9500e-003**	**0.0000**	**99.9599**	**99.9599**	**4.0500e-003**	**0.0000**	**100.0610**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2200e-003	0.0368	0.0162	1.6000e-004	6.4600e-003	2.7000e-004	6.7300e-003	1.8600e-003	2.6000e-004	2.1300e-003	0.0000	15.2861	15.2861	2.3000e-004	2.2300e-003	15.9577
Worker	7.6200e-003	4.3100e-003	0.0737	2.5000e-004	0.0376	1.1000e-004	0.0377	9.9800e-003	1.0000e-004	0.0101	0.0000	23.1444	23.1444	4.2000e-004	5.5000e-004	23.3176
Total	**8.8400e-003**	**0.0411**	**0.0899**	**4.1000e-004**	**0.0440**	**3.8000e-004**	**0.0444**	**0.0118**	**3.6000e-004**	**0.0122**	**0.0000**	**38.4305**	**38.4305**	**6.5000e-004**	**2.7800e-003**	**39.2753**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7405					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.3352	0.7038	1.1600e-003		7.9500e-003	7.9500e-003		7.9500e-003	7.9500e-003	0.0000	99.9598	99.9598	4.0500e-003	0.0000	100.0609

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**0.7917**	**0.3352**	**0.7038**	**1.1600e-003**		**7.9500e-003**	**7.9500e-003**		**7.9500e-003**	**7.9500e-003**	**0.0000**	**99.9598**	**99.9598**	**4.0500e-003**	**0.0000**	**100.0609**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2200e-003	0.0368	0.0162	1.6000e-004	6.4600e-003	2.7000e-004	6.7300e-003	1.8600e-003	2.6000e-004	2.1300e-003	0.0000	15.2861	15.2861	2.3000e-004	2.2300e-003	15.9577
Worker	7.6200e-003	4.3100e-003	0.0737	2.5000e-004	0.0376	1.1000e-004	0.0377	9.9800e-003	1.0000e-004	0.0101	0.0000	23.1444	23.1444	4.2000e-004	5.5000e-004	23.3176
Total	**8.8400e-003**	**0.0411**	**0.0899**	**4.1000e-004**	**0.0440**	**3.8000e-004**	**0.0444**	**0.0118**	**3.6000e-004**	**0.0122**	**0.0000**	**38.4305**	**38.4305**	**6.5000e-004**	**2.7800e-003**	**39.2753**

3.5 Finishings - 2032

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1844					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.0835	0.1753	2.9000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	24.8942	24.8942	1.0100e-003	0.0000	24.9194
Total	**0.1972**	**0.0835**	**0.1753**	**2.9000e-004**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**24.8942**	**24.8942**	**1.0100e-003**	**0.0000**	**24.9194**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1000e-004	9.1200e-003	4.0400e-003	4.0000e-005	1.6100e-003	7.0000e-005	1.6800e-003	4.6000e-004	7.0000e-005	5.3000e-004	0.0000	3.7515	3.7515	6.0000e-005	5.5000e-004	3.9162
Worker	1.7900e-003	1.0100e-003	0.0177	6.0000e-005	9.3600e-003	3.0000e-005	9.3900e-003	2.4900e-003	2.0000e-005	2.5100e-003	0.0000	5.6635	5.6635	1.0000e-004	1.3000e-004	5.7054
Total	**2.1000e-003**	**0.0101**	**0.0218**	**1.0000e-004**	**0.0110**	**1.0000e-004**	**0.0111**	**2.9500e-003**	**9.0000e-005**	**3.0400e-003**	**0.0000**	**9.4150**	**9.4150**	**1.6000e-004**	**6.8000e-004**	**9.6216**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1844					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.0835	0.1753	2.9000e-004		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	24.8942	24.8942	1.0100e-003	0.0000	24.9194
Total	**0.1972**	**0.0835**	**0.1753**	**2.9000e-004**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**24.8942**	**24.8942**	**1.0100e-003**	**0.0000**	**24.9194**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1000e-004	9.1200e-003	4.0400e-003	4.0000e-005	1.6100e-003	7.0000e-005	1.6800e-003	4.6000e-004	7.0000e-005	5.3000e-004	0.0000	3.7515	3.7515	6.0000e-005	5.5000e-004	3.9162
Worker	1.7900e-003	1.0100e-003	0.0177	6.0000e-005	9.3600e-003	3.0000e-005	9.3900e-003	2.4900e-003	2.0000e-005	2.5100e-003	0.0000	5.6635	5.6635	1.0000e-004	1.3000e-004	5.7054
Total	**2.1000e-003**	**0.0101**	**0.0218**	**1.0000e-004**	**0.0110**	**1.0000e-004**	**0.0111**	**2.9500e-003**	**9.0000e-005**	**3.0400e-003**	**0.0000**	**9.4150**	**9.4150**	**1.6000e-004**	**6.8000e-004**	**9.6216**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Baseline	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Regulatory Compliance						0.0000	0.0000		0.0000	0.0000	0.0000	563.6637	563.6637	0.0979	0.0119	569.6481
Electricity Baseline						0.0000	0.0000		0.0000	0.0000	0.0000	563.6637	563.6637	0.0979	0.0119	569.6481
NaturalGas Regulatory Compliance	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
NaturalGas Baseline	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

5.3 Energy by Land Use - Electricity

Baseline

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	6.54104e+006	563.6637	0.0979	0.0119	569.6481
Total		**563.6637**	**0.0979**	**0.0119**	**569.6481**

Regulatory Compliance

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	6.54104e+006	563.6637	0.0979	0.0119	569.6481
Total		**563.6637**	**0.0979**	**0.0119**	**569.6481**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	13.2286	1.0641	20.4250	0.0277		1.4712	1.4712		1.4712	1.4712	153.3140	963.4011	1,116.7151	0.5049	0.0220	1,135.8938
Baseline	13.2286	1.0641	20.4250	0.0277		1.4712	1.4712		1.4712	1.4712	153.3140	963.4011	1,116.7151	0.5049	0.0220	1,135.8938

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.4012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.9601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.5312	0.9357	9.2776	0.0271		1.4094	1.4094		1.4094	1.4094	153.3140	945.1798	1,098.4937	0.4874	0.0220	1,117.2342
Landscaping	0.3361	0.1284	11.1474	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.2213	18.2213	0.0175	0.0000	18.6596
Total	**13.2286**	**1.0641**	**20.4250**	**0.0277**		**1.4712**	**1.4712**		**1.4712**	**1.4712**	**153.3140**	**963.4011**	**1,116.7151**	**0.5049**	**0.0220**	**1,135.8938**

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.4012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	5.9601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.5312	0.9357	9.2776	0.0271		1.4094	1.4094		1.4094	1.4094	153.3140	945.1798	1,098.4937	0.4874	0.0220	1,117.2342
Landscaping	0.3361	0.1284	11.1474	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.2213	18.2213	0.0175	0.0000	18.6596
Total	**13.2286**	**1.0641**	**20.4250**	**0.0277**		**1.4712**	**1.4712**		**1.4712**	**1.4712**	**153.3140**	**963.4011**	**1,116.7151**	**0.5049**	**0.0220**	**1,135.8938**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Regulatory Compliance	199.6537	3.2139	0.0788	303.4663
Baseline	199.6537	3.2139	0.0788	303.4663

7.2 Water by Land Use

Baseline

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	97.731 / 61.613	199.6537	3.2139	0.0788	303.4663
Total		**199.6537**	**3.2139**	**0.0788**	**303.4663**

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	97.731 / 61.613	199.6537	3.2139	0.0788	303.4663
Total		**199.6537**	**3.2139**	**0.0788**	**303.4663**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Regulatory Compliance	140.0638	8.2775	0.0000	347.0021
Baseline	140.0638	8.2775	0.0000	347.0021

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Baseline

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

Regulatory Compliance

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Desert Retreat - Total Phase Construction - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D.10

Mass Grading Annual

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Desert Retreat - Mass Grading/Off-site Street Improvements

Riverside-Salton Sea County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	264.00	1000sqft	6.06	264,000.00	0
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Mass grading/street improvement phase only. Approximately 6 month duration.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment -

Trips and VMT - Per applicant - 300 roundtrips hauling per day. 30 workers on-site.
Soil imported from adjacent parcels and Stormwater Channel Project (24 mi roundtrip)

Grading - Mass grading phase requires max soil import of 450,000 cubic yards.

Vehicle Trips - Construction only.

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule 403 minimum controls.

Fleet Mix -

Area Coating -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	620.00	131.00
tblConstructionPhase	NumDays	440.00	131.00
tblGrading	MaterialImported	0.00	450,000.00
tblLandUse	LotAcreage	300.00	377.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	15.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripNumber	56,250.00	39,300.00
tblTripsAndVMT	WorkerTripNumber	73.00	30.00

2.0 Emissions Summary

2.1 Overall Construction

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	1.2566	14.1426	9.9516	0.0367	2.8930	0.4996	3.3926	0.9079	0.4613	1.3691	0.0000	3,339.2339	3,339.2339	0.6870	0.1934	3,414.0411
Maximum	**1.2566**	**14.1426**	**9.9516**	**0.0367**	**2.8930**	**0.4996**	**3.3926**	**0.9079**	**0.4613**	**1.3691**	**0.0000**	**3,339.2339**	**3,339.2339**	**0.6870**	**0.1934**	**3,414.0411**

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Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	1.2566	14.1425	9.9516	0.0367	1.2471	0.4996	1.7467	0.3799	0.4613	0.8412	0.0000	3,339.2314	3,339.2314	0.6870	0.1934	3,414.0386
Maximum	**1.2566**	**14.1425**	**9.9516**	**0.0367**	**1.2471**	**0.4996**	**1.7467**	**0.3799**	**0.4613**	**0.8412**	**0.0000**	**3,339.2314**	**3,339.2314**	**0.6870**	**0.1934**	**3,414.0386**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.89**	**0.00**	**48.52**	**58.16**	**0.00**	**38.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Baseline ROG + NOX (tons/quarter)	Maximum Regulatory Compliance ROG + NOX (tons/quarter)
1	3-1-2024	5-31-2024	7.6841	7.6841
2	6-1-2024	8-31-2024	7.5789	7.5789
		Highest	7.6841	7.6841

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.0971	1.0640	20.4130	0.0277		1.4711	1.4711		1.4711	1.4711	153.3140	963.3777	1,116.6917	0.5049	0.0220	1,135.8688
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,774.4280	1,774.4280	0.1211	0.0341	1,787.6073

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mobile	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021
Water						0.0000	0.0000		0.0000	0.0000	31.0056	168.6481	199.6537	3.2139	0.0788	303.4663
Total	**14.6162**	**4.0695**	**33.3718**	**0.0620**	**2.8970**	**1.5785**	**4.4755**	**0.7739**	**1.5771**	**2.3510**	**324.3833**	**5,462.0451**	**5,786.4284**	**12.2700**	**0.2725**	**6,174.3860**

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.0971	1.0640	20.4130	0.0277		1.4711	1.4711		1.4711	1.4711	153.3140	963.3777	1,116.6917	0.5049	0.0220	1,135.8688
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,774.4280	1,774.4280	0.1211	0.0341	1,787.6073
Mobile	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021
Water						0.0000	0.0000		0.0000	0.0000	31.0056	168.6481	199.6537	3.2139	0.0788	303.4663
Total	**14.6162**	**4.0695**	**33.3718**	**0.0620**	**2.8970**	**1.5785**	**4.4755**	**0.7739**	**1.5771**	**2.3510**	**324.3833**	**5,462.0451**	**5,786.4284**	**12.2700**	**0.2725**	**6,174.3860**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mass Grading	Grading	3/1/2024	8/30/2024	5	131	
2	Street Improvements	Paving	3/1/2024	8/30/2024	5	131	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2358

Acres of Paving: 6.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Grading	Graders	3	8.00	187	0.41
Mass Grading	Off-Highway Trucks	4	8.00	402	0.38
Mass Grading	Pumps	1	8.00	84	0.74
Mass Grading	Rubber Tired Dozers	3	8.00	247	0.40
Mass Grading	Scrapers	15	8.00	367	0.48
Mass Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Street Improvements	Pavers	2	8.00	130	0.42
Street Improvements	Paving Equipment	2	8.00	132	0.36
Street Improvements	Rollers	2	8.00	80	0.38

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mass Grading	29	30.00	0.00	39,300.00	11.00	5.40	24.00	LD_Mix	HDT_Mix	HHDT
Street Improvements	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mass Grading - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4622	0.0000	2.4622	0.7898	0.0000	0.7898	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1316	11.1036	8.3378	0.0224		0.4406	0.4406		0.4059	0.4059	0.0000	1,966.1488	1,966.1488	0.6256	0.0000	1,981.7874
Total	**1.1316**	**11.1036**	**8.3378**	**0.0224**	**2.4622**	**0.4406**	**2.9027**	**0.7898**	**0.4059**	**1.1957**	**0.0000**	**1,966.1488**	**1,966.1488**	**0.6256**	**0.0000**	**1,981.7874**

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Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0448	2.4101	0.5876	0.0126	0.4066	0.0282	0.4348	0.1116	0.0270	0.1386	0.0000	1,223.9361	1,223.9361	0.0185	0.1929	1,281.8847
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0300e-003	3.3600e-003	0.0455	1.3000e-004	0.0162	8.0000e-005	0.0162	4.2900e-003	7.0000e-005	4.3600e-003	0.0000	11.9835	11.9835	3.3000e-004	3.3000e-004	12.0897
Total	**0.0498**	**2.4134**	**0.6330**	**0.0128**	**0.4228**	**0.0283**	**0.4511**	**0.1159**	**0.0271**	**0.1430**	**0.0000**	**1,235.9196**	**1,235.9196**	**0.0188**	**0.1932**	**1,293.9744**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8162	0.0000	0.8162	0.2618	0.0000	0.2618	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1316	11.1036	8.3378	0.0224		0.4406	0.4406		0.4059	0.4059	0.0000	1,966.1464	1,966.1464	0.6256	0.0000	1,981.7851
Total	**1.1316**	**11.1036**	**8.3378**	**0.0224**	**0.8162**	**0.4406**	**1.2568**	**0.2618**	**0.4059**	**0.6678**	**0.0000**	**1,966.1464**	**1,966.1464**	**0.6256**	**0.0000**	**1,981.7851**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0448	2.4101	0.5876	0.0126	0.4066	0.0282	0.4348	0.1116	0.0270	0.1386	0.0000	1,223.9361	1,223.9361	0.0185	0.1929	1,281.8847
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0300e-003	3.3600e-003	0.0455	1.3000e-004	0.0162	8.0000e-005	0.0162	4.2900e-003	7.0000e-005	4.3600e-003	0.0000	11.9835	11.9835	3.3000e-004	3.3000e-004	12.0897
Total	**0.0498**	**2.4134**	**0.6330**	**0.0128**	**0.4228**	**0.0283**	**0.4511**	**0.1159**	**0.0271**	**0.1430**	**0.0000**	**1,235.9196**	**1,235.9196**	**0.0188**	**0.1932**	**1,293.9744**

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3.3 Street Improvements - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0647	0.6239	0.9580	1.4900e-003		0.0307	0.0307		0.0282	0.0282	0.0000	131.1738	131.1738	0.0424	0.0000	132.2344
Paving	7.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0727**	**0.6239**	**0.9580**	**1.4900e-003**		**0.0307**	**0.0307**		**0.0282**	**0.0282**	**0.0000**	**131.1738**	**131.1738**	**0.0424**	**0.0000**	**132.2344**

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5100e-003	1.6800e-003	0.0227	7.0000e-005	8.0800e-003	4.0000e-005	8.1200e-003	2.1500e-003	3.0000e-005	2.1800e-003	0.0000	5.9918	5.9918	1.6000e-004	1.6000e-004	6.0449
Total	**2.5100e-003**	**1.6800e-003**	**0.0227**	**7.0000e-005**	**8.0800e-003**	**4.0000e-005**	**8.1200e-003**	**2.1500e-003**	**3.0000e-005**	**2.1800e-003**	**0.0000**	**5.9918**	**5.9918**	**1.6000e-004**	**1.6000e-004**	**6.0449**

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Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0647	0.6239	0.9580	1.4900e-003		0.0307	0.0307		0.0282	0.0282	0.0000	131.1736	131.1736	0.0424	0.0000	132.2342
Paving	7.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0727**	**0.6239**	**0.9580**	**1.4900e-003**		**0.0307**	**0.0307**		**0.0282**	**0.0282**	**0.0000**	**131.1736**	**131.1736**	**0.0424**	**0.0000**	**132.2342**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5100e-003	1.6800e-003	0.0227	7.0000e-005	8.0800e-003	4.0000e-005	8.1200e-003	2.1500e-003	3.0000e-005	2.1800e-003	0.0000	5.9918	5.9918	1.6000e-004	1.6000e-004	6.0449
Total	**2.5100e-003**	**1.6800e-003**	**0.0227**	**7.0000e-005**	**8.0800e-003**	**4.0000e-005**	**8.1200e-003**	**2.1500e-003**	**3.0000e-005**	**2.1800e-003**	**0.0000**	**5.9918**	**5.9918**	**1.6000e-004**	**1.6000e-004**	**6.0449**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414
Baseline	1.3967	1.9600	12.5139	0.0276	2.8970	0.0228	2.9198	0.7739	0.0214	0.7953	0.0000	2,555.5913	2,555.5913	0.1526	0.1377	2,600.4414

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Retirement Community	3,600.00	3,045.00	2925.00	7,659,857	7,659,857
Total	3,600.00	3,045.00	2,925.00	7,659,857	7,659,857

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	12.50	4.20	5.40	0.00	0.00	0.00	0	0	0
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Retirement Community	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Regulatory Compliance						0.0000	0.0000		0.0000	0.0000	0.0000	563.6637	563.6637	0.0979	0.0119	569.6481
Electricity Baseline						0.0000	0.0000		0.0000	0.0000	0.0000	563.6637	563.6637	0.0979	0.0119	569.6481
NaturalGas Regulatory Compliance	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
NaturalGas Baseline	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

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Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

5.3 Energy by Land Use - Electricity

Baseline

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	6.54104e+006	563.6637	0.0979	0.0119	569.6481
Total		**563.6637**	**0.0979**	**0.0119**	**569.6481**

Regulatory Compliance

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	6.54104e+006	563.6637	0.0979	0.0119	569.6481
Total		**563.6637**	**0.0979**	**0.0119**	**569.6481**

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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	13.0971	1.0640	20.4130	0.0277		1.4711	1.4711		1.4711	1.4711	153.3140	963.3777	1,116.6917	0.5049	0.0220	1,135.8688
Baseline	13.0971	1.0640	20.4130	0.0277		1.4711	1.4711		1.4711	1.4711	153.3140	963.3777	1,116.6917	0.5049	0.0220	1,135.8688

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.3557					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.5312	0.9357	9.2776	0.0271		1.4094	1.4094		1.4094	1.4094	153.3140	945.1798	1,098.4937	0.4874	0.0220	1,117.2342
Landscaping	0.3350	0.1283	11.1354	5.9000e-004		0.0617	0.0617		0.0617	0.0617	0.0000	18.1979	18.1979	0.0175	0.0000	18.6346
Total	**13.0971**	**1.0640**	**20.4130**	**0.0277**		**1.4711**	**1.4711**		**1.4711**	**1.4711**	**153.3140**	**963.3777**	**1,116.6917**	**0.5049**	**0.0220**	**1,135.8688**

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.3557					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Consumer Products	5.8753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.5312	0.9357	9.2776	0.0271		1.4094	1.4094		1.4094	1.4094	153.3140	945.1798	1,098.4937	0.4874	0.0220	1,117.2342
Landscaping	0.3350	0.1283	11.1354	5.9000e-004		0.0617	0.0617		0.0617	0.0617	0.0000	18.1979	18.1979	0.0175	0.0000	18.6346
Total	**13.0971**	**1.0640**	**20.4130**	**0.0277**		**1.4711**	**1.4711**		**1.4711**	**1.4711**	**153.3140**	**963.3777**	**1,116.6917**	**0.5049**	**0.0220**	**1,135.8688**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Regulatory Compliance	199.6537	3.2139	0.0788	303.4663
Baseline	199.6537	3.2139	0.0788	303.4663

7.2 Water by Land Use

Baseline

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	97.731 / 61.613	199.6537	3.2139	0.0788	303.4663
Total		**199.6537**	**3.2139**	**0.0788**	**303.4663**

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Regulatory Compliance

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	97.731 / 61.613	199.6537	3.2139	0.0788	303.4663
Total		**199.6537**	**3.2139**	**0.0788**	**303.4663**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Regulatory Compliance	140.0638	8.2775	0.0000	347.0021
Baseline	140.0638	8.2775	0.0000	347.0021

8.2 Waste by Land Use

Baseline

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

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Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

Regulatory Compliance

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

Desert Retreat - Mass Grading/Off-site Street Improvements - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

APPENDIX D.11

Operation Annual

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Desert Retreat - Operation

Riverside-Salton Sea County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	1,500.00	Dwelling Unit	377.00	1,500,000.00	4290

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is approximately 377 acres in size.

Construction Phase - Operation only.

Vehicle Trips - The Project is expected to generate approximately 6,470 daily trips. (Fehr and Peers, Pulte Homes Development North Indio Transportation Study, June 2022)

Woodstoves - Per SCAQMD Rule 445, no woodburning fireplaces would be installed. Space heating accounted for under energy module.

Area Coating - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Area Mitigation - Consistent with SCAQMD Rule 1113 assumed VOC content of 50 grams per liter for architectural coatings.

Energy Mitigation -

Water Mitigation -

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstructionPhase	NumDays	400.00	0.00
tblFireplaces	FireplaceWoodMass	457.60	0.00
tblFireplaces	NumberGas	1,200.00	0.00
tblFireplaces	NumberNoFireplace	150.00	0.00
tblFireplaces	NumberWood	150.00	0.00
tblLandUse	LotAcreage	300.00	377.00
tblVehicleTrips	ST_TR	2.03	4.36
tblVehicleTrips	SU_TR	1.95	3.91
tblVehicleTrips	WD_TR	2.40	4.31
tblWoodstoves	NumberCatalytic	75.00	0.00
tblWoodstoves	NumberNoncatalytic	75.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Baseline Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Baseline ROG + NOX (tons/quarter)	Maximum Regulatory Compliance ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6598	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,774.4280	1,774.4280	0.1211	0.0341	1,787.6073
Mobile	1.9504	2.4830	18.2995	0.0416	5.3996	0.0293	5.4289	1.4416	0.0274	1.4690	0.0000	4,100.0357	4,100.0357	0.2127	0.1986	4,164.5194
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water						0.0000	0.0000		0.0000	0.0000	31.0056	168.6481	199.6537	3.2139	0.0788	303.4663
Total	**8.7326**	**3.6566**	**29.8526**	**0.0489**	**5.3996**	**0.1756**	**5.5752**	**1.4416**	**0.1737**	**1.6153**	**171.0693**	**6,061.3050**	**6,232.3743**	**11.8425**	**0.3114**	**6,621.2216**

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.2218	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265
Energy	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,760.3205	1,760.3205	0.1187	0.0338	1,773.3501
Mobile	1.9504	2.4830	18.2995	0.0416	5.3996	0.0293	5.4289	1.4416	0.0274	1.4690	0.0000	4,100.0357	4,100.0357	0.2127	0.1986	4,164.5194
Waste						0.0000	0.0000		0.0000	0.0000	140.0638	0.0000	140.0638	8.2775	0.0000	347.0021
Water						0.0000	0.0000		0.0000	0.0000	24.8044	143.1178	167.9222	2.5725	0.0632	251.0594
Total	**8.2946**	**3.6566**	**29.8526**	**0.0489**	**5.3996**	**0.1756**	**5.5752**	**1.4416**	**0.1737**	**1.6153**	**164.8682**	**6,021.6672**	**6,186.5354**	**11.1987**	**0.2955**	**6,554.5574**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.62**	**0.65**	**0.74**	**5.44**	**5.10**	**1.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2024	2/29/2024	5	0	

Date: 11/3/2022 11:03 AM

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Baseline Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Date: 11/3/2022 11:03 AM

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Baseline Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Regulatory Compliance Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	1.9504	2.4830	18.2995	0.0416	5.3996	0.0293	5.4289	1.4416	0.0274	1.4690	0.0000	4,100.0357	4,100.0357	0.2127	0.1986	4,164.5194
Baseline	1.9504	2.4830	18.2995	0.0416	5.3996	0.0293	5.4289	1.4416	0.0274	1.4690	0.0000	4,100.0357	4,100.0357	0.2127	0.1986	4,164.5194

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	6,465.00	6,540.00	5865.00	14,293,926	14,293,926
Total	6,465.00	6,540.00	5,865.00	14,293,926	14,293,926

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	11.00	3.50	4.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.551512	0.058170	0.178297	0.126510	0.022409	0.006479	0.011491	0.017248	0.000593	0.000271	0.022353	0.001062	0.003606

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Regulatory Compliance						0.0000	0.0000		0.0000	0.0000	0.0000	549.5563	549.5563	0.0955	0.0116	555.3909
Electricity Baseline						0.0000	0.0000		0.0000	0.0000	0.0000	563.6637	563.6637	0.0979	0.0119	569.6481
NaturalGas Regulatory Compliance	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
NaturalGas Baseline	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Retirement Community	2.26889e+007	0.1223	1.0455	0.4449	6.6700e-003		0.0845	0.0845		0.0845	0.0845	0.0000	1,210.7642	1,210.7642	0.0232	0.0222	1,217.9592
Total		**0.1223**	**1.0455**	**0.4449**	**6.6700e-003**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**1,210.7642**	**1,210.7642**	**0.0232**	**0.0222**	**1,217.9592**

5.3 Energy by Land Use - Electricity

Baseline

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	6.54104e+006	563.6637	0.0979	0.0119	569.6481
Total		**563.6637**	**0.0979**	**0.0119**	**569.6481**

Regulatory Compliance

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	6.37733e+006	549.5563	0.0955	0.0116	555.3909
Total		**549.5563**	**0.0955**	**0.0116**	**555.3909**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	6.2218	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265
Baseline	6.6598	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8583					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3323	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265
Total	**6.6598**	**0.1281**	**11.1082**	**5.9000e-004**		**0.0618**	**0.0618**		**0.0618**	**0.0618**	**0.0000**	**18.1932**	**18.1932**	**0.0173**	**0.0000**	**18.6265**

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.4203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3323	0.1281	11.1082	5.9000e-004		0.0618	0.0618		0.0618	0.0618	0.0000	18.1932	18.1932	0.0173	0.0000	18.6265
Total	**6.2218**	**0.1281**	**11.1082**	**5.9000e-004**		**0.0618**	**0.0618**		**0.0618**	**0.0618**	**0.0000**	**18.1932**	**18.1932**	**0.0173**	**0.0000**	**18.6265**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Regulatory Compliance	167.9222	2.5725	0.0632	251.0594
Baseline	199.6537	3.2139	0.0788	303.4663

7.2 Water by Land Use

Baseline

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	97.731 / 61.613	199.6537	3.2139	0.0788	303.4663
Total		**199.6537**	**3.2139**	**0.0788**	**303.4663**

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	78.1848 / 57.8547	167.9222	2.5725	0.0632	251.0594
Total		**167.9222**	**2.5725**	**0.0632**	**251.0594**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Regulatory Compliance	140.0638	8.2775	0.0000	347.0021
Baseline	140.0638	8.2775	0.0000	347.0021

8.2 Waste by Land Use

Baseline

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

Desert Retreat - Operation - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Regulatory Compliance

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	690	140.0638	8.2775	0.0000	347.0021
Total		**140.0638**	**8.2775**	**0.0000**	**347.0021**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX E

Biological Resources Assessment

PULTE – NORTH INDIO PROJECT

CITY OF INDIO, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis

Prepared For:

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Contact: *Travis J. McGill*

August 2022

PULTE – NORTH INDIO PROJECT

CITY OF INDIO, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director

Thomas J. McGill, Ph.D.
Managing Director

August 2022

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Section 1 Introduction

This report contains the findings of ELMT Consulting (ELMT) Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation plan (CVMSHCP) Consistency Analysis for the Pulte – North Indio Project (project site, project) located in the City of Indio, Riverside County, California. ELMT biologists Travis J. McGill and Jacob H. Lloyd Davies conducted a field survey and evaluated the condition of the habitat within the proposed project on August 11, 2021 and April 7, 2022.

The field investigation was conducted to characterize existing site conditions and assess the probability of occurrence of special-status[1] plant and wildlife species that could pose a constraint to implementation of the project. Special attention was given to the suitability of the onsite habitat to support species whose habitat has been conserved within the East Indio Hills Conservation Area by the CVMSHCP (immediately northeast of the project site), including Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), and burrowing owl (*Athene cunicularia*). This report provides a detailed assessment of the suitability of the onsite habitat to support special-status plant and wildlife species that were identified by the CVMSHCP and California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring in the vicinity of the proposed project.

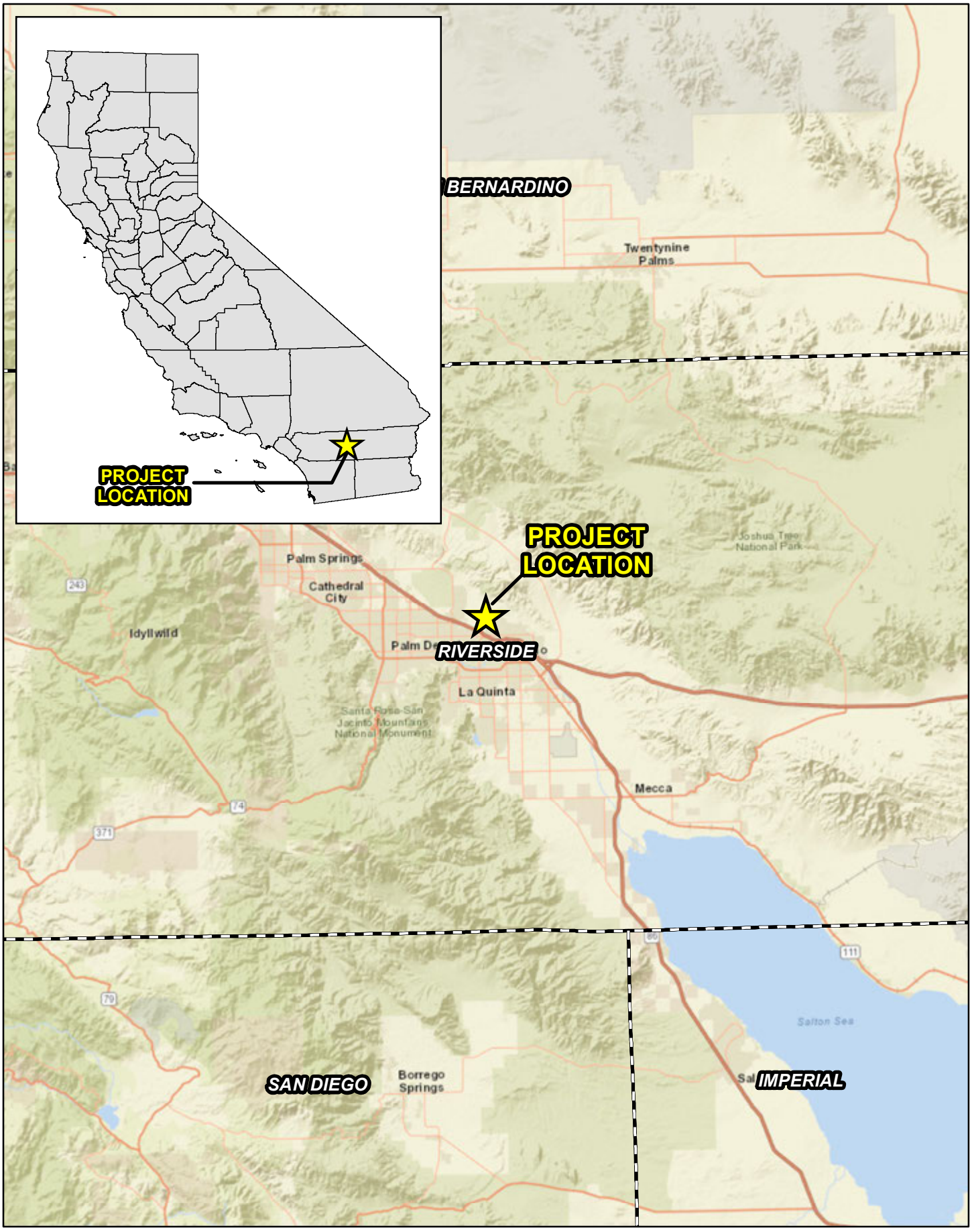
1.1 PROJECT LOCATION

The project site is generally located north and east of Interstate 10, and south and west of the Little San Bernardino Mountains in the City of Indio, Riverside County, California (Exhibit 1, *Regional Vicinity*). The site is depicted on the Myoma quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 4 of Township 5 South, Range 7 East (Exhibit 2, *Site Vicinity*). Specifically, the project site is bounded to the north by Avenue 38, to the east by Madison Street, to the south by 40th Avenue, and to the west by Jefferson street within Assessor Parcel Numbers 691-100-021, -023, and -025, and 691-110-002, -003, -004, -005, -006, -008, -011, and -014 (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project proposes the development of a residential neighborhood on approximately 440 acres. The project projects the construction of approximately 1,500 individual lots, in addition to associated landscaping and infrastructure, trails, parks, and a clubhouse. Refer to Appendix A, *Site Plan*.

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; CVMSHCP listed species; plant species that have been designated a CNPS Rare Plant Rank; and wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species.

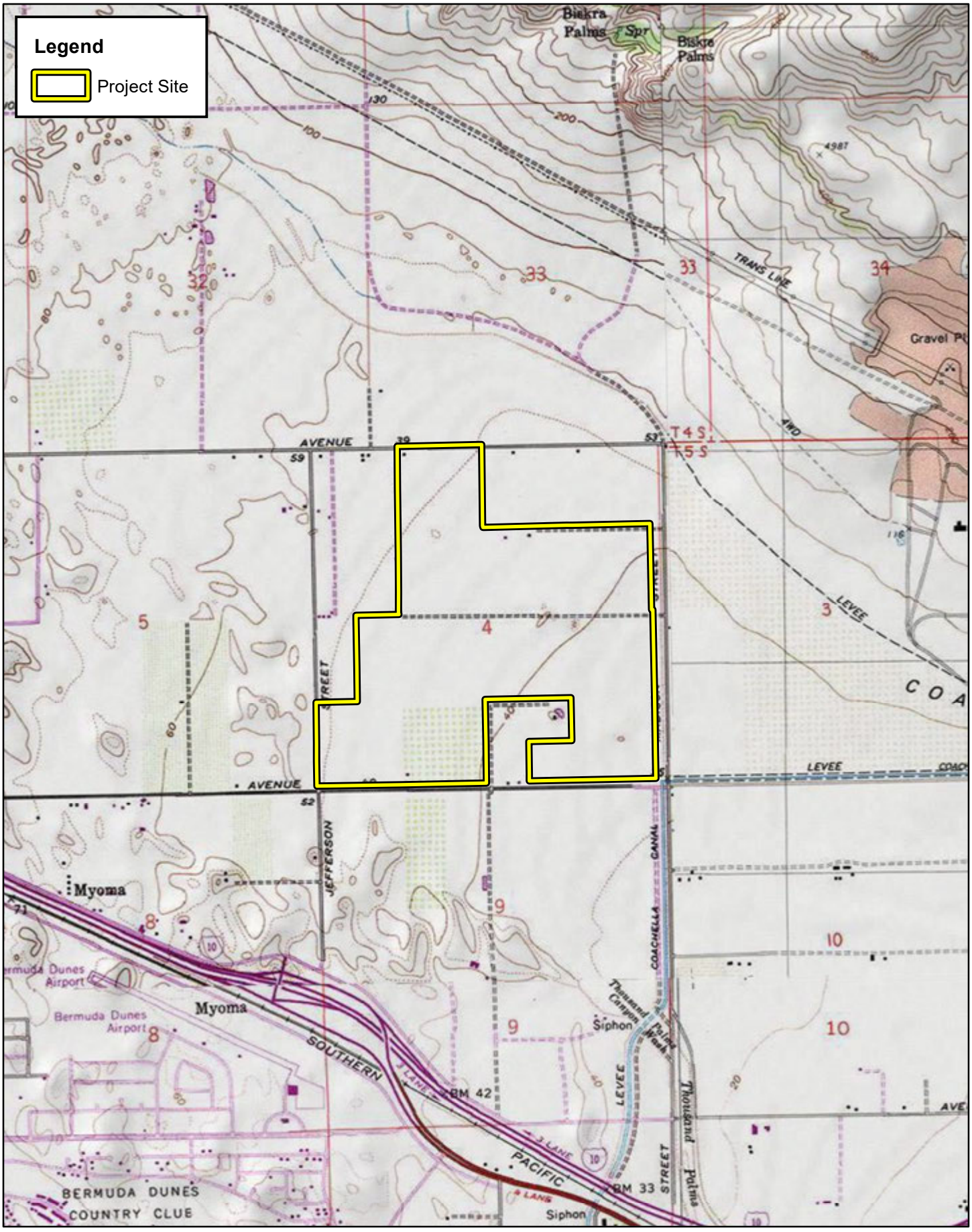


Source: World Street Map, Riverside County

PULTE - NORTH INDIO PROJECT

Regional Vicinity

Exhibit 1



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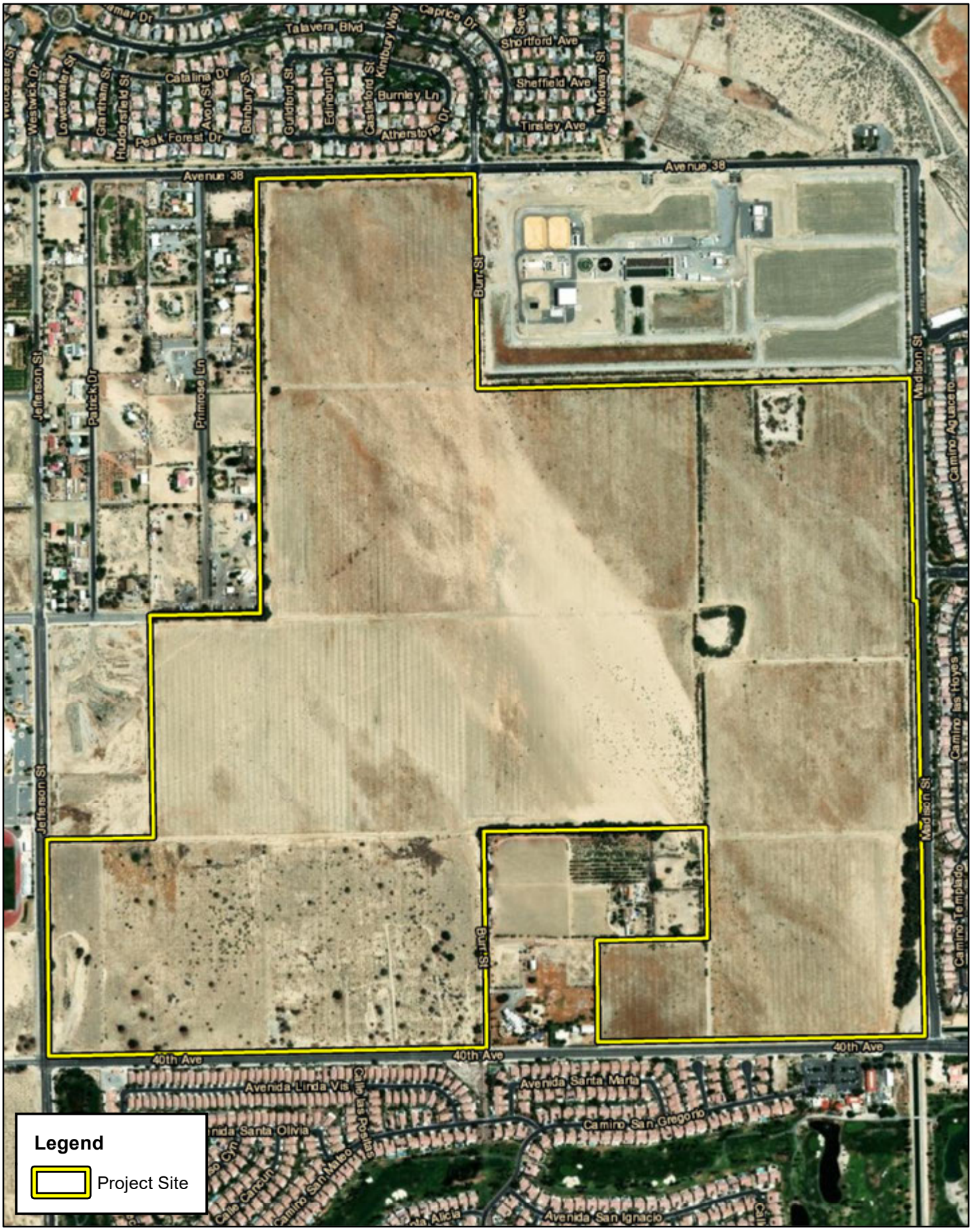
Source: USA Topographic Map, Riverside County

PULTE - NORTH INDIO PROJECT

Site Vicinity

Exhibit 2



ELMT CONSULTING

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Source: ESRI Aerial Imagery, Riverside County

PULTE - NORTH INDIO PROJECT

Project Site

Exhibit 3

Section 2 Methodology

A thorough literature review and records search was conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the proposed project. In addition, a general habitat assessment and field investigation of the proposed project and immediate surrounding area was conducted and provided information about the existing conditions on the proposed project and the potential for special-status biological resources to occur.

2.1 LITERATURE REVIEW

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the proposed project. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the proposed project were determined through a query of the CDFW's CNDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

Literature detailing biological resources previously observed in the vicinity of the proposed project and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- Google Earth Pro historic aerial imagery (1985-2021);
- CDFW 2012 Staff Report on Burrowing Owl Mitigation;
- Coachella Valley Multiple Species Habitat Conservation Plan:
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey[2]; and
- USFWS Critical Habitat designations for Threatened and Endangered Species.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the proposed project. Additional recorded occurrences of these species found on or near the proposed project were derived from database queries. The CNDDB ArcGIS database was used, in conjunction with ArcGIS software, to locate the nearest occurrence and determine the distance from the proposed project.

2.2 FIELD INVESTIGATION

ELMT biologists Travis J. McGill and Jacob H. Lloyd Davies inventoried and evaluated the extent and conditions of the plant communities found within the boundaries of the proposed project and a 200-

[2] A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

foot buffer, where applicable, on August 11, 2021 and April 7, 2022. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area. Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

2.3 SOIL SERIES ASSESSMENT

Onsite and adjoining soils were researched prior to the field visit using the USDA NRCS Soil Survey for Riverside County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes the proposed project has undergone.

2.4 PLANT COMMUNITIES

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

2.5 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomical guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.6 WILDLIFE

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of species during surveys included The Sibley Field Guide to the Birds of Western North America (Sibley 2003) for birds, A Field Guide to Western Reptiles and Amphibians (Stebbins 2003) for herpetofauna, and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

2.7 JURISDICTIONAL DRAINAGES AND WETLANDS

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

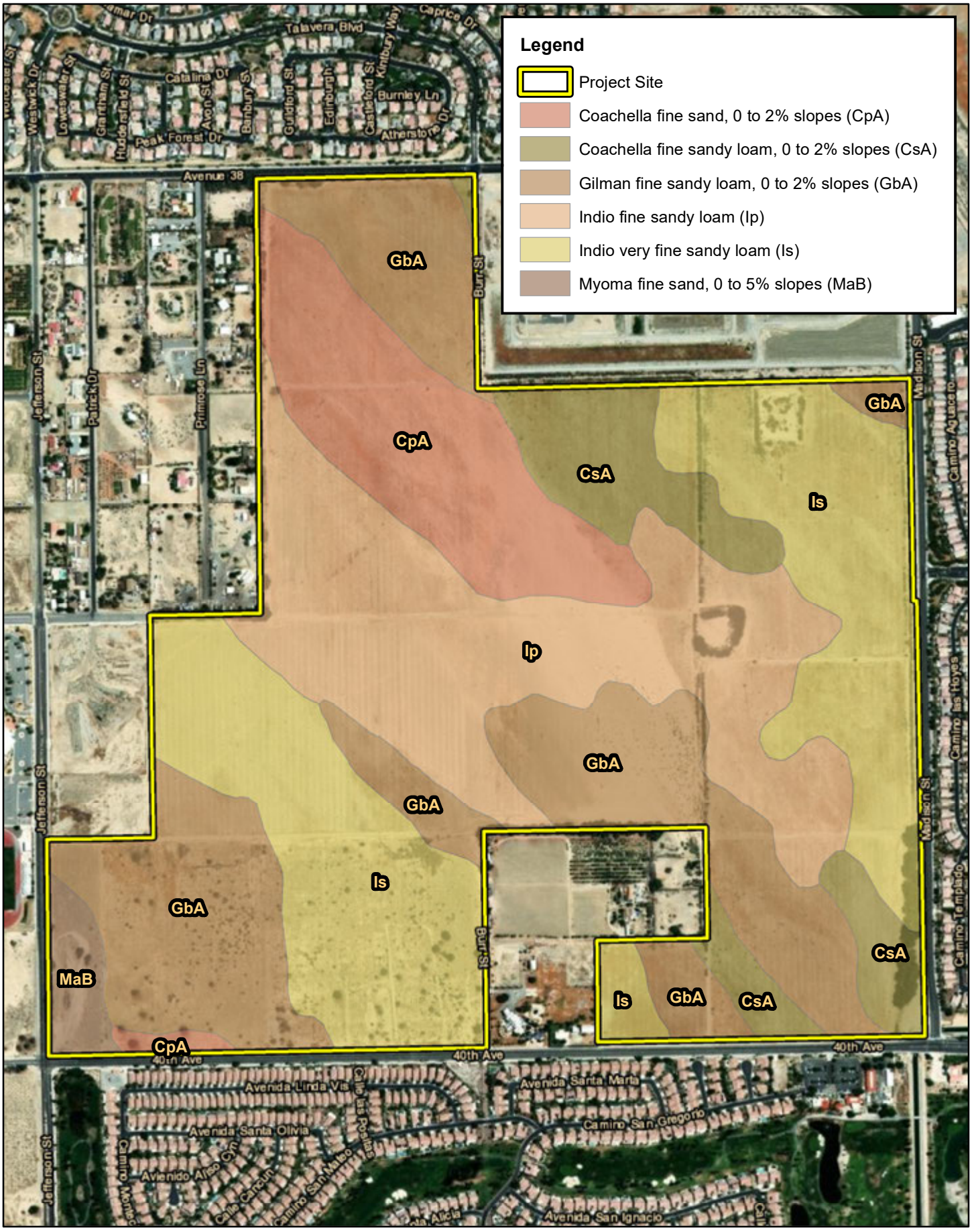
Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained for the City of Indio indicates the annual precipitation averages 3.44 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any occurring between the months of April and November, with the exception of heavy monsoonal rains in the summer, with August accumulating the most rainfall (0.54 inches). The wettest month is usually February, with a monthly average total precipitation of 0.64 inches. The average yearly maximum and minimum temperatures for the City of Indio are 89 and 62 degrees Fahrenheit (F) respectively with July and August being the hottest months (monthly average 107° F) and December being the coldest (monthly average 44° F). The temperatures during the first site visit ranged from 84 to the high 90s °F with no cloud cover overhead, and temperatures during the second site visit ranged from 83 to the high 90s °F.

3.2 TOPOGRAPHY AND SOILS

The project site is ranges in elevation from approximately 30 to 55 feet above mean sea level. On-site topography is generally flat with limited topographic relief and the gently slopes from northwest to southeast. Based on the NRCS USDA Web Soil Survey, the project site is underlain by the following soil units: Coachella fine sand (0 to 2 percent slopes), Coachella fine sandy loam (0 to 2 percent slopes), Gilman fine sandy loam (0 to 2 percent slopes), Indio fine sandy loam, Indio very fine sandy loam, and Myoma fine sand (0 to 5 percent slopes). Refer to Exhibit 4, *Soils*. Soils on-site have been mechanically disturbed from historic land uses (i.e., agricultural activities, grading/disking,).

3.3 SURROUNDING LAND USES

Land uses in the vicinity of the project site primarily consist of existing development in all directions and undeveloped land to the northeast. Beyond the paved roads that surround the site, the site is surrounded largely by residential developments to the north, east, and south. In addition, the site is bounded to the northeast by the Coachella Valley Water District Sanitary Sewer Treatment Plant and Shadow Hills High School to the west, beyond Jefferson Street.



ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

PULTE - NORTH INDIO PROJECT

Soils

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

The project site consists primarily of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances. These disturbances include historic agricultural activities and on-going disking activities. In addition, multiple encampments and illegal dumping were observed on-site during the field investigation. These disturbances have eliminated the natural plant communities that historically occurred on the project site. Further, the surrounding development has eliminated natural plant communities form the immediate area surrounding the project site. Due to historic land uses, no native plant communities or natural communities of special concern were observed on or adjacent to the project site. As such, no undisturbed native plant communities will be impacted from implementation of the proposed project.

4.2 VEGETATION

The project site contains one vegetation community, tamarisk thicket, and one (1) land cover type that would be classified as disturbed (refer to Exhibit 5, *Vegetation*). Refer to Attachment B, *Site Photographs*, for representative site photographs. The land cover types are described in further detail below.

4.2.1 Disturbed

The majority of the project site supports disturbed land associated with historic agricultural land uses. These areas were routinely impacted by agricultural activities and now support early successional and non-native plant species. Common plant species observed onsite include Mediterranean grass (*Schismus barbatus*), hoary saltbush (*Atriplex canescens*), burro weed (*Ambrosia dumosa*), Sahara mustard (*Brassica tournefortii*), filaree (*Erodium* spp.), Sonoran sandmat (*Euphorbia micromera*), brittlebush (*Encelia farinosa*), and tamarisk (*Tamarix ramosissima*).

4.2.2 Tamarisk Thickets

The middle of the southern boundary and the southeast corner of the project site support tamarisk thickets, that are dominated by tamarisk. Refuse and debris are common around tamarisk thickets, and some were observed to support illicit camp sites.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species observed, expected, or not expected to occur on-site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the survey was conducted. Wildlife observations were based on calls, songs, scat, tracks, burrows, and actual sightings of animals.

4.3.1 Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the proposed project. Therefore, no fish are expected to occur and are presumed absent from the site.

4.3.2 Amphibians

No amphibians or hydrogeomorphic features that would provide suitable habitat for amphibian species were observed on or within the vicinity of the proposed project. Therefore, no amphibians are expected to occur and are presumed absent from the site.

4.3.3 Reptiles

The project site provides suitable foraging and cover habitat for reptilian species adapted to desert environments. The only reptilian species observed during the field investigation was western side-blotched lizard (*Uta stansburiana elegans*). Common reptilian species that could be expected to occur include western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert iguana (*Dipsosaurus dorsalis*), Sonoran gopher snake (*Pituophis catenifer affinis*), and red racer (*Coluber flagellum piceus*).

4.3.4 Birds

The project site provides suitable foraging and nesting habitat for a variety of avian species adapted to desert environments. Avian species observed during the field investigation include rock pigeon (*Columba liva*), American kestrel (*Falco sparverius*), Gambel's quail (*Callipepla gembelii*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), greater roadrunner (*Geococcyx californianus*), blue-gray gnatcatcher (*Polioptila caerulea*), Costa's hummingbird (*Calypte costae*), and verdin (*Auriparus flaviceps*).

4.3.5 Mammals

The proposed project provides suitable foraging and denning habitat for mammalian species adapted to desert environments. However, most mammal species are nocturnal and are difficult to observe during a diurnal field visit. Mammalian species observed during the field investigation include desert cottontail (*Sylvilagus audubonii*), domestic cat (*Felis catus*), and coyote (*Canis latrans*). Other common mammalian species that have the potential to occur on the proposed project include California ground Squirrel (*Otospemophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), desert kangaroo rat (*Dipodomys deserti*). No bat species are expected to roost onsite due to a lack of suitable roosting habitat (i.e., trees, crevices, abandoned structures), but may forage over the site.

4.4 NESTING BIRDS

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted during the breeding season. Although heavily disturbed, the project has the potential to provide minimal foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to disturbed areas and urban

environments. Additionally, the site has potential to support ground-nesting birds such as killdeer (*Charadrius vociferus*).

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

4.5 MIGRATORY CORRIDORS AND LINKAGES

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

According to the CVMSHCP, the project site does not occur within any identified wildlife migratory corridors or linkages. However, the eastern boundary of the project site is located approximately 900 feet from the East Indio Hills Conservation Area. Since project activities are not expected to extend beyond site boundaries and is separated from the Conservation Area by existing paved streets and residential developments, implementation of the proposed project is not expected to have any direct or indirect impacts to the East Indio Hills Conservation Area. As a result, implementation of the proposed project will not disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area.

4.6 JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into "waters of the United States" pursuant to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the Fish and Game Code, and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediately surrounding the project site. The NWI and USGS National Hydrography Dataset provide off-site ancillary tools to assist in jurisdictional assessments, but they are not a substitute for field investigations. NWI resources are

graphic representations of potential water features that are mapped at high altitudes based on the imagery that was used.

According to the NWI, the project site supports one (1) freshwater pond in the northwest corner. Based on the results of the field investigation, this feature was determined to be a water detention basin, associated with historic agricultural activities and would not be considered jurisdictional. It should be noted that several water conveyance channels were also observed onsite that historically transported water for agricultural crops. These channels were determined to be remnant channels used to transport water for irrigation and would not be considered jurisdictional.

Therefore, the project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional by the Corps, Regional Board, or CDFW, and regulatory approvals from the Corps, Regional Board, and/or CDFW will not be required for implementation of the project.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB was queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Myoma, West Berdoo Canyon, La Quinta, and Indio USGS 7.5-minute quadrangles. These quadrangles were used due to surrounding topography and the proximity of the project site to quadrangle boundaries. A search of published records of these species was conducted within this quadrangle using the CDFW's CNDDB Rarefind 5 online software and CNDDB Quickview Tool. The CNPS Inventory of Rare and Endangered Vascular Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity of the proposed project. The field investigation was used to assess the ability of the plant communities found on-site to provide suitable habitat for relevant special-status plant and wildlife species.

The literature search identified twenty-nine (29) special-status plant species, sixty-two (62) special-status wildlife species, and one (1) special-status plant communities as having potential to occur within the Myoma, West Berdoo Canyon, La Quinta, and Indio quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in Attachment C, *Potentially Occurring Special-Status Biological Resources*.

4.7.1 Special-Status Plants

Twenty-nine (29) special-status plant species have been recorded in the CNDDB and CNPS in the Myoma, West Berdoo Canyon, La Quinta, and Indio quadrangles (refer to Appendix C). No special-status plant species were observed on-site during the field investigation. Due to existing agricultural activities, no undisturbed natural plant communities occur onsite which has reduced the site's potential to support special-status plant species.

Based on habitat requirements for the identified special-status species, known species distributions, and existing site conditions, it was determined that the project site has a low potential to support Coachella

Valley milkvetch, Borrego milk-vetch (*Astragalus lentiginosus* var. *borreganus*), ribbed cryptantha (*Johnstonella costata*), Arizona spurge (*Euphorbia arizonica*), and flat-seeded spurge (*Euphorbia platysperma*). Further, it was determined that no other special-status plant species have the potential to occur on-site and are presumed absent.

Of the aforementioned special-status species, only Coachella Valley milk-vetch is a federally listed species. Coachella Valley milk-vetch is covered under the CVMSHCP, and mitigation for this species is incorporated into the CVMSHCP.

Descriptions of species determined to have the potential to occur within the project site and the results of the 2022 focused survey are provided below:

Coachella Valley Milk-vetch

Coachella Valley milk-vetch can be either an annual or perennial herb that blooms between February and May. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2, indicating that is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is covered under the MSHCP. It is endemic to California and is only known from Riverside County. It occurs in sandy soils within desert dunes and Sonoran desert scrub, where it typically grows at elevations between 131 and 2,149 feet.

Coachella Valley milk-vetch was not detected onsite during the 2022 focused surveys. Since Coachella Valley milk-vetch is a covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for potential impacts to this species.

Borrego Milk-vetch

Borrego milk-vetch is an annual herb that blooms between February and May. It is not state or federally listed. However, it is designated by the CNPS with the Rare Plant Rank 4.3, indicating that it is a plant of limited distribution and is not very threatened in California, with less than 20% of its known occurrences threatened. It is not endemic to California, but in California it is known to occur in Imperial, Riverside, San Bernardino, and San Diego Counties, where it can be found in sandy soils in Mojavean and Sonoran desert scrub between 98 and 1,050 feet in elevation. Borrego milk-vetch was determined to have a moderate potential to occur on the project site. However, it was not observed during the 2014 surveys.

Borrego milk-vetch was not detected onsite during the 2022 focused surveys. Borrego milk-vetch is not listed as rare, threatened or endangered by either the state or federal governments nor is it proposed to be listed at this time. No further surveys are recommended.

Ribbed Cryptantha

Ribbed cryptantha is an annual herb that blooms between February and May. It is not state or federally listed. However, it is designated by the CNPS with the Rare Plant Rank 4.3, indicating that it is a plant of limited distribution and is not very threatened in California, with less than 20% of its known

occurrences threatened. It is not endemic to California, but in California it is known to occur in Imperial, Inyo, Riverside, San Bernardino, and San Diego Counties, where it can be found in sandy soils in desert dunes and Mojavean and Sonoran desert scrub between 197 and 1,640 feet in elevation. Ribbed cryptantha was determined to have a moderate potential to occur on the project site.

Ribbed cryptantha was not detected onsite during the 2022 focused surveys. Ribbed cryptantha is not listed as rare, threatened or endangered by either the state or federal governments nor is it proposed to be listed at this time. No further surveys are recommended.

Arizona Spurge

Arizona spurge is a perennial herb that blooms between March and April. It is not state or federally listed. However, it is designated by the CNPS with the Rare Plant Rank 2B.3, indicating that it is rare, threatened, or endangered in California and more common elsewhere, but is still not very threatened in California, with less than 20% of its known occurrences threatened. It is not endemic to California, but in California it is known to occur in Imperial, Riverside, and San Diego Counties, where it can be found in sandy Sonoran desert scrub between 164 and 984 feet in elevation. Arizona spurge was determined to have a low potential to occur on the project site. However, it was not observed during the 2014 surveys.

Arizona spurge was not detected onsite during the 2022 focused surveys. Arizona spurge is not listed as rare, threatened or endangered by either the state or federal governments nor is it proposed to be listed at this time. No further surveys are recommended.

Flat-seeded Spurge

Flat-seeded spurge is an annual herb that blooms between February and September. It is not state or federally listed. However, it is designated by the CNPS with the Rare Plant Rank 1B.1, indicating that it is indicating that is rare, threatened, or endangered in California and elsewhere, and is seriously threatened in California. It is not endemic to California, but in California it is known to occur in Imperial, Riverside, and San Diego Counties, where it can be found in sandy Sonoran desert scrub between 213 and 328 feet in elevation. Flat-seeded spurge was determined to have a low potential to occur on the project site.

Flat-seeded spurge was not detected onsite during the 2022 focused surveys. Flat-seeded spurge is not listed as rare, threatened or endangered by either the state or federal governments nor is it proposed to be listed at this time. No further surveys are recommended.

4.7.2 Special-Status Wildlife

Sixty-two (62) special-status wildlife species have been reported in the Myoma, West Berdoo Canyon, La Quinta, and Indio quadrangles (refer to Appendix C). The only special-status animal species observed onsite during the field investigation was Costa's hummingbird. Based on habitat requirements for the identified special-status wildlife species, known distributions, and the and routine disturbance, it was determined that the proposed project has a high potential to support Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter straitus*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius*

ludovicianus), black-tailed gnatcatcher (*Polioptila melanura*), and rufous hummingbird (*Selasphorus rufus*). It was further determined that the project site does not provide suitable habitat for any of the other special-status wildlife species known to occur in the area since the project site has been heavily disturbed from on-site disturbances and is entirely surrounded by existing development.

None of the aforementioned species are state or federally listed as threatened or endangered. In order to ensure impacts to these avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Based on regional significance, listing status, and/or coverage under the CVMSHCP, the potential occurrence of burrowing owl is discussed in further detail below.

Burrowing Owl

The burrowing owl is designated by the CDFW as a California species of special concern. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground. They are dependent upon the presence of burrowing mammals (such as ground squirrels) for roosting and nesting habitat. The presence or absence of colonial mammal burrows is often a major factor that limits the presence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Small mammals may also burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. This species requires open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators. The burrowing owl nesting season generally extends from mid-March to the end of August. The project site was determined to have a high potential to provide suitable habitat for burrowing owl.

A focused burrowing owl survey was conducted during the 2022 breeding season. No burrowing owls were detected onsite during the focused surveys.

Even though burrowing owl is covered under the CVMSHCP, the Migratory Bird Treaty Act (MBTA) and Fish and Game Code prohibits harming burrowing owl. Therefore, mitigation of potential adverse impacts are required and must be approved by the USFWS and/or CDFW, and mitigation is provided in accordance with CDFW's "Staff Report on Burrowing Owl Mitigation". Mitigation for burrowing owl so summarized below:

1. A pre-construction clearance survey shall take plant at least 30 days prior to ground disturbing activities to determine the location of active burrows on and within 500 feet of the project site. If no active burrows are observed in the survey area, ground disturbing activities may commence with a biological monitor.

2. A biological monitor, with the authority to halt or redirect ground disturbing activities, should be present whenever ground disturbance or construction vehicles are present and operating on the project site.
3. The breeding season is generally from February 1st through August 31st. No ground disturbing activities should occur within 500 feet of an active burrow during this timeframe. It is recommended that ground disturbing activities be conducted between September 1st through January 30th.
4. Resident burrowing owls present on or near the project site, outside of the breeding season, can be relocated to other sites by permitted biologists under the authorization of CDFW.

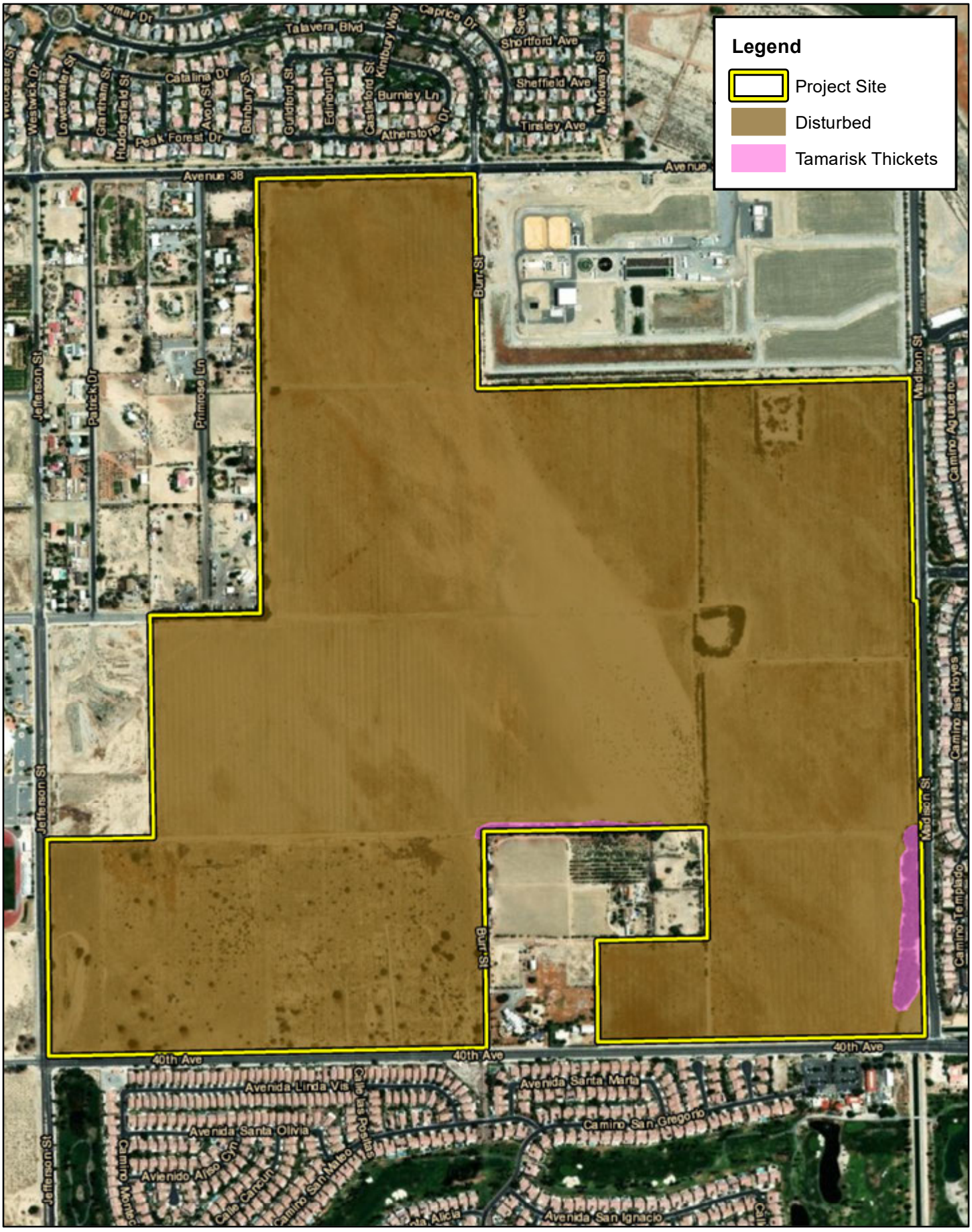
4.7.3 Special-Status Plant Communities

The CNDDB lists one (1) special-status vegetation community as being identified within the Myoma, West Berdoo Canyon, La Quinta, and Indio quadrangles: Desert Fan Palm Oasis Woodland. Based on the results of the field investigation, no special-status plant communities were observed onsite. Therefore, no special-status plant communities will be impacted by project implementation.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If a there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located with federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 2.13 miles west of the site for Coachella Valley fringe-toed lizard (*Uma inornata*). Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed project and consultation with the USFWS will not be required for impacts to Critical Habitat.



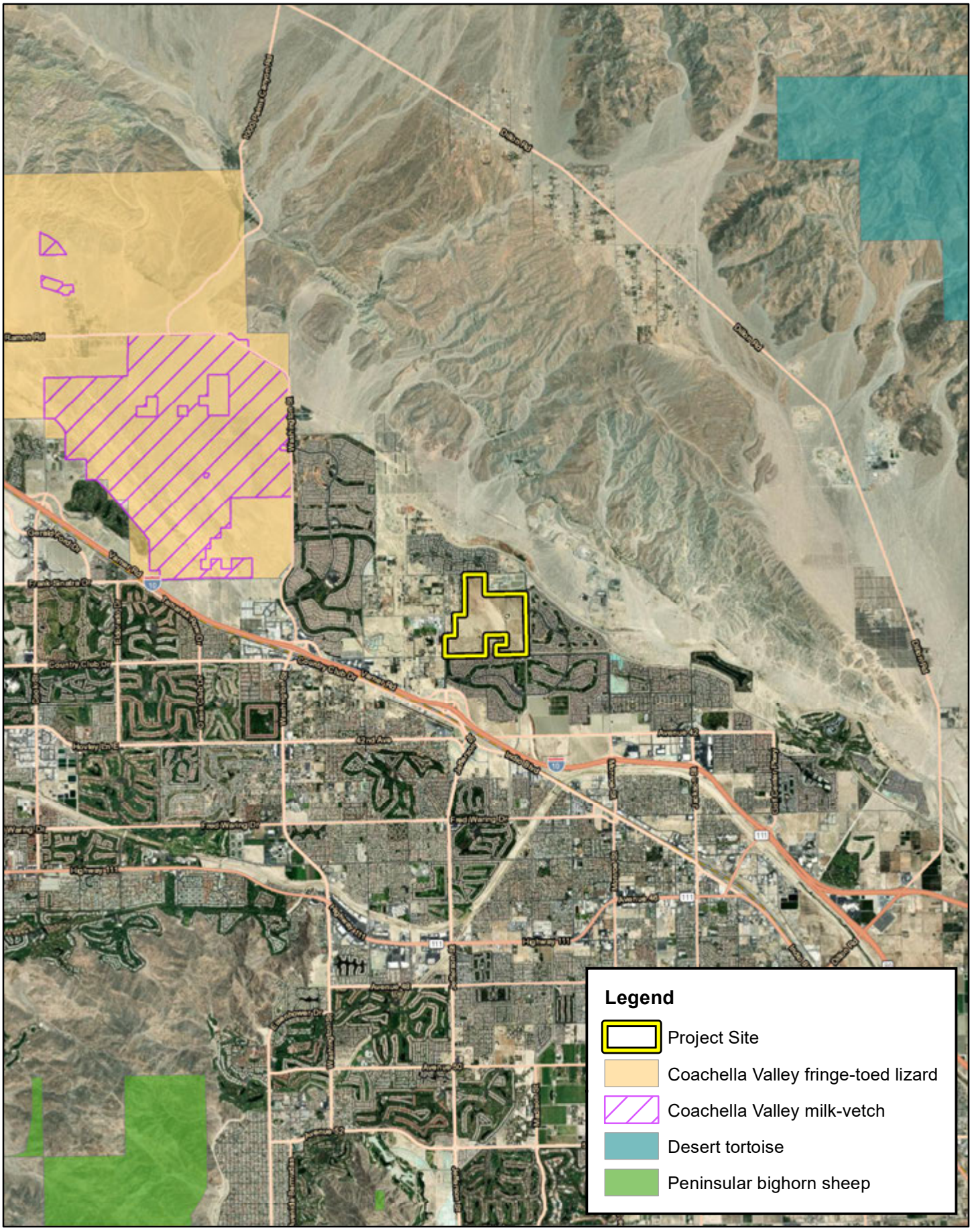
ELMT CONSULTING

Source: ESRI Aerial Imagery, Riverside County

PULTE - NORTH INDIO PROJECT

Vegetation

Exhibit 5



ELMT CONSULTING

0 1.25 2.5 5 Miles

Source: ESRI Aerial Imagery, USFWS Critical Habitat, Riverside County

PULTE - NORTH INDIO PROJECT

Critical Habitat

Exhibit 6

Section 5 Coachella Valley MSHCP Consistency Analyis

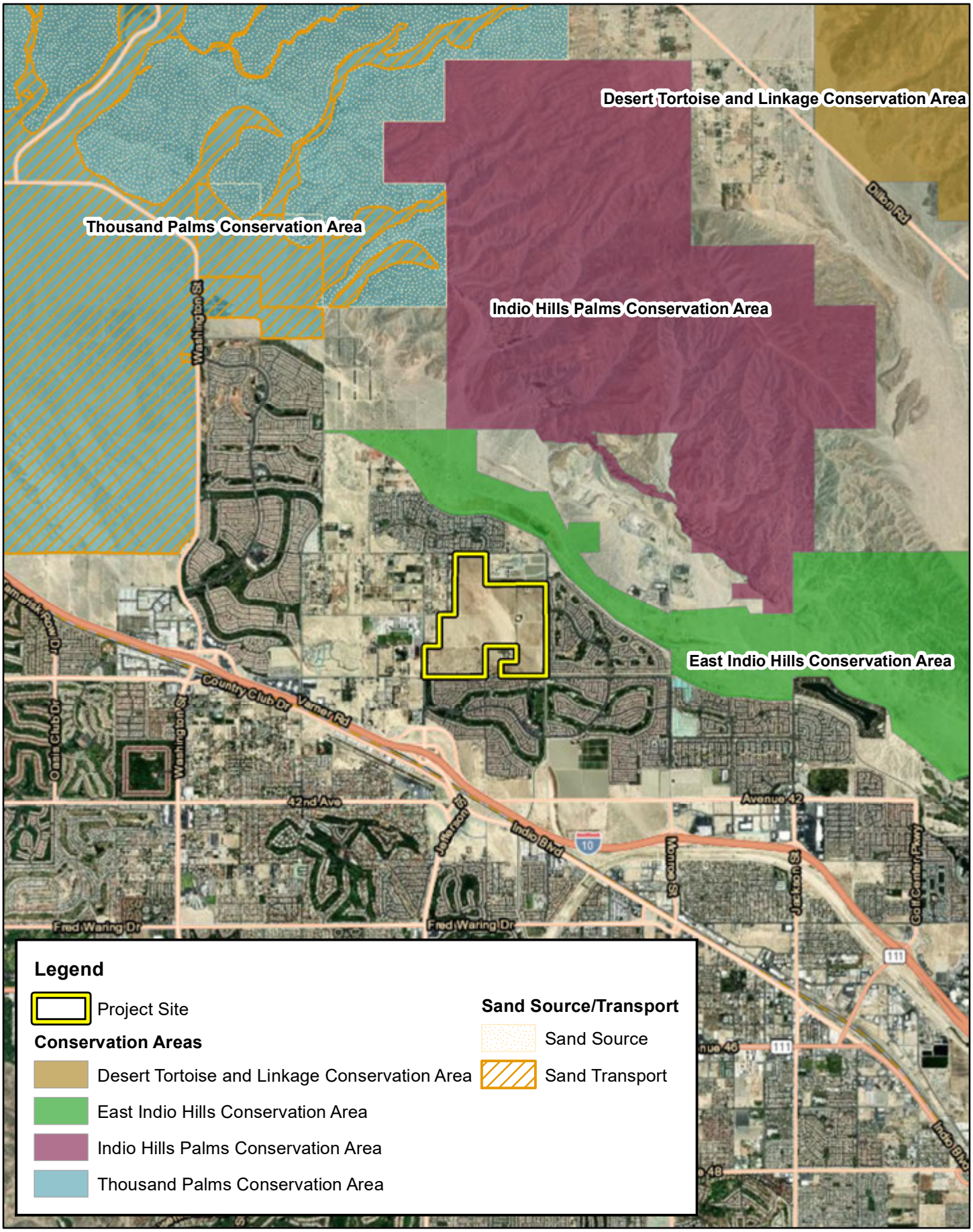
The proposed project is not located within any of the CVMSHCP designated conservation areas; however, the eastern boundary of the project site is located approximately 900 feet west of the East Indo Hills Conservation Area (Exhibit 7, *CVMSHCP Conservation Areas*).

5.1 COVERED ACTIVITIES OUTSIDE CONSERVATION AREAS

The proposed project was reviewed to determine consistency with the CVMSHCP. Geographic Information System (GIS) software was utilized to map the proposed project in relation to the CVMSHCP including conservation areas, corridors and linkages, and sand transport areas. The CVMSHCP requires that local permittees comply with various protective measures for covered species, communities, essential ecological processes, and biological corridors. In addition, certain projects may be subject to local development mitigation fees, a Joint Project Review Process, or other conservation or implementation measures.

The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. According to Section 7.1 of the CVMSHCP, take authorization will be provided for certain activities that take place outside of Conservation Areas including "*new projects approved pursuant to county and city general plans, transportation improvement plans for roads in addition to those addressed in Section 7.2, master drainage plans, capital improvement plans, water and waste management plans, the County's adopted Trails Master Plan, and other plans adopted by the Permittees*."

As a Covered Activity located outside designated conservation areas, implementation of the proposed project is expected to be consistent with the applicable regulatory compliance measures described in Section 4.4 of the CVMSHCP (refer to Appendix D). Since the proposed project is considered a Covered Activity under Section 7.1 of the CVMSHCP, no measures are required, and the project is in compliance with the CVMSHCP.



ELMT CONSULTING

0 0.5 1 2 Miles

Source: ESRI Aerial Imagery, CVMSHCP, Riverside County

PULTE - NORTH INDIO PROJECT

CVMSHCP Conservation Areas

Exhibit 3

Section 6 Conclusion and Recommendations

The discussion below provides a summary of survey results; avoidance and minimization efforts; direct, indirect, and cumulative project impacts; and compensatory mitigation measures for each biological resource area required to be analyzed according to CEQA, based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines:

Special-Status Plant Species

No special-status plant species were observed during the field investigation and subsequent focused surveys conducted in 2022. Based on habitat requirements for the identified special-status species, known species distributions, and existing site conditions, it was determined that the site has a low potential to support Coachella Valley milkvetch, Borrego milk-vetch, ribbed cryptantha, Arizona spurge, and flat-seeded spurge Further, it was determined that no other special-status plant species have the potential to occur on-site and are presumed absent.

A focused special-status plant survey was conducted during the 2022 blooming season. No special-status plants were observed onsite. As a result, no further surveys are recommended.

Special-Status Wildlife Species

The only special-status animal species observed onsite during the field investigation was Costa's hummingbird and sharp-shinned hawk. Based on habitat requirements for the identified special-status wildlife species, known distributions, and the and routine disturbance, it was determined that the proposed project has a high potential to support Cooper's hawk, sharp-shinned hawk, burrowing owl, California horned lark, prairie falcon, loggerhead shrike, black-tailed gnatcatcher, and rufous hummingbird. Further, it was determined that no other special-status wildlife species have the potential to occur on-site and are presumed absent.

In order to ensure impacts to these avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Migratory Bird Treaty Act and Fish and Game Code Compliance

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer

should be expanded to 500 feet. A biological monitor should be present to delineate the boundaries of the buffer area and monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Pre-Construction Burrowing Owl Clearance Survey

To ensure burrowing owl remain absent from the project site, it is recommended that a burrowing owl pre-construction clearance survey be conducted prior to any ground disturbing activities.

Riparian Habitat and Special-Status Natural Communities

No jurisdictional drainage and/or wetland features were observed within the proposed project during the field survey. Therefore, development of the proposed project will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

No special-status natural communities were observed within the boundaries of the proposed project. Therefore, no special-status natural communities will be impacted by project implementation.

Wildlife Corridors and Linkages

Project activities are not expected to extend beyond site boundaries, implementation of the proposed project is not expected to have any direct impacts to the East Indio Hills Conservation Area. Implementation of the proposed project will not disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area.

Local, Reginal, and State Plans

The proposed project is located within the boundaries of the CVMSHCP, but not located within any of the CVMSHCP designated conservation areas; however, the eastern boundary of the project site abuts the Thousand Palms Conservation Area. As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to implement the applicable regulatory complinace measures described in Section 4.4 of the CVMSHCP (refer to Appendix D). With implementation of these measures and payment of the CVMSHCP mitigaiton fee, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP.

Section 7 References

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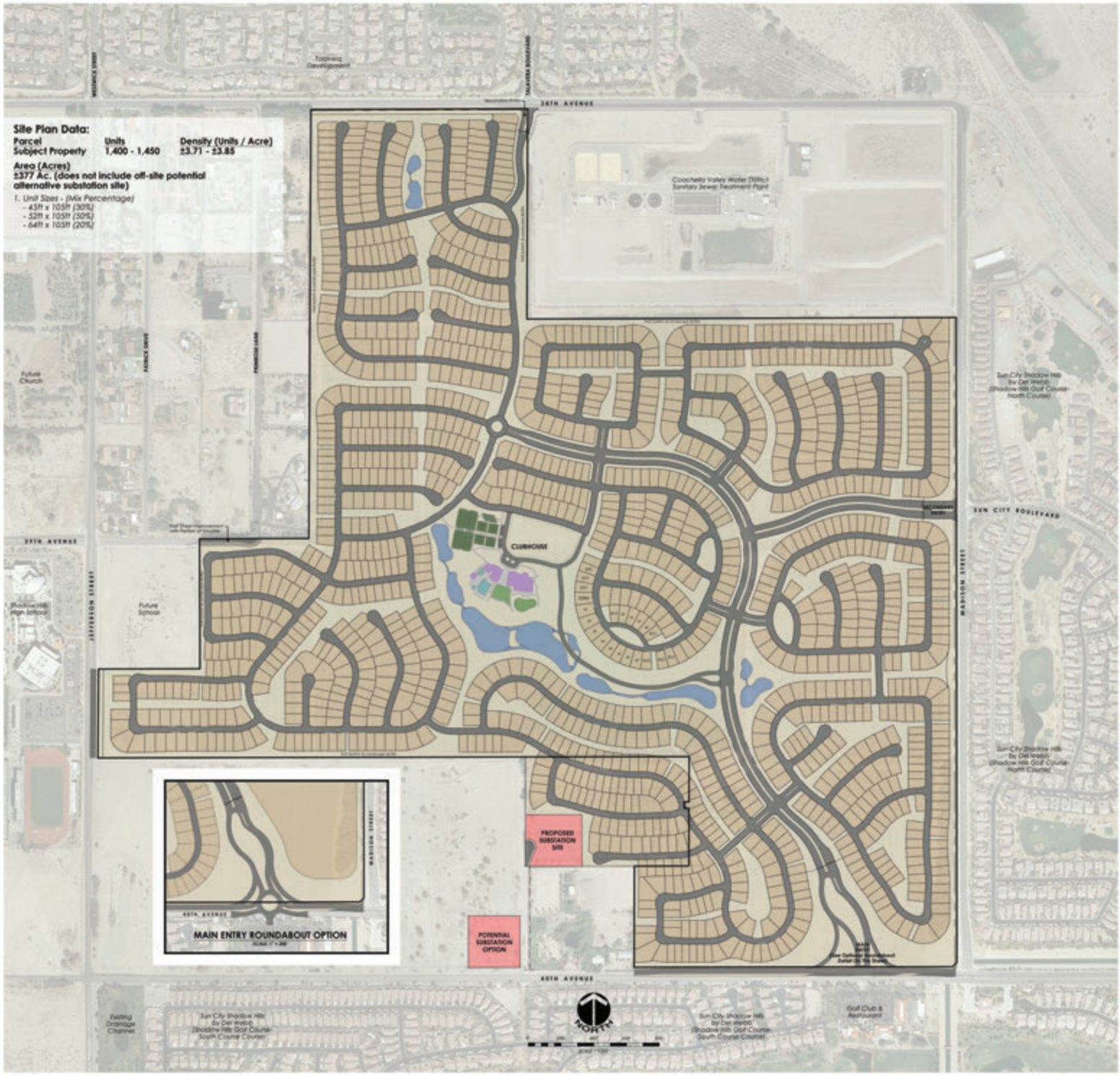
Appendix A Site Plan



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CONCEPTUAL LAND USE PLAN (DRAFT)

PULTE - NORTH INDIO

Appendix B Site Photographs

Photograph 1: From the northwest corner of the project site along Avenue 38 looking south along the western boundary.

Photograph 2: From the northwest corner of the project site along Avenue 38 looking east along the northern boundary.

Photograph 3: From the northeast corner of the project site along Madison Street looking west along the northern boundary.

Photograph 4: From the northeast corner of the project site along Madison Street looking south along the eastern boundary.

Photograph 5: From the southeast corner of the project site looking north along the eastern boundary.

Photograph 6: From the southeast corner of the project site looking west along the southern boundary.

Photograph 7: From the southwest corner of the project site looking east along the southern boundary.

Photograph 8: From the southwest corner of the project site looking north along the western boundary.

Photograph 9: Representative photograph of one of the historic irrigation canals and adjacent disturbed land supported by the project site.

Photograph 10: Recently disked land in the northwest portion of the project site.

Photograph 11: Disturbed land in the middle portion of the project site.

Photograph 12: Looking southwest across the basin in the northeast portion of the project site.

Appendix C Potentially Occurring Special-Status Biological Resources

Table C-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
SPECIAL-STATUS WILDLIFE SPECIES				
Accipiter cooperii Cooper's hawk	Fed: None CA: WL CVMSHCP: Not Covered	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	No	**High** Suitable foraging habitat is present on-site. The tamarisk trees provide minimal nesting opportunities.
Accipiter striatus sharp-shinned hawk	Fed: None CA: WL CVMSHCP: Not Covered	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	No	**High** Suitable foraging habitat is present on-site, but the site lacks suitable nesting opportunities.
Anodonta californiensis California floater	USFWS: None CDFW: None CVMSHCP: Not Covered	Found in lakes and lake-like stream environments at low altitudes.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Antrozous pallidus pallid bat	Fed: None CA: SSC CVMSHCP: Not Covered	Locally common species of low elevation in California. Occurs in grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting, but will also roost in caves, crevices, mines, hollow trees, and buildings.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site.
Aquila chrysaetos golden eagle	Fed: None CA: FP; WL CVMSHCP: Not Covered	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site.
Ardea herodias great blue heron	Fed: None CA: None CVMSHCP: Not Covered	Fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains about foothills.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: SSC CVMSHCP: Not Covered	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage such as chaparral, woodland, and riparian areas.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Athene cunicularia burrowing owl	Fed: None CA: SSC CVMSHCP: Covered	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**High** The project site provides line-of-sight opportunities favored by this species. Suitable burrows (>4 inches in diameter) were observed throughout the project site. This species was not observed during the 2022 focused surveys.
Botaurus lentiginosus American bittern	Fed: None CA: None CVMSHCP: Not Covered	Often breed in shallow wetlands dominated by tall emergent vegetation, including cattail marshes, wet meadows, bogs, and shrubby marshes and occasionally hayfields.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Buteo regalis ferruginous hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Common winter resident of grasslands and agricultural areas in southwestern California. Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Does not breed in California.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Calypte costae Costa's hummingbird	Fed: None CA: None CVMSHCP: Not Covered	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	Yes	**Present** This species was observed onsite during the field investigation. The project site provides suitable habitat for this species.
Chaetodipus californicus femoralis Dulzura pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Inhabits a variety habitats year-round, including coastal scrub, chamise-redshank and montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats. Prefers soft soils for digging burrows in brushy areas along grass-chaparral edges.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	Fed: None CA: SSC CVMSHCP: Not Covered	Common resident of sandy herbaceous areas, usually in association with rocks or course gravel in southwestern California. Occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Chaetura vauxi Vaux's swift	Fed: None CA: SSC CVMSHCP: Not Covered	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Circus hudsonius northern harrier	Fed: None CA: SSC CVMSHCP: Not Covered	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Coleonyx variegatus abbotti San Diego banded gecko	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Prefers rocky areas in coastal sage and chaparral within granite or rocky outcrops. Occurs in coastal and cismontane southern California from interior Ventura Co. south.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Contopus cooperi olive-sided flycatcher	Fed: None CA: SSC CVMSHCP: Not Covered	Uncommon to common, summer resident in a wide variety of forest and woodland habitats below 9,000 ft throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC CVMSHCP: Not Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Cyprinodon macularius desert pupfish	Fed: **END** CA: **END** CVMSHCP: Covered	In California, this species historically occurred in several springs, seeps and slow-moving streams in the Salton Sink Basin, as well as in backwaters and sloughs along the lower Colorado River. Now relegated to remnants of their former habitats, which generally are too harsh for most introduced species to exist.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Dinacoma caseyi Casey's June beetle	Fed: **END** CA: None CVMSHCP: Not Covered	All *Dinacoma* populations are associated with alluvial sediments occurring in or contiguous with bases of desert alluvial fans, and the broad, gently sloping, depositional surfaces at the base of the Santa Rosa mountain ranges in the dry Coachella valley region. Most commonly associated with the Carsitas series soil.	No	**Presumed Absent** Limited habitat is present within the project site, but the site occurs outside the known range geographic range.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Dipodomys merriami collinus earthquake Merriam's kangaroo rat	Fed: None CA: None CVMSHCP: Not Covered	Typically found in Riversidean alluvial fan sage scrub habitat, but may also be found in Riversidean sage scrub, chaparral and grassland vegetation in adjacent to upland areas. Often associated with sandy-loam soils that are common throughout the designated core drainages.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Empidonax traillii brewsteri little willow flycatcher	Fed: None CA: **END** CVMSHCP: Not Covered	A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats (2,000 to 8,000 feet) in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Empidonax traillii extimus southwestern willow flycatcher	Fed: **END** CA: **END** CVMSHCP: Covered	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water, or are at least moist.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Eremophila alpestris actia California horned lark	Fed: None CA: WL CVMSHCP: Not Covered	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types. Flocks in groups.	No	**High** Suitable foraging and minimal nesting habitat are present within the project site.
Eumops perotis californicus western mastiff bat	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Euparagia unidentata Algodones euparagia	USFWS: None CDFW: None CVMSHCP: Not Covered	Scavenges dead insects in sandy areas to feed larvae. Adults nectar primarily on *Croton* sp., upon which it is closely reliant.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Euphydryas editha quino quino checkerspot butterfly	Fed: **END** CA: None CVMSHCP: Not Covered	Characterized by patchy shrub or small tree landscapes with openings of several meters between large plants, or a landscape of open swales alternating with dense patches of shrubs. Frequently perch on vegetation or other substrates to mate or bask and require open areas to facilitate movement. Host plant needed for egg deposits include *Plantago erecta* (erect or dwarf plantain), *Plantago patagonica* (Patagonian plantain), and *Anterrhinum coulterianum* (white snapdragon).	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Falco mexicanus prairie falcon	Fed: None CA: WL CVMSHCP: Not Covered	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**High** Suitable foraging habitat is present on-site, but the site lacks suitable nesting opportunities.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Gopherus agassizii desert tortoise	Fed: **THR** CA: **THR** CVMSHCP: Covered	Widely distributed in the Mojave, Sonoran, and Colorado deserts from below sea level to 7,220 feet. Most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except those on the most precipitous slopes.	No	**Presumed Absent** Suitable habitat is present within the project site.
Habropoda pallida white faced bee	Fed: None CA: None CVMSHCP: Not Covered	Builds nests in clay-rich sandy slopes along water courses in the Mojave Desert. In California, it occurs from Into County south to Imperial County and east to the Nevada and Arizona borders. Prefers areas with a high density of creosote and dune-restricted endemic plants.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Hesperopsis gracielae MacNeill's sootywing	USFWS: None CDFW: None CVMSHCP: Not Covered	Found along riparian or otherwise moist areas within arid regions. Larvae are dependent upon *Atriplex lentiformes*.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Icteria virens yellow-breasted chat	Fed: None CA: SSC CVMSHCP: Covered	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC CVMSHCP: Not Covered	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	**High** Suitable foraging and nesting habitat are present within the project site and the surrounding area.
Lasiurus xanthinus western yellow bat	Fed: None CA: SSC CVMSHCP: Covered	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Lithobates yavapaiensis Lowland leopard frog	USFWS: Delisted CDFW: SSC CVMSHCP: Not Covered	Occurs in temperate forests, rivers, intermittent rivers, freshwater lakes, and freshwater marshes.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Macrobaenetes valgum Coachella giant sand treader cricket	Fed: None CA: None CVMSHCP: Covered	Nocturnal and moisture sensitive insects. Emergence occurs with winter rains and appear at maximum densities in January-February. Can be detected via their characteristic delta-shaped burrow excavations.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Neotoma lepida intermedia San Diego desert woodrat	Fed: None CA: SSC CVMSHCP: Not Covered	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed Onsite**	**Potential to Occur**
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: CA: CVMSHCP:	None SSC Covered	Often found in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Roosts in caves, tunnels, mines, and rock crevices, usually in large colonies.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site.
Oliarces clara cheeseweed owlfly	Fed: CA: CVMSHCP:	None None Not Covered	Occur on or near bajadas, adults aggregate at local high topographic features to mate.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Ovis canadensis nelsoni desert bighorn sheep	USFWS: CDFW: CVMSHCP:	None FP Covered	Occurs in alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian. Prefers open areas of low-growing vegetation for feeding, with close proximity to steep, rugged terrain for escape, lambing, and bedding, an adequate source of water, and travel routes linking these areas.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
***Ovis canadensis nelsoni* pop. 2** Peninsular bighorn sheep DPS	Fed: CA: CVMSHCP:	**END** **THR**; FP Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Pandion haliaetus osprey	USFWS: CDFW: CVMSHCP:	None WL Not Covered	Uncommon winter resident of southern California. Primarily associated with large, fish-bearing waterbodies such as rivers, lakes, reservoirs, bays, and estuaries. Requires clear, open waters for foraging and use large snags and open trees for roosting.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	Fed: CA: CVMSHCP:	None SSC Not Covered	Occupies tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and infrequently drier grasslands.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Passerculus sandwichensis rostratus large-billed savannah sparrow	Fed: CA: CVMSHCP:	None SSC Not Covered	Non-breeding visitor occurring primarly from late August to early March along the southern coast and from late July to mid-February at the Salton Sea. Breeding habitat is limited to open, low salt marsh vegetation, including grasses, pickleweed, and iodine bush.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Perognathus longimembris bangsi Palm Springs pocket mouse	Fed: CA: CVMSHCP:	None SSC Covered	Inhabits areas having flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils on slopes ranging from 0% to approximately 15%. Remaining habitat in the Coachella Valley and environs is about 142,000 acres.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: None CA: SSC CVMSHCP: Not Covered	Resides in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Phrynosoma mcallii flat-tailed horned lizard	Fed: None CA: SSC CVMSHCP: Covered	Typical habitat is sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Most common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Piranga rubra summer tanager	Fed: None CA: SSC CVMSHCP: Covered	Breed in gaps and edges of open deciduous or pine-oak forests across the southern and mid-Atlantic U.S. Uncommon (formerly common) summer resident and breeder in desert riparian habitat along lower Colorado River. Breeds in mature, desert riparian habitat dominated by cottonwoods and willows.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Polioptila melanura black-tailed gnatcatcher	Fed: None CA: WL CVMSHCP: Not Covered	In Mojave, Great Basin, Colorado and Sonoran desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by creosote bush and salt bush with scattered bursage, burrowed, ocotillo, saguaro, barrel cactus, nipple cactus, and prickly pear and cholla.	No	**High** Suitable habitat is present within the project site.
Pyrocephalus rubinus vermilion flycatcher	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occupies desert riparian habitat, particularly cottonwoods, willows, mesquite, and other large desert riparian trees, in habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas where it can forage.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Rallus obsoletus yumanensis Yuma Ridgeway's rail	USFWS: **END** CDFW: **THR**; FP CVMSHCP: Not Covered	Nests in freshwater marches along the Colorado River and Salton Sea. Prefers stands of cattails and tules dissected by narrow channels of flowing water.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Selasphorus rufus rufous hummingbird	Fed: None CA: None CVMSHCP: Not Covered	During breeding, they are found in forests, on seed-tree harvest units, riparian shrub, and spruce-fir habitats. During the winter, it migrates to lowland stream bottoms, foothill brush land, seacoast and high mountain meadows.	No	**High** Suitable habitat is present within the project site.
Setophaga petechia yellow warbler	Fed: None CA: SSC CVMSHCP: Covered	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Spinus lawrencei Lawrence's goldfinch	Fed: None CA: None CVMSHCP: Not Covered	Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Nearby herbaceous habitats often used for feeding. Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid woodland and chaparral near water.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Spizella breweri Brewer's sparrow	Fed: None CA: None CVMSHCP: Not Covered	Habitats include sagebrush and brushy plains.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Taxidea taxus American badger	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Toxostoma crissale Crissal thrasher	Fed: None CA: SSC CVMSHCP: Covered	Year round resident in California. Occupies a relatively large variety of desert riparian and scrub habitats from below sea level to over 6,000 feet. The common factor, regardless of habitat type and species of shrub, is dense, low scrubby vegetation. Primarily occupies riparian scrub or woodland at lower elevations.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	Fed: None CA: SSC CVMSHCP: Covered	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	No	**Presumed Absent** Limited habitat is present within the project site; however, this species is poorly adapted to routine disturbance.
Uma inornata Coachella Valley fringe-toed lizard	Fed: **THR** CA: **END** CVMSHCP: Covered	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Vireo bellii pusillus least Bell's vireo	Fed: **END** CA: **END** CVMSHCP: Covered	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Xanthocephalus xanthocephalus yellow-headed blackbird	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in freshwater emergent wetlands, and moist, open areas along croplands and mud flats of lacustrine habitats. Prefers to nest in dense wetland vegetation characterized by tules, cattails, or other similar plant species along the border of lakes and ponds.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site.
Xerospermophilus tereticaudus chlorus Coachella Valley round-tailed ground squirrel	Fed: None CA: SSC CVMSHCP: Covered	Inhabits sandy arid regions of Lower Sonoran Life Zone. Its scrub and wash habitats include mesquite and creosote dominated sand dunes, creosote bush scrub, creosote palo verde and saltbush/alkali scrub.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
SPECIAL-STATUS PLANT SPECIES				
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: None CA: None CNPS: 1B.1 CVMSHCP: Not Covered	Found on the coastal side of the southern California mountains in chaparral and coastal sage scrub plant communities in areas of full sun and sandy soils. Found at elevations ranging from 262 to 5,249 feet. Blooming period is from January to September.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Astragalus lentiginosus* var. *borreganus Borrego milk-vetch	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Grows in sandy soils within Mojavean desert scrub and Sonoran desert scrub. Found at elevations ranging from 98 to 1,050 feet in elevation. Blooming period is from February to May.	No	**Low** Minimal habitat is present throughout the project site. Was not observed onsite during the 2022 focused surveys.
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: **END** CA: None CNPS: 1B.2 CVMSHCP: Covered	Preferred habitat includes desert dunes and sandy Sonoran desert scrub. Found at elevations ranging from 131 to 2,149 feet in elevation. Blooming period is from February to May.	No	**Low** Minimal habitat is present throughout the project site. Was not observed onsite during the 2022 focused surveys.
Astragalus preussii* var. *laxiflorus Lancaster milk-vetch	Fed: None CA: None CNPS: 1B.1 CVMSHCP: Not Covered	Occurs on alkaline clay flats, gravelly or sandy washes, and along draws in gullied badlands. Found at elevations up to 2,379 feet. Blooming period is from March to May.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Astragalus sabulonum gravel milk-vetch	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Occurs in sandy and gravelly soils in flats, washes, and roadsides in desert dunes and Mojavean and Sonoran desert scrub. Found at elevations ranging from 98 to 2,936 feet. Blooming period is from February to May.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.

Scientific Name Common Name	**Status**		**Habitat**	**Observed Onsite**	**Potential to Occur**
Astragalus tricarinatus triple-ribbed milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Found in sandy or gravelly soils within Joshua tree woodland and Sonoran desert scrub habitats. Found at elevations ranging from 1,476 to 3,904 feet. Blooming period is from February to May.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
Chorizanthe leptotheca Peninsular spineflower	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Found in granitic soils within chaparral, coast scrub, and lower montane coniferous forest habitats. Found at elevations ranging from 984 to 6,234 feet. Blooming period is from May to August.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Ditaxis claryana glandular ditaxis	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found in sandy soils in dry washes and rocky hillsides within Mojavean and Sonoran desert scrub. Occurs at elevations ranging from 0 to 1,525 feet. Blooming period is October and December through March.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Ditaxis serrata* var. *californica California ditaxis	Fed: CA: CNPS: CVMSHCP:	None None 3.2 Not Covered	Found in Sonoran desert scrub. Occurs at elevations ranging from 98 to 3,281 feet. Blooming period is from March to December.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Eremothera boothii ssp. boothii Booth's evening primrose	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Joshua tree woodland, pinyon and juniper woodland. Blooming period is from June to August.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Eschscholzia androuxii Joshua Tree poppy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in desert washes, flats, and slopes; sandy, gravelly and/or rocky within Joshua tree woodland and Mojavean desert scrub habitats. Found at elevations ranging from 1,919 to 5,528 feet. Blooming period is from February to June.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
Euphorbia abramsiana Abram's spurge	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found on sandy soils in Mojavean desert scrub and Sonoran Desert scrub. Found at elevations ranging from -15 to 4,300 feet. Blooming period is from September to November.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Euphorbia arizonica Arizona spurge	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Preferred habitat includes sandy Sonoran desert scrub habitat. Found at elevations ranging from 164 to 984 feet. Blooming period is from March to April.	No	**Low** Minimal habitat is present throughout the project site. Was not observed onsite during the 2022 focused surveys.
Euphorbia platysperma flat-seeded spurge	Fed: None CA: None CNPS: 1B.2 CVMSHCP: Not Covered	Occurs within desert scrub and sandy Sonoran desert scrub habitats. Found at elevations ranging from 213 to 328 feet. Blooming period is from February to September.	No	**Low** Minimal habitat is present throughout the project site. Was not observed onsite during the 2022 focused surveys.
Horsfordia alata pink velvet-mallow	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Occurs in rocky Sonoran desert scrub. Found at elevations ranging from 328 to 1,640 feet. Blooming period is from February to December.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Horsfordia newberryi Newberry's velvet-mallow	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Occurs in rocky Sonoran desert scrub. Found at elevations ranging from 10 to 2,624 feet. Blooming period includes February, April, November, and December.	No	**Presumed Absent.** No suitable habitat is present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Johnstonella costata ribbed cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Grows in sandy soils within desert dunes, Mojavean desert scrub, and Sonoran desert scrub habitats, often in ephemeral areas. Found at elevations ranging from 197 to 1,640 feet. Blooming period is from February to May.	No	**Low** Minimal habitat is present throughout the project site. Was not observed onsite during the 2022 focused surveys.
Johnstonella holoptera winged cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Found in Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 328 to 5,545 feet. Blooming period is from March to April.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
Juncus acutus ssp. leopoldii southwestern spiny rush	Fed: None CA: None CNPS: 4.2 CVMSHCP: Not Covered	Found in coastal dunes (mesic), meadows and seeps (alkaline), and marshes and swamps (coastal salt). Found at elevations ranging from 0 to 3,115 feet. Blooming period is from May to June.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Juncus cooperi Cooper's rush	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Found in meadows and seeps (mesic, alkaline, or saline). Found at elevations ranging from -250 to 2,855 feet. Blooming period is from April to May.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Lycium torreyi Torrey's box-thorn	Fed: None CA: None CNPS: 4.2 CVMSHCP: Not Covered	Found in sandy, rocky washes, streambanks and desert valleys in association with Mojavean and Sonoran Desert scrub habitats. Found at elevations ranging from 130 to 3,575 feet. Blooming period is from March to May.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Marina orcuttii* var. *orcuttii California marina	Fed: None CA: None CNPS: 1B.3 CVMSHCP: Not Covered	Occurs in rocky soils in chaparral, pinyon-juniper woodland, and Sonoran desert scrub. Found at elevations ranging from 3,444 to 3,805 feet. Blooming period is from May to October.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Matelea parvifolia spear-leaf matelea	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Occurs in rocky soils in Mojavean and Sonoran desert scrub. Found at elevations ranging from 1,443 to 3,593 feet. Blooming period is typically March to May and can last through July.	No	**Presumed absent.** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Petalonyx linearis narrow-leaf sandpaper plant	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Found in sandy or rocky canyons in association with Mojavean or Sonoran Desert scrub habitats. Found at elevations ranging from 260 to 2,855 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
Pseudorontium cyathiferum Deep Canyon snapdragon	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Occurs in rocky Sonoran desert scrub. Found at elevations ranging from 0 to 2,624 feet. Blooming period is from February to April.	No	**Presumed Absent** There is no suitable habitat within or adjacent to the project site.
Selaginella eremophila desert spike-moss	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
Stemodia durantifolia purple stemodia	Fed: None CA: None CNPS: 2B.1 CVMSHCP: Not Covered	Occurs in Sonoran desert scrub habitats. Found at elevations ranging from 591 to 984 feet. Blooming period is from January to December.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed Onsite**	**Potential to Occur**
Xylorhiza cognata Mecca-aster	Fed: None CA: None CNPS: 1B.2 CVMSHCP: Covered	Occurs in Sonoran desert scrub habitat. Found at elevations ranging from 66 to 1,312 feet. Blooming period is from January to June.	No	**Presumed Absent** The project site is outside of the typical known elevation for this species.
CDFW SENSITIVE HABITATS				
Desert Fan Palm Oasis Woodland	CDFW Sensitive Habitat	Rare plant community that is one of the most unusual biological resources located within the Coachella Valley. Found within canyons and along the San Andreas Fault Zone, where water occurs naturally. Generally characterized by open to dense groves of native desert fan palms, which are the most massive native palm in North America, growing more than 66 feet.	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END – Federal Endangered
THR – Federal Threatened

California Department of Fish and Wildlife (CA) - California
END – California Endangered
THR – California Threatened
FP – California Fully Protected
CSC – California Species of Special Concern
WL – California Watch List

California Native Plant Society (CNPS)
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3 More Information Needed
4 Plants of Limited Distribution – A Watch List

Threat Ranks
0.1- Seriously threatened in California
0.2- Moderately threatened in California
0.3- Not very threatened in California

Appendix D Section 4.4 of the CVMSHCP

4.4 Required Avoidance, Minimization, and Mitigation Measures

This section describes certain avoidance, minimization, and mitigation requirements for Covered Activities within the Conservation Area, in addition to Conservation Area specific measures described in the Conservation Area subsections in Section 4.3. The measures described in this section do not apply to single-family homes, emergency response activities, and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. To assist Permittees with implementation of these measures, CVCC will maintain maps of modeled Habitat and a natural communities map and will provide them to each of the Permittees. CVCC will also maintain a list of Acceptable Biologists who may be used to conduct surveys for specified Covered Species identified in this section. Any Permittee may submit the names of biologists for inclusion in the initial list of Acceptable Biologists. The list shall be updated at least annually. CVCC will develop procedures for individual biologists to submit their name for inclusion on the list. Individuals conducting survey activities for listed endangered or threatened species or species for which a state or federal protocol exists must have the appropriate permit (i.e., in accordance with the federal Endangered Species Act, Section 10(a)(1)(A), or state Endangered Species Act, California Fish and Game Code, Section 2081(a)) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the Wildlife Agencies for review. The Wildlife Agencies shall have thirty (30) days to provide input on the qualifications of any biologists on the list. If the Wildlife Agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

In the event that a survey of a parcel is required pursuant to the MSHCP, it will be conducted by an Acceptable Biologist. The survey shall be conducted in the appropriate season, in accordance with established accepted protocols if they exist. Within one (1) year of Permit issuance, the Wildlife Agencies and the MPA, in consultation with CVCC, shall develop survey protocols for those species for which a protocol is required. CVCC will maintain a list of accepted survey protocols. For those species for which protocols do not exist at the time surveys are needed, the Acceptable Biologist shall use a survey protocol generally accepted by biologists familiar with the species. Survey results shall be documented in both mapped and text form and shall be presented for review by the appropriate Permittee and CVCC. Wildlife Agencies' concurrence or acceptance of the surveys and/or the results contained therein is not required by the MSHCP.

Biological Corridors. Specific roads in Conservation Areas, where culverts or undercrossings are required to maintain Biological Corridors, are delineated in the Section 4.3 subsections on individual Conservation Areas.

Burrowing Owl. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities other than levees, berms, dikes, and similar features that are known to contain burrowing owl burrows. O&M of

roads is not subject to this requirement. For other projects that are subject to CEQA, the Permittees will require burrowing owl surveys in the Conservation Areas using an accepted protocol (as determined by the CVCC in coordination with the Permittees and the Wildlife Agencies). Prior to Development, the construction area and adjacent areas within 500 feet of the Development site, or to the edge of the property if less than 500 feet, will be surveyed by an Acceptable Biologist for burrows that could be used by burrowing owl. If a burrow is located, the biologist will determine if an owl is present in the burrow. If the burrow is determined to be occupied, the burrow will be flagged and a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the burrow. The buffer will be staked and flagged. No Development or O&M activities will be permitted within the buffer until the young are no longer dependent on the burrow.

If the burrow is unoccupied, the burrow will be made inaccessible to owls, and the Covered Activity may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

Within one (1) year of Permit issuance, CVCC will cooperate with County Flood Control, CVWD and IID to conduct an inventory of levees, berms, dikes, and similar features in the Plan Area maintained by those Permittees. Burrowing owl burrow locations will be mapped and each of these Permittees will incorporate the information into its O&M practices to avoid impacts to the burrowing owl to the maximum extent Feasible. CVCC in cooperation with County Flood Control, CVWD, and IID will prepare a manual for maintenance staff, educating them about the burrowing owl and appropriate actions to take when owls are encountered to avoid impacts to the maximum extent Feasible. The manual will be submitted to the Wildlife Agencies for review and comment within two (2) years of Permit issuance. In conjunction with the Monitoring Program, the maps of the burrowing owl locations along the above-described levees, berms, dikes, and similar features will be periodically updated.

Covered Riparian Bird Species. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. Riparian Habitat here refers to the following natural communities: southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, and southern sycamore-alder riparian woodland in the Cabazon, Stubbe and Cottonwood Canyons,

Whitewater Canyon, Upper Mission Creek/Big Morongo Canyon, Thousand Palms, Indio Hills Palms, Joshua Tree National Park, Mecca Hills and Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas. Covered Activities, including O&M of facilities and construction of permitted new projects, in riparian Habitat will be conducted to the maximum extent Feasible outside of the March 15 – September 15 nesting season for least Bell's vireo, and the May 1 – September 15 nesting season for southwestern willow flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests are present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird Species are not present, the Covered Activity may proceed.

Crissal Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled crissal thrasher Habitat in the Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, and Coachella Valley Stormwater Channel and Delta Conservation Areas, surveys will be conducted by an Acceptable Biologist prior to the start of construction activities during the nesting season, January 15 – June 15, to determine if active nest sites for this species occur on the construction site and/or within 500 feet of the construction site, or to the edge of the property boundary if less than 500 feet. If nesting crissal thrashers are found, a 500-foot buffer, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction activities will be permitted within the buffer during the breeding season of January 15 – June 15 or until the young have fledged.

Desert tortoise. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to

June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the *Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises* and *Guidelines for Handling Desert Tortoises During Construction Projects*, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right-of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

Inactive Season Protocol. This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.
2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the

plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.

3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of-way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of-way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the pre-construction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.

4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.

5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.

6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.

7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.

8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

The following terms are established to protect the desert tortoise during utility-related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.
- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist
- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.
- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.
- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.
- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open ended pipeline segments that are welded in place shall be capped during periods of

construction inactivity to prevent entry by desert tortoises.

- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.
- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.
- Powerlines associated with water development, such as to provide power for pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds, and shall adhere to the electrical distribution protocol which follows.
- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.
- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.
- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.
- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.
- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.
- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities

shall not be permitted between dusk and dawn in areas not previously graded.

Active Season Protocol. This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction activities, as long as a final check for desert tortoises is conducted at the time of construction.
- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep-sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.
- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.
- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

Disposition of Sick, Injured, or Dead Specimens. Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained

veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

Fluvial Sand Transport. Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

Le Conte's Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled Le Conte's thrasher Habitat in all the Conservation Areas, during the nesting season, January 15 - June 15, prior to the start of construction activities, surveys will be conducted by an Acceptable Biologist on the construction site and within 500 feet of the construction site, or to the property boundary if less than 500 feet. If nesting Le Conte's thrashers are found, a 500 foot buffer, or to the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction will be permitted within the buffer during the breeding season of January 15 - June 15 or until the young have fledged.

Mesquite Hummocks and Mesquite Bosque Natural Communities. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. Construction activities in the Cabazon, Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas will avoid mesquite hummocks and mesquite bosque to the maximum extent Feasible.

Peninsular Bighorn Sheep Habitat. Completion of Covered Activities in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas will be conducted outside of the January 1 - June 30 lambing season unless otherwise authorized through a Minor Amendment to the Plan with concurrence from the Wildlife Agencies. O&M of Covered Activities, including but not limited to refinishing the inside of water storage tanks, shall be scheduled to avoid the lambing season, but may extend into the January 1 – June 30 period if necessary to complete the activity, upon concurrence with the Wildlife Agencies.

For new projects in the above listed Conservation Areas, no toxic or invasive plant species may be used for landscaping. For existing public infrastructure facilities which have landscaping in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas, the

Permittees who have such facilities will, with respect to those facilities, develop and implement a plan and schedule to remove or prevent access to oleander and any other plants known to be toxic to Peninsular bighorn sheep. The plan and schedule will be prepared within one (1) year of Permit issuance.

Triple-ribbed milkvetch. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. It is understood that O&M for infrastructure developed as part of a private development approved in compliance with the MSHCP that is later transferred to a public entity is included as a Covered Activity. For Covered Activities within modeled triple-ribbed milkvetch Habitat in the Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, and Santa Rosa and San Jacinto Mountains Conservation Areas, surveys by an Acceptable Biologist will be required for activities during the growing and flowering period from February 1 - May 15. Any occurrences of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent Feasible. In particular, known occurrences on a map maintained by CVCC shall not be disturbed.

Palm Springs Pocket Mouse. To avoid impacts to the Palm Springs pocket mouse and its habitat in the Upper Mission Creek/Big Morongo Canyon and Willow Hole Conservation Areas, Flood Control-related construction activities will comply with the following avoidance and minimization measures.

- **Clearing**: For construction that would involve disturbance to Palm Springs pocket mouse habitat, activity should be phased to the extent feasible and practicable so that suitable habitat islands are no farther than 300 feet apart at any given time to allow pocket mice to disperse between habitat patches across non-suitable habitat (i.e., unvegetated and/or compacted soils). Prior to project construction, a biological monitor familiar with this species should assist construction crews in planning access routes to avoid impacts to occupied habitat as much as feasible (i.e., placement of preferred routes on project plans and incorporation of methods to avoid as much suitable habitat/soil disturbance as possible). Furthermore, during construction activities, the biological monitor will ensure that connected, naturally vegetated areas with sandy soils and typical native vegetation remain intact to the extent feasible and practicable. Finally, construction that involves clearing of habitat should be avoided during the peak breeding season (approximately March to May), and activity should be limited as much as possible during the rest of the breeding season (January to February and June to August).
- **Revegetation**: Clearing of native vegetation (e.g., creosote, rabbitbrush, burrobush, cheesebush) should be followed by revegetation, including natural reestablishment and other means, resulting in habitat types of equal or superior biological value for Palm Springs pocket mouse.
- **Trapping/Holding**: All trapping activity should be conducted in accordance with accepted protocols and by a qualified biologist who possesses a Memorandum of

Understanding with CDFG for live-trapping of heteromyid species in Southern California.

- **Translocation**: Should translocation between distinct population groups be necessary, as determined through the Adaptive Management and Monitoring Program, activity should be conducted by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California. Trapping and subsequent translocation activity should be conducted in accordance with accepted protocols. Translocation programs should be coordinated by or conducted by the CVCC and/or RMOC to determine the appropriate trapping, holding, marking, and handling methods and potential translocation sites.

Little San Bernardino Mountains Linanthus. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. To avoid and minimize impacts to this species as much as possible, the following avoidance and minimization effort shall occur:

- **Salvage**: Salvage of top soil and/or seeds should occur prior to ground disturbance in accordance with Section 6.6.1. Salvage should be conducted by or in cooperation with the CVCC.

Appendix E Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Coachella Valley MSHCP

A Multiple Species Habitat Conservation Plan (Plan) was prepared for the entire Coachella Valley and surrounding mountains to address current and potential future state and federal Endangered Species Act issues in the Plan Area. A Memorandum of Understanding ("Planning Agreement") was developed to govern the preparation of the Plan. In late 1995 and early 1996, under the auspices of CVAG, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; County of Riverside (County); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Game (CDFG); Bureau of Land Management (BLM); U.S. Forest Service (USFS); and National Park Service (NPS) signed the Planning Agreement to initiate the planning effort. Subsequently, Caltrans, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), California Department of Parks and Recreation (State Parks), and CVMC decided to participate in the Plan.

The Plan balances environmental protection and economic development objectives in the Plan Area and simplifies compliance with endangered species related laws. The Plan is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The Plan will, to the maximum extent practicable, minimize and mitigate the impacts of the Taking and provide for Conservation of the Covered Species.

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program, and Adaptive Management. The MSHCP Reserve System will be established from lands within

21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of "waters of the U.S.," including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." In order to further define the scope of waters protected under the CWA, the Corps and EPA published the Clean Water Rule on June 29, 2015. Pursuant to the Clean Water Rule, the term "*waters of the United States*" is defined as follows:

(i) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

(ii) All interstate waters, including interstate wetlands[1].

(iii) The territorial seas.

(iv) All impoundments of waters otherwise defined as waters of the United States under the definition.

(v) All tributaries[2] of waters identified in paragraphs (i) through (iii) mentioned above.

(vi) All waters adjacent[3] to a water identified in paragraphs (i) through (v) mentioned above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

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1 The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

2 The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (iv) mentioned above), to a water identified in paragraphs (i) through (iii) mentioned above, that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark.

3 The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (i) through (v) mentioned above, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like.

(vii) All prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernals pools, Texas coastal prairie wetlands, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (i) through (iii) meantioned above.

(viii) All waters located within the 100-year floodplain of a water identified in paragraphs (i) through (iii) mentioned above and all waters located within 4,000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (i) through (v) mentioned above, where they are determined on a case-specific basis to have a significant nexus to a waters identified in paragraphs (i) through (iii) mentioned above.

The following features are not defined as "waters of the United States" even when they meet the terms of paragraphs (iv) through (viii) mentioned above:

(i) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act.

(ii) Prior converted cropland.

(iii) The following ditches:

(A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
(B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
(C) Ditches that do not flow, either directly or through another water, into a water of the United States as identified in paragraphs (i) through (iii) of the previous section.

(iv) The following features:

(A) Artificially irrigated areas that would revert to dry land should application of water to that area cease;
(B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
(C) Artificial reflecting pools or swimming pools created in dry land;
(D) Small ornamental waters created in dry land;
(E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
(F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of a tributary, non-wetland swales, and lawfully constructed grassed waterways; and
(G) Puddles.

(v) Groundwater, including groundwater drained through subsurface drainage systems.

(vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

(vii) Wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

APPENDIX F

Cultural Resources Study

Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California

Patrick B. Stanton, Felicia V. De Peña, and Joseph El-Adli

Draft report prepared for
Meridian Consultants
706 S. Hill Street, 11th Floor
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Technical Report 22-104
Statistical Research, Inc.
Redlands, California

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December 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

ACBCI	Agua Caliente Band of Cahuilla Indians
B.P.	years before present
Beta	Beta Analytic, Inc.
BLM	Bureau of Land Management
BSSM	buried-site-sensitivity model
Caltrans	California Department of Transportation
CCR	*California Code of Regulations*
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information Center
City	City of Indio
cmbs	centimeter(s) below surface
CRHR	California Register of Historical Resources
CRMTP	Cultural Resources Monitoring and Treatment Plan
CVWD	Coachella Valley Water District
EIC	Eastern Information Center
EIR	Environmental Impact Report
FAR	fire-affected rock
GLO	U.S. General Land Office
HSC	California Health and Safety Code
I-10	Interstate 10
NAHC	Native American Heritage Commission
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OU	observation unit
PFYC	Potential Fossil Yield Classification
PP	Point Provenience
PRC	California *Public Resources Code*
Project	Desert Retreat Specific Plan Project
RPA	Registered Professional Archaeologist
Sanborn	Sanborn Fire Insurance
SR	State Route
SRI	Statistical Research, Inc.
SSURGO	Soil Survey Geographic Database
STP	shovel-test pit
SVP	Society of Vertebrate Paleontology

THPO	Tribal Historic Preservation Officer
TP	test pit
U.S. 99	U.S. Highway 99
UCR	University of California, Riverside
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USGS	U.S. Geological Survey
WSC	Western Science Center

Meridian Consultants has contracted with Statistical Research, Inc. (SRI), to conduct a cultural resource and paleontological resource study in support of the Environmental Impact Report (EIR) being prepared by the City of Indio for the proposed Desert Retreat Specific Plan (formerly, North Indio Specific Plan) Project (Project).

The Project site consists of approximately 380 acres (153.8 ha) of land in Indio, Riverside County, California, within Section 4 of Township 5 South, Range 7 East, on the 2012 Myoma, California, 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle. The Project area is composed of one large, approximately 377-acre (152.6-ha) block and a separate approximately 3-acre (1.2-ha) discontinuous parcel immediately southwest of the main parcel. The Project area is bound by 40th Avenue to the south, 38th Avenue to the north, Madison Street to the east, and Jefferson Street and Tar Road to the west. The Project includes approximately 1,500 residences, artificial water features, and a clubhouse as well as 2 proposed substation locations. Entrances will be located on Madison Street and 30th and 40th Avenues.

As mentioned above, as part of the preparation of the EIR, Meridian Consultants has contracted with SRI to conduct a cultural resource and paleontological resource study of the entire Project area. The study includes testing and evaluation of any resources encountered during the Project. As part of the Project, SRI conducted a cultural resource records search with the California Historical Resources Information System's Eastern Information Center and a paleontological records search with the Western Science Center and also conducted archival research for the Project area using historical-period aerial imagery, USGS topographic maps, U.S. Department of the Interior Bureau of Land Management/U.S. General Land Office records, and Sanborn Fire Insurance maps. Furthermore, a buried-site-sensitivity model (BSSM) based on geologic data was created to determine whether parts of the study area could contain buried archaeological resources.

The results of the records search indicated that five previously conducted projects included work in portions of the Project area, all together covering approximately 7 percent of the current Project area. Also, one prehistoric archaeological site (CA-RIV-8908) consisting of an artifact scatter has been previously recorded within the current Project boundaries.

In addition to the resource recorded within the Project area, another 36 cultural resources had been recorded in the surrounding records-search area, which included the Project area and a 1-mile (1.6-km) radius around it: 33 archaeological sites (24 prehistoric and 9 historical period) and 3 prehistoric isolated resources. The prehistoric resources largely consist of artifact scatters or habitation areas; 2 prehistoric sites also include elements of a trail segment, 1 containing a rock alignment and the other containing a lithic scatter. At least 2 of the prehistoric sites (CA-RIV-6896 and CA-RIV-12669) had been recorded as containing human cremations, and 1 site (CA-RIV-5492) reportedly contains burned-bone loci. The historical-period sites in the records-search area are 2 refuse scatters, a segment of the Union Pacific Railroad/Southern Pacific Railroad, a segment of the Hayfield-Chino 220-kV transmission line, a utility pole, an unpaved road segment, the Coachella Canal, the East Side Dike, and a pipeline segment. All 3 previously recorded isolated resources consist of ceramic fragments.

The BSSM for the Project area revealed that the entirety of it is sensitive for buried archaeological resources. Based on soil-series descriptions, the sensitive soils are approximately 1.5 m (5 feet) in thickness and have potential to contain buried archaeological resources to their bases. However, it cannot be ruled out that early prehistoric sites could be present at greater depths in unknown buried soils. As for paleontological resources, based on the paleontological sensitivity study, it can be assumed that the upper 5 feet (1.5 m) of the sediments underlying the Project area should be assigned low paleontological resource

sensitivity, and any deposits discovered at greater than 5 feet (1.5 m) in depth below grade should be assigned high paleontological resource sensitivity.

SRI conducted pedestrian survey of the entirety of the Project area and identified 11 sites and 30 isolated resources. The sites are 3 historical-period agricultural sites associated with irrigation and 8 prehistoric artifact scatters composed largely of ceramic sherds and also smaller amounts of ground stone, flaked stone, fire-affected rock, worked shell, and burned bone. At 1 site, SRI 15, bone possibly associated with a possible prehistoric cremation was identified, and a single buried thermal feature was discovered. The Riverside County Coroner's Office was contacted regarding the possible cremation, but no diagnostic elements were available to positively identify the remains as belonging to a cremation. The previously recorded prehistoric site (CA-RIV-8908/P-36-17111) could not be relocated. The previously recorded historical-period site includes a previously unrecorded segment of the Coachella Canal (CA-RIV-12999). The isolated resources are 26 prehistoric isolates and 4 historical-period isolates.

Although enough information was available to evaluate the historical-period sites, shovel-test pits and other test pits were placed at and between prehistoric sites to test their subsurface integrity. Testing revealed that the majority of the sites do not possess substantial subsurface components; only a single feature was found, the thermal feature identified at SRI 15.

Of the 11 sites, 1 newly recorded resource (SRI 15) is recommended eligible for listing in the California Register of Historical Resources (CRHR), and 1 previously recorded resource (CA-RIV-12999, the Coachella Canal) is already listed in the CRHR because it is listed in the National Register of Historic Places. One of the previously recorded resources could not be relocated and likely has been destroyed: CA-RIV-8908 (the Coachella Canal); though present within the Project area, it is buried beneath an unknown depth of fill material.

CHAPTER 1

Introduction

Meridian Consultants has contracted with Statistical Research, Inc. (SRI), to conduct a cultural resource and paleontological resource study in support of the Environmental Impact Report (EIR) being prepared by the City of Indio (City) for the proposed Desert Retreat Specific Plan (formerly, North Indio Specific Plan) Project (Project). The Project site consists of approximately 380 acres (153.8 ha) of land in Indio, Riverside County, California, within Section 4 of Township 5 South, Range 7 East, on the 2012 Myoma 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figures 1.1 and 1.2). The Project area is composed of one large, approximately 377-acre (152.6-ha) block and a separate approximately 3-acre (1.2-ha) discontinuous parcel immediately southwest of the main parcel. The Project area is bound by 40th Avenue to the south, 38th Avenue to the north, Madison Street to the east, and Jefferson Street and Tar Road to the west. The Project includes approximately 1,500 residences, artificial water features, and a clubhouse and includes 2 proposed substation locations. Entrances will be located on Madison Street and 30th and 40th Avenues. According to the 2019 EIR for the City's General Plan Update, the Project is located in an area listed as having high potential for cultural resources (Rincon Consultants 2019:Figures 4.5-1 and 4.5-3).

Regulatory Environment

The development is considered a "project" subject to the California Environmental Quality Act (CEQA; California *Public Resources Code*, Section 21000 *et seq.* [PRC 21000 *et seq.*]), which mandates that the lead agency consider the effects of a project on historical and archaeological resources. Additionally, the State of California provides protection for paleontological resources as historical resources under CEQA guidelines (*California Code of Regulations*, Title 14, Section 15064.5[a][3] [14 CCR15064.5(a)(3)]). The City will be the CEQA lead agency for this Project.

CEQA recognizes that historical resources are parts of the environment and that "a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" (PRC 21084.1). For potential impacts to an archaeological site to be considered significant under CEQA, the resource must be determined to be a "historical resource"—that is, one listed in or determined eligible for listing in the California Register of Historical Resources (CRHR), included in a local register of historical resources, or determined by the lead agency to be a historical resource (PRC 21084.1). For an archaeological site that does not meet the criteria for consideration as a historical resource, however, a determination must be made as to whether it qualifies as a "unique archaeological resource" (PRC 21083.2[g]; 14 CCR 15064.5[c][3]). CEQA recommends avoidance as the preferred treatment for significant historical resources or unique archaeological resources. However, if avoidance is not feasible, CEQA recommends that the archaeological resources be evaluated in terms of eligibility for listing in the CRHR. Although paleontological resources are not eligible for listing in the CRHR, CEQA also states that eligibility for the CRHR does not preclude a lead agency from determining that a resource may be historical as defined in PRC 5020.1(j) and PRC 5024.1 (14 CCR 15064.5[a][4]).

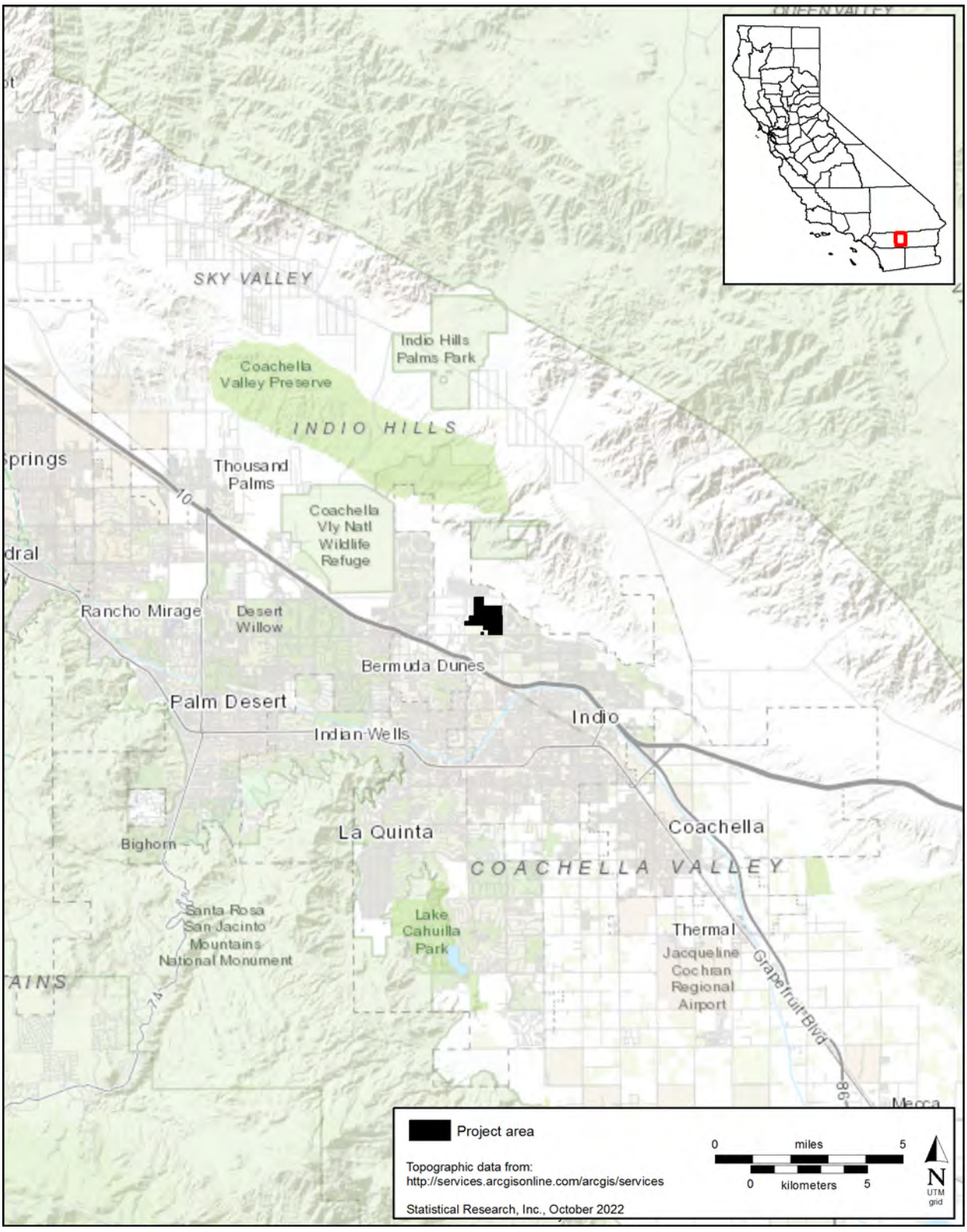

Figure 1.1. Vicinity map of the Project area.

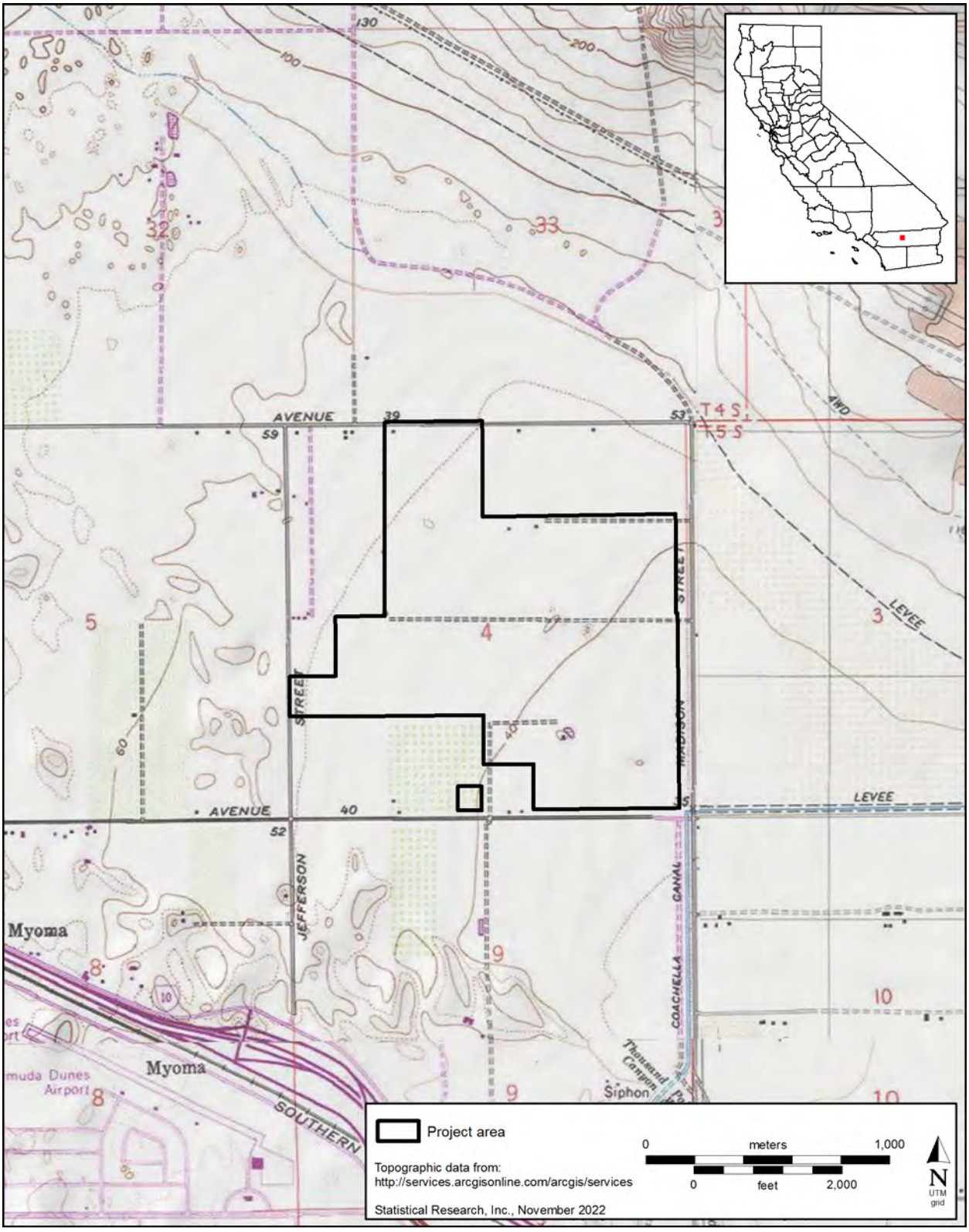

Figure 1.2. Location map of the Project area.

As part of the preparation of the EIR, Meridian Consultants contracted with SRI to conduct a cultural resource and paleontological resource study of the entire Project area. The purpose of the study is to prepare the relevant cultural resource and paleontological documents in support of the EIR. The study efforts include a records search for the entire Project area and the surrounding vicinity; an archaeological survey of the Project area; Native American outreach; a testing program for cultural resources, to identify subsurface deposits; and evaluation of all cultural resources encountered within the Project area.

Project Personnel

All SRI personnel meet the Secretary of the Interior's Historic Preservation Professional Qualifications Standards in their respective disciplines. The personnel involved with the implementation of this Project have extensive experience in the region and have worked on several archaeological and paleontological studies across southern California. SRI's key personnel for the Project study are as follows:

- Kenneth M. Becker, M.A., Registered Professional Archaeologist (RPA), project manager;
- Patrick B. Stanton, M.A., RPA, principal investigator;
- Joseph El-Adli, Ph.D., paleontologist;
- Felicia V. De Peña, Ph.D., RPA, senior project director; and
- Luke A. Burnor, B.A., crew chief.

Mr. Burnor led the archaeological survey component of the Project, and Mr. Stanton requested and conducted the records search. Dr. De Peña supervised the testing component and completed the survey of the areas that could not be accessed during the initial survey. Dr. El-Adli performed the paleontological assessment of the property and created the buried-site-sensitivity model (BSSM).

CHAPTER 2

Project Setting

Environmental Setting

The Project area is located along the far-northwestern end of the Coachella Valley, a low valley sandwiched between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. The valley is part of the Colorado Desert geomorphic province, an area that includes both sides of the lower Colorado River and the Coachella and Imperial Valleys of California (Jenkins 1980).

High temperatures during the summer months average between 39°C and 42°C (102°F and 108°F). During the winter, the mean temperature falls to about 23°C (73°F) during the day, and lows reach near 8°C (47°F) at night. Average annual precipitation in the area is 12.32 cm (4.85 inches), most of which falls between December and March (WorldClimate.com 2020), although occasional summer thunderstorms in August and September provide additional rainfall.

Geology

The Coachella Valley forms the northern extent of the Salton Trough, a northwest–southeast-trending depression that reaches from the San Gorgonio Pass to the Gulf of California, located 280 km (174 miles) to the south. The valley has been heavily shaped by tectonic forces involving the interaction of the Pacific Plate and the North American Plate along the San Andreas Fault system (Harden 2004). The valley is a fault-bound depression, with the San Andreas Fault running along the northern margin of the valley. The Banning Fault, a subordinate fault to the San Andreas, runs east–west through the valley, between the San Andreas Fault and the San Jacinto Fault to the west. Folding in the earth's crust has blocked the flow of underground aquifers and has resulted in numerous springs and pools. These water sources were crucial resources for prehistoric groups (Wilke 1978). The Whitewater River was the other major source of water in the Coachella Valley. The river starts on the flanks of Mount San Gorgonio and enters the Coachella Valley through the Banning Pass. It runs along the southern edge of the valley, approximately 900 m (2,952.8 feet) north of the Project area.

The mountain ranges surrounding the Coachella Valley are uplifted blocks of continental crust. The Santa Rosa Mountains are located at the northern end of the Peninsular Ranges, a series of mountain ranges running from the Los Angeles Basin southeast to the tip of the Baja Peninsula (Jahns 1954:3) that forms a natural border between the coastal areas to the west and the deserts to the east. The mountains are composed of plutonic intrusions that have been uplifted through tectonic activity. The highest point is San Jacinto Mountain, at 3,307 m (10,849 feet), which towers above the present-day city of Palm Springs. The Little San Bernardino Mountains are part of the Transverse Ranges, a series of east–west-trending mountains that are similar in composition to the Peninsular Ranges and include large masses of Mesozoic-era plutonic rocks. The summits of the Transverse Ranges exceed 3,500 m (11,483 feet) at San Gorgonio Peak (Bailey and Jahns 1954).

Much of the valley bottom is at or below sea level, with the deepest areas dipping to 80 m (263 feet) below mean sea level. The Project area is situated at an elevation of approximately 110 m (360 feet) above mean sea level. Both alluvial and aeolian sediments are present within the valley. Geologic mapping of Quaternary sediments in the area by Lundstrom et al. (2001) indicated that alluvial-fan surfaces of probable late Holocene age are extensive and show very weak, nonoxidized soils. Recent aeolian sand is also common in the area and is mapped as dunes and sand ramps forming mantles on slopes in the valley (Lundstrom et al. 2001).

The hot and dry climate of the Coachella Valley would normally place significant restrictions on human activities. However, the valley has been repeatedly inundated in the past, as a result of flooding brought on by changes in the course of the Colorado River. Over many episodes, the river left its banks and flooded the Salton Trough, resulting in the creation of ancient Lake Cahuilla, also referred to as Blake's Sea or Lake LeConte (Wilke 1978). At its maximum, the lake reached 184 km (114.3 miles) long, 54 km (33.6 miles) wide, and 96 m (59.7 miles) in depth, and it inundated a considerable portion of the valley. When the Colorado River resumed its normal course, the lake would begin to dry. Recent studies have suggested that it would have taken approximately 56 years for the lake to be completely dry after having reached the high-water mark (Laylander 1997).

Between 800 and 300 years before present (B.P.), there were at least three documented cycles of flooding and desiccation, but it is not clear if the lake during that time was primarily full with only minor drying episodes, mostly empty and only occasionally inundated, or somewhere in between (Laylander 1997; Waters 1983; Wilke 1978; see also Schaefer and Laylander 2007). The most-recent stand of Lake Cahuilla may have been brief, occurring between 700 and 500 B.P.

Much of the prehistoric occupation of the Coachella Valley appears to be correlated with the presence of Lake Cahuilla. The earliest known sites in the valley date to the Late Archaic period, roughly 4000–1500 B.P. (Love and Dahdul 2002). Most of these sites are located at or near the ancient lakeshore, as are several sites dating to the Late Prehistoric period (Sutton and Wilke 1988; Wilke 1978). The Project area is located along of the maximum shoreline of Lake Cahuilla.

Plant Communities

The Coachella Valley is part of the Sonoran Life Zone and is characterized by the Creosote Bush Scrub plant community (Hall and Grinnell 1919; Munz 1974; Schoenherr 1992). This life zone is characterized by the presence of creosote bush (*Larrea tridentata*), mesquite (*Prosopis glandulosa*), brittlebush (*Encelia farinosa*), cholla and pricklypear cacti (*Opuntia* spp.), chuparosa (*Beloperone californica*), desert lavender (*Hyptis emoryi*), sage (*Salvia* spp.), and various grasses. California fan palm (*Washingtonia filifera*), the only species of palm native to California, is also present in oases surrounding the valley. Desert oases also provide habitat for a number of other species, including screwbean mesquite (*Prosopis pubescens*) and Fremont cottonwood (*Populus fremontii*). Many of the plants known to the historical-period Cahuilla, the cultural group that occupied the Coachella Valley at the time of European contact, were medicinal or therapeutic in nature (for a detailed discussion, see Bean and Saubel [1972]).

Animal Communities

A number of desert animals inhabit the greater Coachella Valley. They include mammals such as bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*). During prehistoric times, and up to the early twentieth century, pronghorn (*Antilocapra americana*) were common in the Coachella Valley, but they have since been pushed out by modern development (Jaeger 1965). Besides representing sources of food, many of the animals were important components of Cahuilla rituals, and their bones have been found in ritual contexts at sites in Tahquitz Canyon (see Bean et al. 1995).

Cultural Setting

The following section describes the general chronological sequence of cultural development in the Colorado Desert as it is currently understood.

Prehistoric Background

The prehistory of the Colorado Desert, including the northern Coachella Valley, is poorly understood, although a number of recent studies have greatly improved our knowledge. Treatments of the region include the classic work of Rogers (1945, 1966) and the more-recent works of Schaefer (1994), Love and Dahdul (2002), and Schaefer and Laylander (2007). Schaefer (1994) defined three principal prehistoric periods: the Paleoindian, Archaic, and Late Prehistoric periods (see also Love and Dahdul 2002); that sequence is generally followed below.

The Paleoindian Period (12,000–8000 B.P.)

Paleoindian period groups, probably with Clovis complex technology, occupied much of California beginning about 12,000 years ago. However, there is very little evidence of Paleoindian period occupation of the northern Coachella Valley. The reasons for this are unclear but may be related to a lack of habitat for the large game hunted by Clovis people.

Across much of western North America, the Clovis complex developed into the Western Stemmed Point tradition or Western Pluvial Lakes tradition after 10,000 B.P. (Bedwell 1973), probably in response to the warming and drying climate of the early Holocene. This tradition is characterized by crescents and large stemmed, shouldered, and lanceolate points (Willig and Aikens 1988:3). This cultural assemblage is commonly called San Dieguito in southern California and had an economy presumably based on the exploitation of marsh plants, fish, freshwater shellfish, and large and small game (Rogers 1966). Rogers had originally defined three distinct phases associated with the San Dieguito cultures, but further excavations at the sites where he worked have failed to find evidence of these distinctions (Vaughan 1982; Warren 1967:171).

There is little evidence of a San Dieguito presence in the northern Coachella Valley, probably just a few "small, mobile bands exploiting small and large game and collecting seasonally available wild plants" (Schaefer 1994:63; see also Schaefer and Laylander 2007). The reasons for this are unclear, but the lack of an early occupation may indicate that Lake Cahuilla was not inundated during that time.

The Archaic Period (8000–1500 B.P.)

Beginning about 8,000 years ago, the climate became hotter and drier, and it appears that the northern Coachella Valley was basically abandoned during that time (Schaefer 1994:64). At best, the record suggests only a minor occupation by relatively few people. When the climate began to cool, after about 4,000 years ago, during the Late Archaic period, it appears that the Colorado Desert was reoccupied (Love and Dahdul 2002; Schaefer 1994:64), and several archaeological sites in the northern Coachella Valley are dated to this time. It appears that, as with later occupations, much of the occupation centered on the shores of Lake Cahuilla. However, very little is known about overall Late Archaic period adaptations or social structure.

One of the best-documented Late Archaic period sites in the Colorado Desert is the Indian Hill Rockshelter near Anza-Borrego State Park (McDonald 1992; Wilke et al. 1986), located approximately 70.8 km (44.0 miles) south-southwest of the Project area. Excavators found a number of rock-lined storage pits as well as hearths and Elko Eared projectile points. Radiocarbon dates from these levels indicated that they were occupied approximately 4,000 years ago. McDonald (1992) postulated that this was a base camp for

hunter-gatherers who likely roamed over a large area in search of food. A rockshelter from Tahquitz Canyon also contained rock-lined pits and similar artifacts, but no radiocarbon dates were taken at the site; so, its true age is unclear (Schaefer 2002). Taken together, these sites suggest that people lived in highly mobile bands and took advantage of a variety of resources in the area.

Excavations at two sites near Desert Hot Springs located 37.2 km northwest of the Project area (CA-RIV-1827 and CA-RIV-2642) encountered deposits dating to the transition from the Late Archaic period to the Late Prehistoric period, approximately 1200–1000 B.P. (Dahdul et al. 2008; Drover 1982, 1988; Hogan et al. 2010). These sites contained evidence of habitation, including hearth features; activity surfaces and a variety of artifact types, such as flaked stone debitage; faunal remains; and possible human remains. These sites are located adjacent to the ethnohistorically known Seven Palms Rancheria (CA-RIV-154), and it is likely that these sites represent an early occupation of the village.

The Late Prehistoric Period (1500–200 B.P.)

Beginning about 1500 B.P., Yuman (or Patayan) agricultural groups along the Colorado River area began to influence Colorado Desert groups, particularly in the Coachella Valley. This Patayan pattern included a preceramic phase (Rogers 1945:170; Warren 1984; Waters 1982a, 1982b) and three ceramic phases, Patayan I (ca. 1500–1000 B.P.), II (ca. 1000–500 B.P.), and III (after ca. 500 B.P.). After about 1000 B.P. (Patayan II), a number of cultural traits, including new ceramic types, small triangular points, and cremations, moved west from the Colorado River, either through diffusion or perhaps carried by some migrating Yuman people. Whichever the case, long-distance trade networks were established between the Coachella Valley and Colorado River.

Agricultural crops were also probably introduced into the area during this time. Along the Colorado River, domesticated crops constituted up to half of the diet of Yumans (Castetter and Bell 1951). Ethnographically (see below), the Cahuilla were known to have large, walk-in wells that could have been used in pot irrigation (Bean and Mason 1962), although small check dams and other simple irrigation technologies likely also were used (Wilke and Lawton 1975:28).

The Late Prehistoric period groups that occupied the Coachella Valley were the direct ancestors of the ethnographic Cahuilla. This period represents a significant increase in human occupation of the valley, and several large archaeological sites from the period have been identified (see Bean et al. 1995; Schaefer 1994; Sutton and Wilke 1988; Wilke 1978).

Ethnographic Background

The aboriginal group that occupied the northern Coachella Valley during the historical period was the Desert Cahuilla, who, along with the Mountain and Pass Cahuilla, constituted the ethnographic Cahuilla. The Cahuilla spoke a language of the Takic branch of Northern Uto-Aztecan (see Goddard 1996:Table 3), and the Desert Cahuilla spoke a distinct dialect of Cahuilla. Descriptions of Cahuilla culture have been presented by Barrows (1900), Hooper (1920), Curtis (1926), Strong (1929), and Bean (1972, 1978). There have been few archaeological studies of the historical-period Cahuilla, but testing at the former Mission Creek Indian Reservation, approximately 36.2 km (22.5 miles) northwest of the Project area, identified occupations stretching from the Late Prehistoric period into the early twentieth century (Altschul 1986). Similarly, excavations at Tahquitz Canyon (Bean et al. 1995), 32.9 km (20.4 miles) northwest of the Project area, found a large village complex dating to between A.D. 1600 and 1870.

Villages were located in areas with access to a number of resources, either at springs or where wells could be easily dug. As a result, most villages relied on hand-excavated walk-in wells for water. These wells were dug to a depth of about 6 m (20 feet), to reach the water table. Villages were loose clusters of houses spread over an area up to 1 km (0.6 miles) across. Some of the houses were large (e.g., 6 m [20 feet] in length), whereas others were smaller, and at least one large ceremonial structure was present in each

village (Bean 1972:72). Once established, villages were considered permanent (Bean 1972:74) and were occupied by lineages. Villages were connected to each other by a complex system of trails.

The Cahuilla were organized into moieties, tribelets (i.e., clans), and then lineages. The two moieties were the *túktem* (Wildcats) and *'istam* (Coyotes; Bean 1978; Garcia et al. 2011). The lineages were land-holding groups, and each occupied its own village. The adjacent lineage, with its own village, would generally belong to the other moiety. This arrangement served to ensure access to different habitats. Each village was economically independent.

The Desert Cahuilla exploited a large number of plant species (Barrows 1900; Bean and Saubel 1972); mesquite (*Prosopis* spp.) on the valley floor was the primary staple. Other important resources, such as agave (*Agave deserti*), pinyon (*Pinus* spp.), and acorns (*Quercus* spp.), were obtained in the mountains to the west. More than 150 species of plants were used for food, fibers, medicines, manufactures, and dyes. The Cahuilla exploited a variety of animals from mountain habitats, including deer (*Odocoileus* sp.), mountain sheep (*Ovis canadensis*), pronghorn, and smaller animals, such as rabbits and rodents, from desert habitats.

The Desert Cahuilla also grew a few agricultural crops, namely corn, beans, and squash, that were probably obtained from native peoples along the Colorado River to the east. Crops were irrigated from springs (Wilke and Lawton 1975); with the arrival of Europeans, wheat, melons, barley, and fruit trees were added (Bean and Mason 1962; Lawton and Bean 1968). By the late eighteenth century, the Cahuilla had adopted ranching as an important industry and also worked as wage laborers on the railroads and at farms and ranches.

After the smallpox and measles epidemic of 1863, the Cahuilla population, originally perhaps as many as 3,000 people, declined rapidly. In addition, the emigration of young people seeking work in the metropolitan areas of southern California resulted in many Cahuilla moving away from their traditional areas (Harvey 1967). In 1974, approximately 900 people claimed Cahuilla descent, most of whom lived on one of the many Cahuilla reservations in inland southern California (Garcia et al. 2011:21).

The Agua Caliente Indian Reservation, located in the city of Palm Springs, was founded in 1876 by an Executive Order of President Ulysses S. Grant and was expanded in 1877 and 1907. The reservation covers roughly 31,420 acres (12,715.2 ha) and consists of all even-numbered sections and all unsurveyed portions of Township 4 South, Ranges 4 and 5 East, and Township 5 South, Range 4 East, on the San Bernardino Meridian, with the exception of sections already given out by the government (Garcia et al. 2011:21). The odd-numbered sections had already been given to railroads as an incentive to develop cross-country rail lines, and so, the reservation appears as a checkerboard pattern on maps. In 1891, Congress passed the Mission Indian Relief Act, which authorized allotments of reservation land to be given to individuals. The allotment elections were finally approved by the secretary of the interior as part of the Equalization Act in 1959 (Public Law 86-339), which finalized the individual allotments and set aside certain lands for tribal use and cemeteries. The Agua Caliente Tribe has a land-exchange agreement with the U.S. Department of the Interior (USDI) Bureau of Land Management (BLM) and is actively acquiring other non-reservation land.

Historical-Period Background

The extreme aridity of the Colorado Desert acted as a deterrent to many early explorers. The earliest recorded European visit to the Coachella Valley was in the winter of 1823–1824 by José Romero, the leader of an expedition attempting to reach the Colorado River by a new route (Bean and Mason 1962). Until the mid-nineteenth century, however, most nonnative forays into the area were confined to the established prehistoric trail systems. A number of those trails passed through the western Coachella Valley, including the important Cocomaricopa Trail, which connected Arizona with the cultures along the southern California coast (Bean and Vane 1995).

In 1853, William P. Blake described the Coachella Valley during the Pacific Railroad Survey expedition (Blake 1857). Blake recorded the general environment, noted the locations of Indian villages, described native agriculture in the valley, and recorded some oral traditions of the Indians concerning life around ancient Lake Cahuilla. In 1855 and 1856, the U.S. Land Office Survey surveyed the valley and divided it into townships and sections (Wilke and Lawton 1975).

The European settlement of the valley intensified after the completion of the Southern Pacific Railroad in 1877 (Heath 1945). Entire business areas were built along newly constructed railroad lines. For example, Whitewater, located west of Indio, was one of the many stops along the Southern Pacific Railroad that never grew beyond merely serving as a station. The Whitewater stop served as a stopping point for the railroad for many years because of the presence of the Smith family ranch, but no true townsite was ever begun at Whitewater, apparently because of the extreme winds and sand that afflicted the area (Lerch 2004:272). In the 1880s, the Homestead Act and the Desert Land Act opened much of the public land in the area to private development. Farming was the primary economic activity in the valley, supported by a variety of wells that accessed sizable underground water resources. Prior to the installation of a canal system, the lack of runoff and an increase in land development made well-pumping a necessity (Stene 2009:16–17). So, in 1938, construction began for the 123-mile (197.9 km) Coachella Canal. This canal would supply additional water from the Colorado River to the valley for crop irrigation and aid in flood control. The Coachella Canal, completed in 1949, extends northwest from the All-American Canal and through the southeastern corner of the Project area at the corner of Madison Street and 40th Avenue. A lateral system was constructed from 1949 to 1954. By the 1960s, the Coachella Valley County Water District realized the limitations of the Coachella Canal. Rehabilitation of the canal resulted in the installation of a supervisory remote control and telemetering system to operate the canal and distribution system, construction of a regulating reservoir (Lake Cahuilla), construction of two flood control dikes, installation of travelling demossing screens, installation of a new check gate, and rehabilitated an existing check gate (Stene 2009:27–28). The portion of the Coachella Canal within the Project area was covered during the widening of Madison Avenue after 2006 and is no longer visible in the Project area.

Much of the area around the town of Indio, is still an important agricultural center. Vegetables, cotton, citrus, and, particularly, dates were, and still are, important cash crops. In 1904, the U.S. Department of Agriculture (USDA) began an experimental date farm (U.S. Date Garden) near the town of Mecca, but this farm was moved to nearby Indio in 1907 because rising water levels from the newly formed Salton Sea threatened to flood the farm (Nixon 1962:1). The U.S. Date and Citrus Station, as it became known after moving to Indio, played an important role in the development of the date industry in the United States. Construction of the Coachella Canal and its distribution system has allowed the Coachella Valley to remain a productive agricultural location since its completion.

The development of the federal and state highway systems in the early twentieth century opened the valley to further development. U.S. Highway 99 (U.S. 99) was completed through the area in 1926, followed by State Route (SR) 111 in 1934. SR 111, south of the Project area, generally followed the alignment of the Bradshaw Stage Road, established in the 1860s, which connected the region with Arizona to the east. That section of U.S. 99 from Indio westward to Beaumont coincided with U.S. 60/70, a component of the transcontinental highway system, and was designated as U.S. 60/70/99. The modern interstate highway system, initiated in 1956 with the authorization of the Federal-Aid Highway Act (also known as the National Interstate and Defense Highways Act), unified the nation's transportation system at the same time it reduced the number of two-lane, transcontinental highways. Interstate 10 (I-10), the fourth longest interstate route in the United States, extends from Los Angeles, California, to Jacksonville, Florida. I-10 in California was completed in 1964, and U.S. 60/70/99 near the Project area was decommissioned in 1972. Portions of the decommissioned highway were subsumed by the interstate alignment, and certain segments, notably Varner Road, are still in use (California Department of Transportation [Caltrans] 2014a:96–99; California Highways 2015a, 2015b, 2015c).

By the late 1920s, the Coachella Valley had become a popular vacation spot for the well-to-do in the Los Angeles Basin. Due to its proximity to the entertainment industry in Los Angeles, nearby Palm Springs became a convenient retreat for motion picture celebrities and the moneyed elite from the East Coast and Midwest. During the late twentieth century, development in the Coachella Valley expanded rapidly; scores of country clubs and housing developments appeared along SR 111 and I-10. The southern and eastern sides of the Project area are surrounded by such developments. The advent of Native American gaming initiatives has also driven economic development in the valley. At least three casino resorts are present in the valley; several others are located nearby.

CHAPTER 3

Cultural Resource Records Search

A cultural resource records-search update was conducted by SRI for the Project area at the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC), Department of Anthropology, University of California, Riverside (UCR). This records search looked at all reports from previous archaeological surveys executed within a 1-mile (1.6-km) radius of the Project area, as well as all previously recorded historical-period and prehistoric cultural resources recorded within the same 1-mile radius.

In addition to the research conducted at the CHRIS EIC, archival studies were conducted via/at other libraries, research institutions, and government agencies. The data gathered from these repositories provided valuable information on both prehistoric and historical-period resources within the Project area. Historical maps were consulted for information regarding specific historical-period land use in and around the Project area. Resources consulted included historical USGS topographic maps, BLM/U.S. General Land Office (GLO) records, and Sanborn Fire Insurance (Sanborn) maps.

Records-Search Results

The records search indicated that five previously conducted projects included work in portions of the Project area (Figure 3.1; Table 3.1). Together, these studies included approximately 7 percent of the current Project area. Another 75 reports related to land within the 1-mile (1.6-km) records-search buffer.

In total, 36 cultural resources were identified within the records-search area: 33 archaeological sites (24 prehistoric and 9 historical period) and 3 isolated prehistoric resources (Figure 3.2; Table 3.2). The recorded prehistoric resources largely consist of artifact scatters or habitation areas; 2 prehistoric sites also include elements of a trail segment, 1 with a rock alignment and the other with a lithic scatter. At least 2 of the prehistoric sites (CA-RIV-6896 and CA-RIV-12669) contained human cremations, and 1 site (CA-RIV-5492) contains burned-bone loci.

Of the 36 cultural resources, only 1 had been previously recorded within the Project area. This site (P-33-017111/CA-RIV-8908) consists of an artifact scatter composed of potsherds, debitage, and fire-affected clay fragments. It was recorded by CRM TECH in 2008 and was described as "located east of an agricultural field, on an elevated crescent shape dune" and measuring 18 by 7 m in size (Tang et al. 2008a). Furthermore, the site record indicated that the site had been heavily disturbed, possibly from the construction of the Coachella Canal.

Additionally, a very important habitation site (P-33-001766/CA-RIV-1766) is located south of the Project area, in the Myoma Dunes. This site consists of hearths, burned house remains, human-coprolite deposits, isolated cremations, and large concentrations of artifacts and animal bone (Wilke 1980). Subjected to several surveys by Wilke starting in 1971 and excavated in 1983 by the UCR Archaeological Research Unit, this site was found to be exceedingly important to paleoecological research, primarily because the human coprolites at the site were well preserved and were the only ones found in open context anywhere in the New World north of Peru (Wilke 1983).

The previously recorded historical-period sites are two refuse scatters, a segment of the Union Pacific Railroad/Southern Pacific Railroad, a segment of the Hayfield-Chino 220-kV transmission line, a utility pole, an unpaved road segment, the Coachella Canal, the East Side Dike, and a pipeline segment. All three isolated resources consist of ceramic fragments.

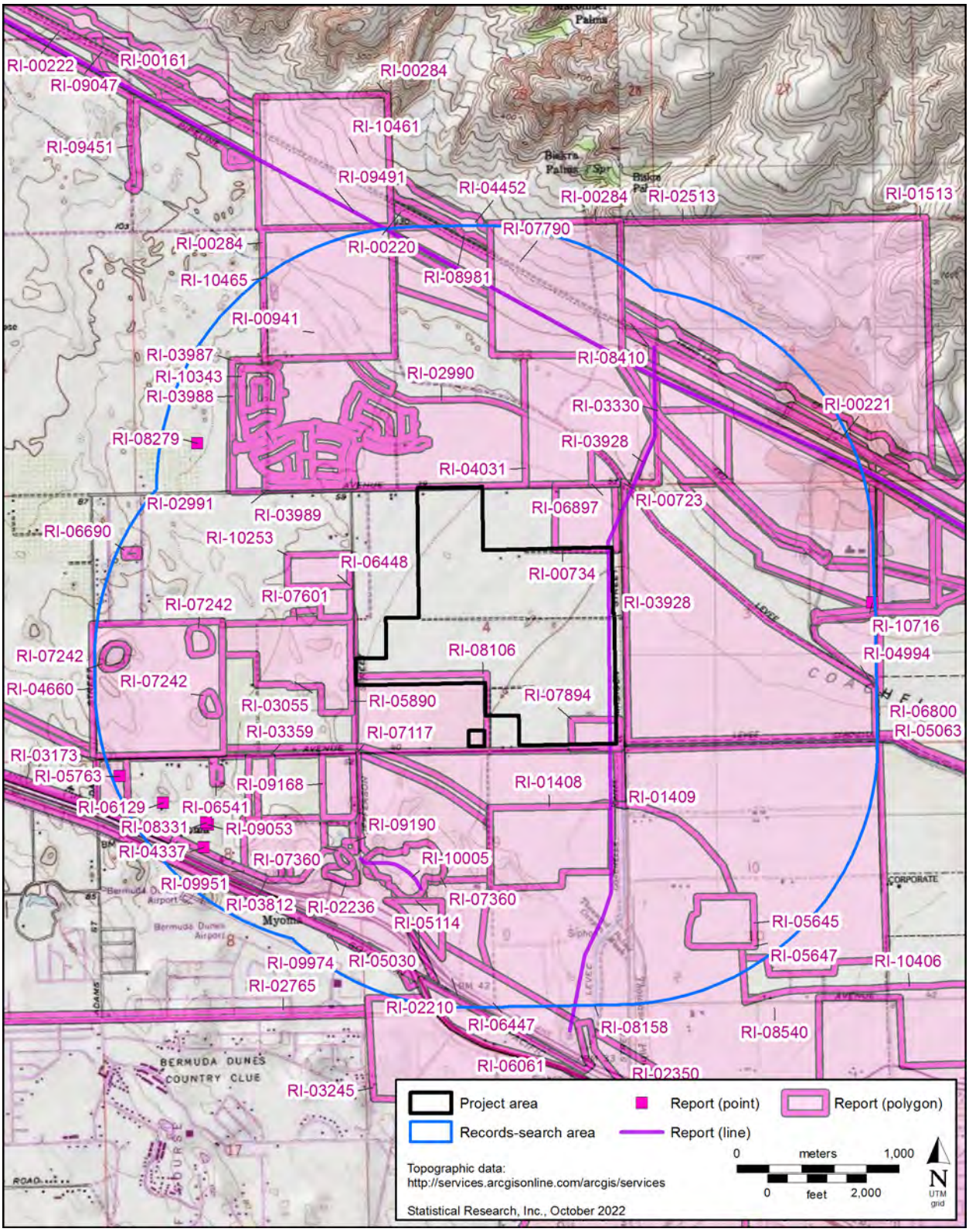

Figure 3.1. Map showing the locations of selected previous cultural resource studies conducted within the Project area.

Table 3.1. Previously Conducted Cultural Resource Studies Project Area

Report No(s).	Report Author(s)	Report Year	Report Type	Project Location
RI-00161	Roberta S. Greenwood	1975	evaluation and literature search	records-search area
RI-00220	Richard A. Cowan and Kurt Wallof	1977	survey	records-search area
RI-00221	Richard L. Carrico, Dennis K. Quillen, and Dennis Gallegos	1982	survey	records-search area
RI-00222	Kurt Wallof and Richard A. Cowan	1977	survey	records-search area
RI-00284	Richard A. Weaver	1977	survey	records-search area
RI-00723	James D. Swenson	1979	survey	records-search area
RI-00734	James D. Swenson	1979	survey	Project area
RI-00941	James D. Swenson	1980	survey	records-search area
RI-01408	Philip J. Wilke	1983	data recovery	records-search area
RI-01409	Larry L. Bowles and Jean Salpas	1980	survey	records-search area
RI-01513	Bruce Love, Adrian Sanchez Moreno, and Michael Hogan	2000	survey	records-search area
RI-02210	J. Underwood, J. Cleland, C. M. Wood, and R. Apple	1986	survey	records-search area
RI-02236	Barry Neiditch	1988	survey	records-search area
RI-02350	Rebecca McCorkle Apple and Jan E. Wooley	1988	survey	records-search area
RI-02513	Victor De Munck	1989	survey	records-search area
RI-02765	Brooke Arkush	1990	survey	records-search area
RI-02990	Bruce Love	1990	survey	records-search area
RI-02991	Bruce Love, Bai “Tom” Tang, Daniel Ballester, Kathryn Bouscaren, and Adrian Sanchez Moreno	2000	survey	records-search area
RI-03055	Karen Swope and Kevin Hallaran	1990	survey	records-search area
RI-03173	Dicken Everson and Kevin Hallaran	1991	survey	records-search area
RI-03245	David M. Van Horn, Laurie S. White, and Robert S. White	1990	sensitivity model	records-search area
RI-03330	Martin Rosen	1989	survey	records-search area
RI-03359	Jean A. Keller	1991	survey	records-search area
RI-03812	M. C. Hall	1994	survey	records-search area
RI-03928	G. Edward Collins and Jay Von Werlhof	1996	survey	Project area
RI-03987, RI-03989	J. Stephen Alexandrowicz	1996	survey	records-search area
RI-03988	Bruce Love and Bai “Tom” Tang	1996	survey	records-search area
RI-04031	Brian D. Dillon	1997	evaluation	records-search area
RI-04337	Curt Duke	1999	survey	records-search area
RI-04430	Jones and Stokes Associates, Inc.	2000	survey	records-search area
RI-04452	Bruce Love	1993	survey	records-search area
RI-04660	David M. Smith	1999	survey	records-search area
RI-04994	McKenna et al.	2004	survey	records-search area
RI-05030	McKenna et al.	2004	survey	records-search area

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Report No(s).	Report Author(s)	Report Year	Report Type	Project Location
RI-05063	McKenna et al.	2002	survey	records-search area
RI-05114	McKenna et al.	2003	evaluation	records-search area
RI-05645	Carol R. Demcak	2005	survey	records-search area
RI-05647	Carol R. Demcak	2005	testing	records-search area
RI-05763	Robert J. Wlodarski	2005	survey	records-search area
RI-05890	Bruce Love, Bai "Tom" Tang, Daniel Ballester, and Mariam Dahdul	2002	survey	records-search area
RI-06061	Jerry Schaefer and Sinead Ní Ghabhlaín	2003	evaluation	Project area
RI-06129	Christeen Taniguchi	2004	survey	records-search area
RI-06259	Chambers Group, Inc.	2006	survey	records-search area
RI-06447	Bai "Tom" Tang, Michael Hogan, Matthew Wetherbee, and Daniel Ballester	2004	survey	records-search area
RI-06448	Bai "Tom" Tang, Michael Hogan, Matthew Wetherbee, and John J. Eddy	2004	survey	records-search area
RI-06541	Bai "Tom" Tang, Michael Hogan, Thomas Shackford, and Laura Hensley Shaker	2006	survey	records-search area
RI-06690	Deirdre Encarnacion and Daniel Ballester	2007	survey	records-search area
RI-06800	Rachael A. Nixon	2006	survey	records-search area
RI-06897	Jeanette A. McKenna	2006	survey	records-search area
RI-07117	Bai "Tom" Tang, Michael Hogan, Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	2007	survey	records-search area
RI-07201	Curt Duke	2003	survey	records-search area
RI-07242	Matthew Wetherbee and John D. Goodman II	2006	survey and evaluation	records-search area
RI-07360	Michael J. Moratto, Melinda C. Horne, Robert J. Lichtenstein, Dennis McDougall, Michael J. Mirro, and Marilyn J. Wyss	2007	evaluation	records-search area
RI-07601	Richard Green and Brian F. Smith	2006	testing	records-search area
RI-07673	Miriam Dahdul, Clarence Bodmer, and Daniel Ballester	2008	survey and testing	records-search area
RI-07790	Jerry Schaefer	2003	survey	records-search area
RI-07894	Bai "Tom" Tang, Clarence Bodmer, Lisa Hunt, and Laura Shaker	2008	survey	Project area
RI-08106	Kim Scott, Steve McCormick, and Sherri Gust	2004	evaluation	Project area
RI-08158	Jeanette McKenna	2004	survey	records-search area
RI-08279	Lorna Billat	2009	literature search	records-search area
RI-08331	Robert J. Wlodarski	2009	survey	records-search area
RI-08410	William T. Eckhardt, Kristen E. Walker, and Richard L. Carrico	2004	survey	records-search area
RI-08540	Bai "Tom" Tang and Michael Hogan	2010	survey and evaluation	records-search area
RI-08733	Michael J. Moratto, Dicken Everson, and Gabrielle Duff	2011	survey	records-search area
RI-08981	Matthew M. DeCarlo, Scott C. Justus, and William T. Eckhardt	2013	survey	records-search area

Report No(s).	Report Author(s)	Report Year	Report Type	Project Location
RI-09047	Patrick McGinnis, Rachel Droessler, and Stacie Wilson	2013	survey	records-search area
RI-09053	Wayne H. Bonner and Sarah A. Williams	2013	literature search	records-search area
RI-09168	Jeanette A. McKenna	2013	survey	records-search area
RI-09190	Heather R. Puckett	2013	evaluation	records-search area
RI-09451	Christine Ward and Scott H. Kremkau	2015	survey	records-search area
RI-09491	Christine Ward and Scott H. Kremkau	2015	survey	records-search area
RI-09951	Tracy A. Stropes and Brian F. Smith	2017	survey	records-search area
RI-09974	Michael J. Moratto and Dennis McDougall	2017	data recovery	records-search area
RI-10005	Robert J. Lichtenstein	2014	literature search	records-search area
RI-10253	Bai “Tom” Tang, Daniel Ballester, Nina Gallardo, and Sal Z. Boites	2018	survey	records-search area
RI-10343	Evan Mills, Kholood Abdo-Himtzman, and Joan George	2018	survey	records-search area
RI-10406	Michael Mirro	2012	sensitivity model	records-search area
RI-10461	William T. Eckhardt, Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach	2015	monitoring	records-search area
RI-10465	Andrew Myers and Wendy Blumel	2017	literature search	records-search area
RI-10716	Wayne H. Bonner and Arabesque Said	2010	evaluation and literature search	records-search area

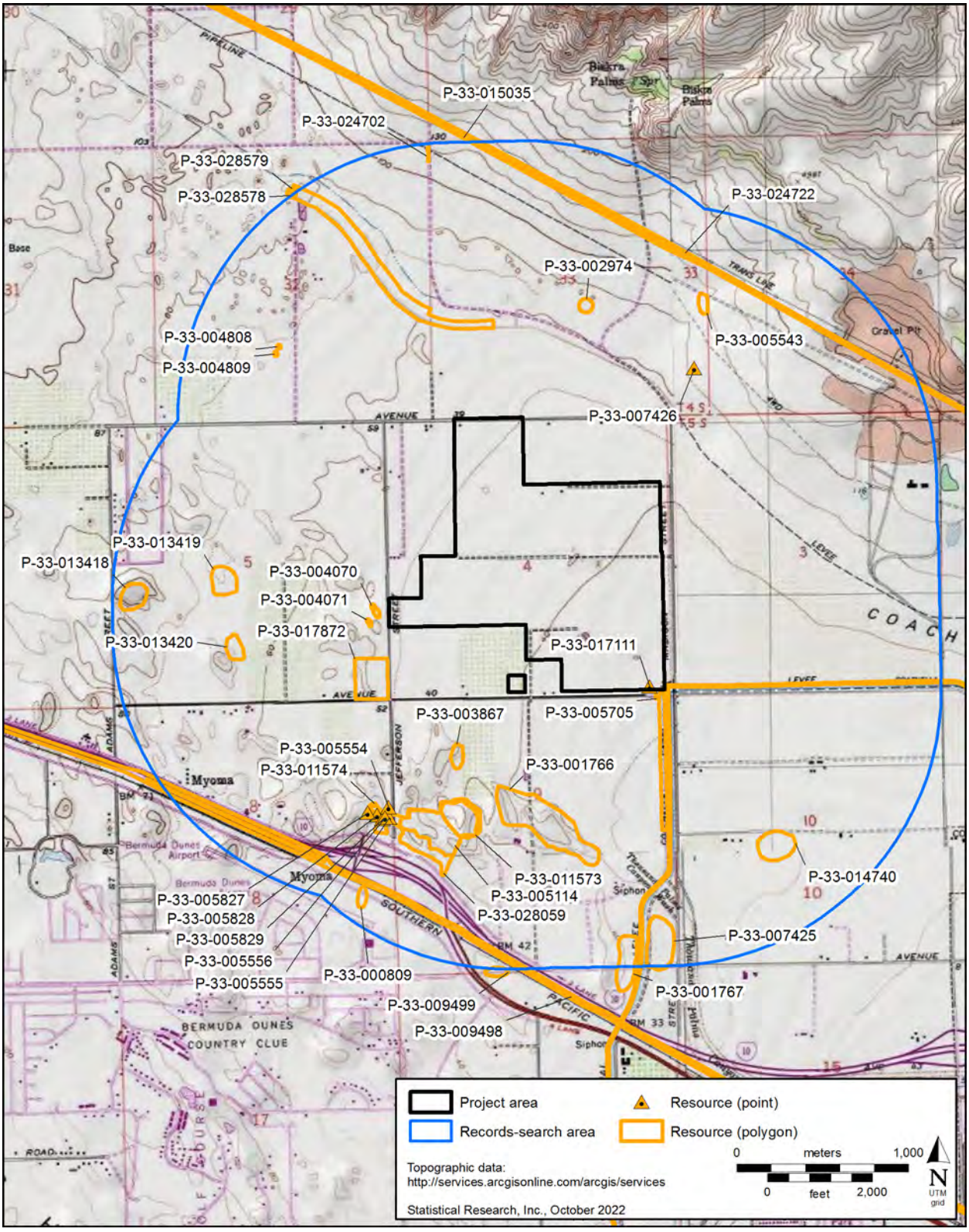

Figure 3.2. Map showing the locations of previously recorded cultural resources in the Project area.

Table 3.2. Previously Recorded Archaeological Sites within the Project Area

Primary No. (P-33-)	Trinomial (CA-)	Type	Age	Description	Location
000809	RIV-809	site	prehistoric	artifact scatter composed of shell, potsherds, and lithics	records-search area
001766	RIV-1766	site	prehistoric	habitation site with hearths, house remains, an artifact scatter, faunal bone, and coprolites	records-search area
001767	RIV-1767	site	prehistoric	habitation site with an artifact scatter and faunal bone	records-search area
002974	RIV-2974	site	prehistoric	artifact scatter composed of worked shell and bone, ground stone tools, and flaked stone tools	records-search area
003867	RIV-3867	site	prehistoric	artifact scatter composed of potsherds, lithic artifacts, fire-affected rock, and faunal bone	records-search area
004070	RIV-4070	site	prehistoric	artifact scatter composed of potsherds, lithic artifacts, and human remains	records-search area
004071	RIV-4071	site	prehistoric	ceramic scatter	records-search area
004808	RIV-4808H	site	historical period	refuse scatter	records-search area
004809	RIV-4809H	site	historical period	refuse scatter	records-search area
005114	RIV-6896	site	prehistoric	secondary deposition site with ceramics, lithics, and burnt bone	records-search area
005543	RIV-5492	site	prehistoric	serpentine rock alignment, rock assemblage, trail segment, lithic scatter, 2 reduction loci, and 2 burned-bone loci	records-search area
005554		isolate	prehistoric	single potsherd	records-search area
005555		isolate	prehistoric	single potsherd	records-search area
005556		isolate	prehistoric	single potsherd	records-search area
005705		built environment	historical period	Coachella Canal	records-search area
005827	RIV-5554	site	prehistoric	lithic scatter	records-search area
005828	RIV-5555	site	prehistoric	lithic scatter with an associated trail	records-search area
005829	RIV-5556	site	prehistoric	lithic scatter and a ceramic body sherd	records-search area
007425	RIV-5799	site	prehistoric	artifact scatter composed of ceramics, ground stone, fire-affected rock, shell, hearths, and 8 structural depressions	records-search area
007426	RIV-5800	site	prehistoric	ground-stone-tool scatter	records-search area
009498	RIV-6381H	site	historical period	Union Pacific Railroad/Southern Pacific Railroad	records-search area
009499	RIV-6382	site	prehistoric	ceramic scatter	records-search area
011573	RIV-6896	site	prehistoric	4 artifact-scatter loci and 2 human cremations	records-search area
011574	RIV-6897	site	prehistoric	artifact scatter of potsherds, bone fragments, fire-affected rock, and debitage	records-search area
013418	RIV-7458	site	prehistoric	ceramic scatter with fire-affected rock	records-search area
013419	RIV-7459	site	prehistoric	artifact scatter of flaked stone artifacts, potsherds, ground stone artifacts, and fire-affected rock	records-search area

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Primary No. (P-33-)	Trinomial (CA-)	Type	Age	Description	Location
013420	RIV-7460	site	prehistoric	artifact scatter of debitage and potsherds	records-search area
014740	RIV-7846	site	prehistoric	artifact scatter of flaked stone artifacts, potsherds, and ground stone artifacts	records-search area
015035	RIV-13001	site	historical period	Hayfield-Chino 220-kV transmission line	records-search area
017111	RIV-8908	site	prehistoric	artifact scatter composed of potsherds, debitage, and fire-affected-clay fragments	Project area
017872	RIV-9429	site	prehistoric	ceramic scatter with fire-affected rock	records-search area
024702	RIV-12229	site	historical period	unpaved road	records-search area
024722		built environment	historical period	pipeline segment	records-search area
028059	RIV-12669	site	prehistoric	44 cultural features, including hearths, activity areas or living floors, concentrations of faunal remains, 2 dense clusters of ceramics, and 2 human cremations, along with numerous flaked and ground stone artifacts, worked shell and bone, baked clay, potsherds, and faunal remains	records-search area
028578		built environment	historical period	East Side Dike (earthen detention dike)	records-search area
028579	RIV-12875	site	historical period	utility pole	records-search area

Previous Archaeological Research in the Project Area

The first documented archaeological work in the Project area occurred in 1979, when UCR Archaeological Research Unit Senior Staff Archaeologist James D. Swenson conducted a survey for the wastewater-treatment plant north of the Project area, in the northeastern quarter of Section 4 (Swenson 1979). Although most of that survey was conducted outside the Project area, a small sliver of the survey area overlapped with the northern boundary of the Project area. No prehistoric or historical-period archaeological resources were discovered as a result of the survey.

In 1996, G. Edward Collins and Jay von Werlhof from the Imperial Valley College Desert Museum conducted a survey for the Indio 230-kV Transmission Loop Alternate Route No. 1 (Collins and von Werlhof 1996). A segment of that survey extended north–south through the eastern portion of the Project area and paralleled Madison Street. Although six prehistoric sites were recorded or updated during the project, none of the resources was located within the Project area.

In 2003, ASM Affiliates, Inc., evaluated the Coachella Canal as part of a project associated with the Coachella Valley Water District's plan to line a 33.2-mile (53.4-km) segment of the canal with concrete as a water-conservation measure (Schaefer 2003). As a result of the project, the Coachella Canal was recommended eligible for listing in the National Register of Historic Places (NRHP) under Criterion a, for the role it played in the development of Coachella Valley agriculture, and Criterion c, as an example of irrigation construction in the 1930s and 1940s.

In 2008, CRM TECH conducted a survey of the southeastern portion of the Project area for the Madison Hills Plaza project (Tang et al. 2008a). It was during that project that CRM TECH identified CA-RIV-8908 within the Project area, noting that the dune on which CA-RIV-8908 was located had been previously disturbed, possibly from construction of the Coachella Canal or nearby roads or from agricultural activity (Tang et al. 2008a:13). No other cultural materials were discovered within the Project area during the survey.

The final previous study within the Project area was conducted in 2004 by Cogstone Resource Management, Inc. (Scott et al. 2004). That survey was conducted as part of an archaeological and paleontological study for the residential development of a 78.68-acre (31.8-ha) parcel of land south of the main portion of the Project area and included the 3-acre (1.2-ha) proposed substation location. No cultural or paleontological materials were discovered during the project.

Archival Research

No historical-period structures or other features are depicted in the Project area on the 1856 or 1914 GLO plat maps. However, a review of the land-patent information revealed that land within Section 4 was acquired by various private parties in the early twentieth century. During that time, the southeast quarter was acquired by Julian E. Bailey (in 1912), the southwest quarter was acquired by Vernon Coyner (in 1906), the northwest quarter was acquired by Augusta D. S. Faw (in 1911), and the northeast quarter was acquired by Richard White (in 1912).

SRI also examined historical-period aerial images and USGS topographic maps to help identify any possible historical-period structures within the Project area. Using that information, a possible historical-period structure was observed in the north-central portion of the Project area in aerial imagery from 1953 (Historic Aerials 1953a, 1953b). Also, on the 1958 Myoma, California, 7.5-minute USGS topographic map, four possible historical-period structures were observed within the main Project area, as well as an orchard or grove of trees south of the main Project area, where the 3-acre (1.2-ha) proposed substation parcel is located (USGS 1958; Figure 3.3). These structures and the orchard/grove are likewise visible on the 1967 Myoma, California, 7.5-minute USGS topographic map (USGS 1967; Figure 3.4). An additional four structures and a possible retention basin or pit were observed on the 1973 Myoma, California, 7.5-minute USGS topographic map (USGS 1973; Figure 3.5).

Finally, historical Sanborn maps were reviewed, but no maps of this type were available for the Project area.

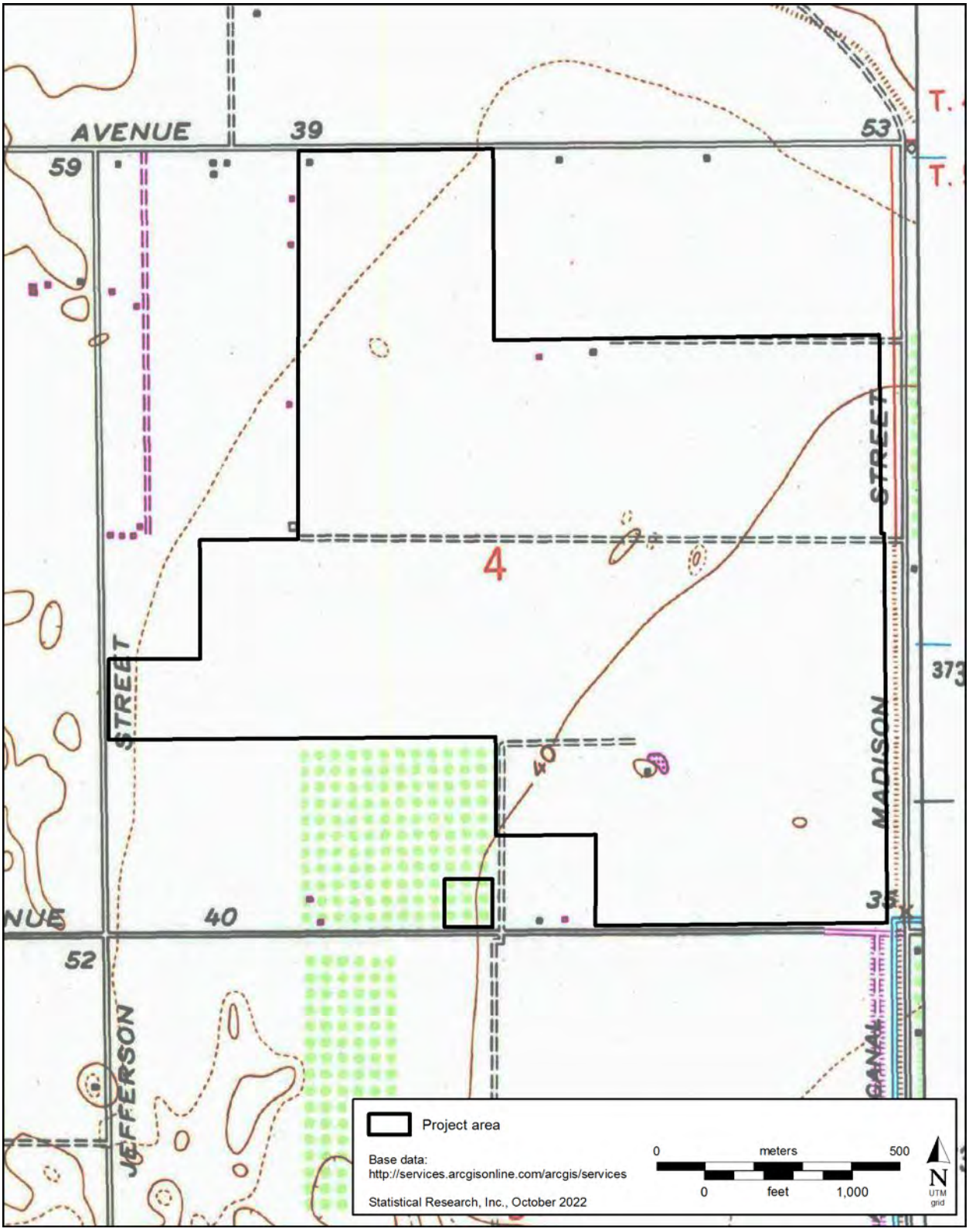

Figure 3.3. 1958 Myoma, California, USGS topographic map with the Project area indicated.

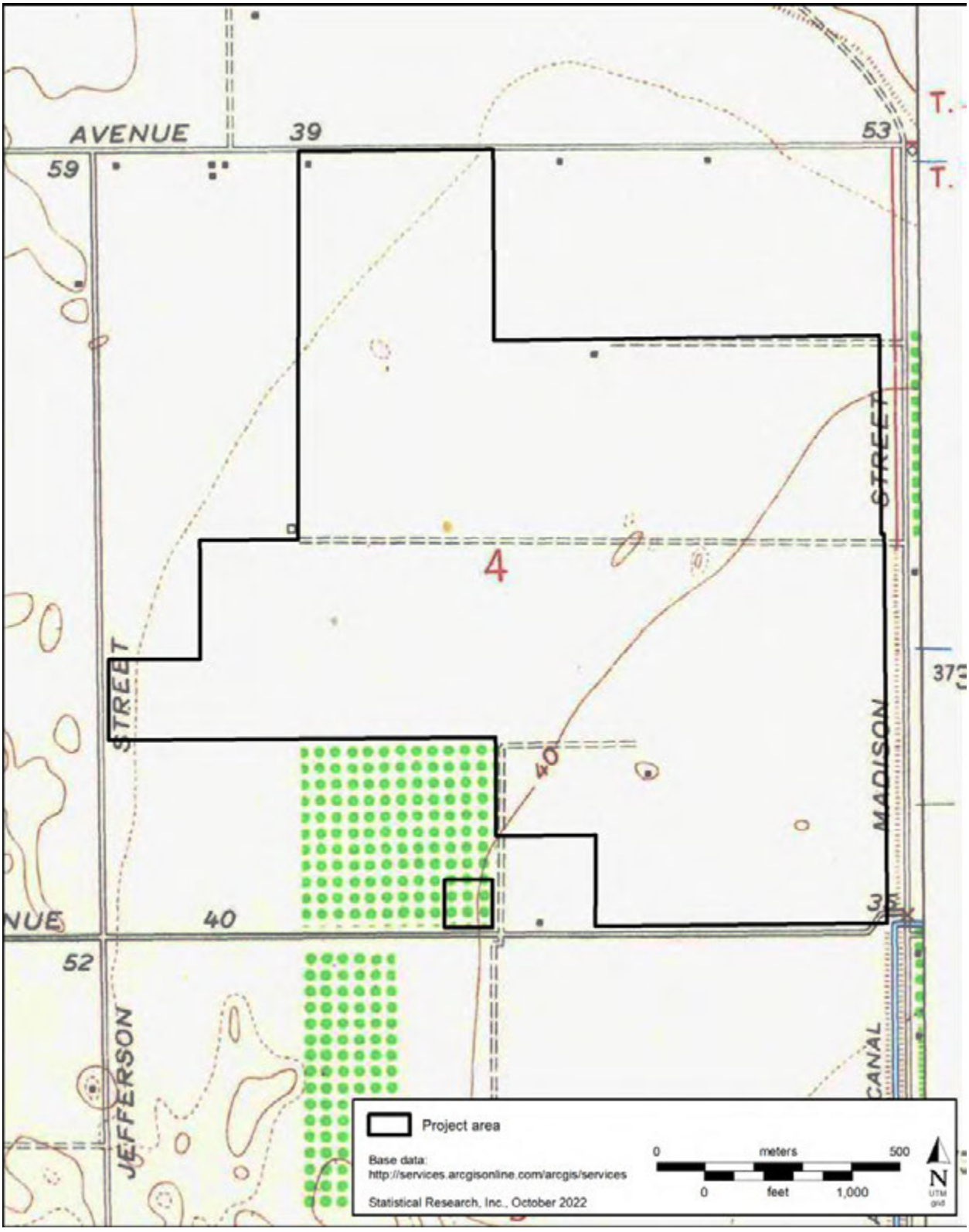

Figure 3.4. 1967 Myoma, California, USGS topographic map with the Project area indicated.

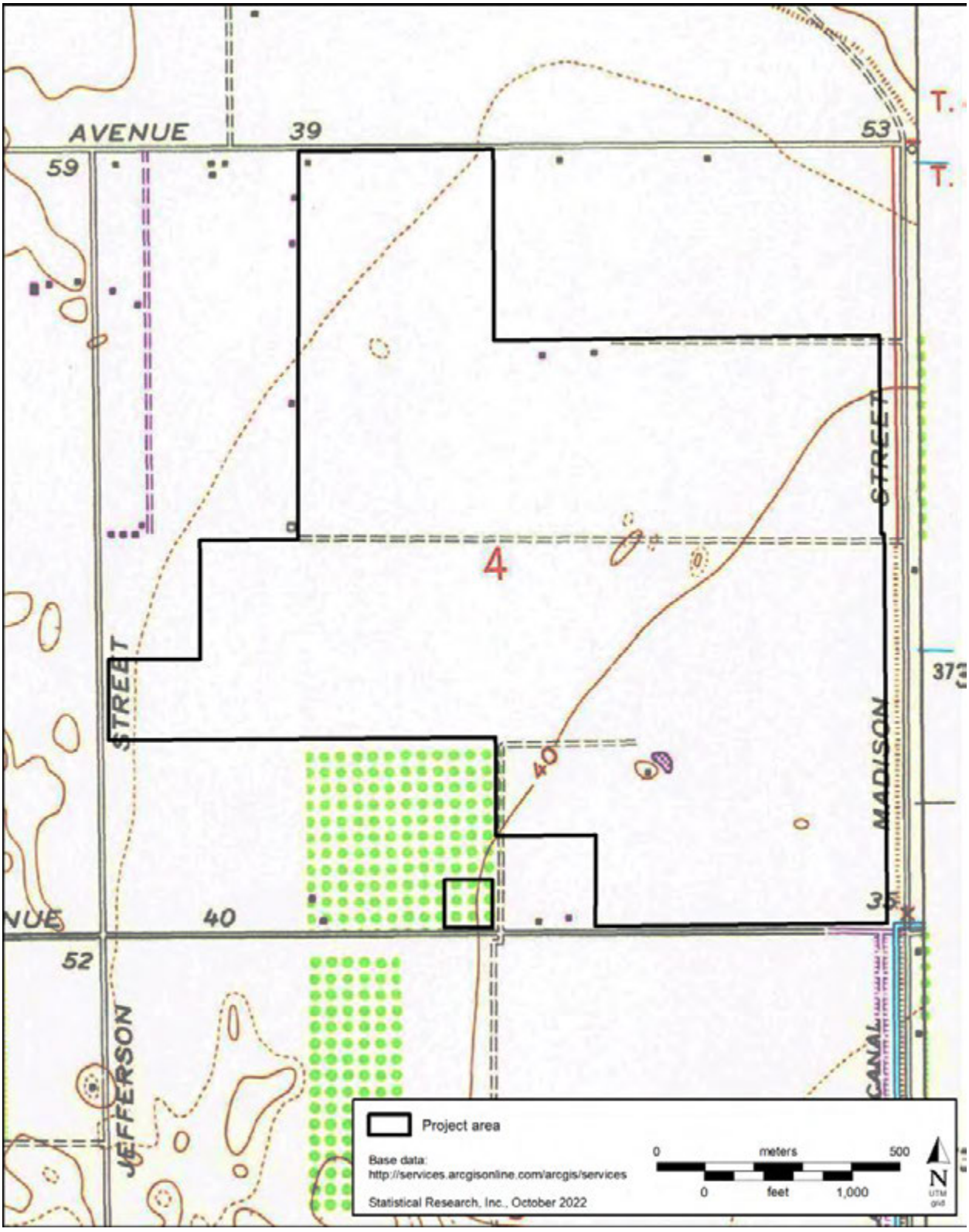

Figure 3.5. 1973 Myoma, California, USGS topographic map with the Project area indicated.

CHAPTER 4

Native American Outreach

Native American Heritage Commission Sacred Lands File Search

Part of the records search and literature review involved contacting the Native American Heritage Commission (NAHC) for a list of traditional-use areas or sacred sites within the Project area and a list of specific Native American groups or individuals who could provide additional information on cultural resources within the Project area. The NAHC Sacred Lands File search did not indicate the presence of Native American Traditional Cultural Places within the project area. However, the NAHC provided a list of 18 contacts from 12 Tribes who could provide additional information on cultural resources within the Project area (Appendix A).

Subsequently, SRI sent a letter to all 18 contacts, describing the proposed project and requesting any information that they could provide. SRI also attempted to contact, by phone and/or email, any individuals who did not respond to the letter. Documentation of the contact efforts are presented in Appendix B.

Agua Caliente Band of Cahuilla Indians

On April 29, 2022, SRI received a letter discussing the Project from Agua Caliente Band of Cahuilla Indians (ACBCI) Tribal Historic Preservation Office (THPO) Operations Manager Ms. Lacy Padilla. Ms. Padilla indicated that the ACBCI THPO requests the following:

- a copy of the records search with associated survey reports and site records from the information center;
- copies of any cultural resource documentation (report and site records) generated in connection with this Project;
- the presence of an approved ACBCI Native American Cultural Resource Monitor(s) during any ground-disturbing activities (including archaeological testing and surveys), with the ability to halt destructive construction activities should buried cultural deposits be encountered. In such a case, the monitor would notify a Qualified Archaeologist (per the Secretary of the Interior's Standards and Guidelines) to investigate the material and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Office and the ACBCI; and
- to contact our office for a meeting.

On June 1, 2022, Ms. Padilla contacted SRI via email to report that she met with Ms. Ann Brierty, THPO for the Morongo Band of Mission Indians, to discuss monitoring of the survey and testing components of the Project. Additionally, Ms. Padilla reached out to Director of Cultural Affairs for the Cabazon Band of Mission Indians Mr. Michael Mirelez, who had requested to be involved in the decision-making process for the project. Both the Morongo Band of Mission Indians and the ACBCI reaffirmed their request to have a monitor on-site to concurrently monitor the survey and testing efforts as well as further ground disturbance. On June 9, 2022, SRI reached out to Ms. Padilla to plan a pre-field meeting with SRI, the ACBCI, and Meridian Consultants; the meeting was planned for Thursday, June 16, 2022. During the meeting, SRI provided the ACBCI and the Morongo Band of Mission Indians with all the information relevant to the

upcoming field portion of the Project and planned to begin work immediately after contracts between the Tribes and Pulte Homes could be executed.

On August 4, 2022, SRI notified the ACBCI of the potential discovery of cremated human remains at a site during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Ms. Padilla and Director of the ACBCI THPO Ms. Patricia Garcia-Plotkin of an agreement between the project landowner, Mr. Bernard Debonne, and the Coachella Valley Water District (CVWD) to place a substantial amount of material from a nearby CVWD project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Ms. Garcia-Plotkin asked that the activity cease and desist until she could confer with the City, the developer, and the CVWD. A conference call among Pulte Homes, Meridian Consultants, SRI, and the ACBCI took place on August 12, 2022, during which the ACBCI was made aware of the specifics of the stockpile. On August 15, 2022, a meeting among Pulte Homes, SRI, the ACBCI, and Sukuts Construction was conducted within the Project area to discuss the placement of the stockpile. During the meeting, it was agreed that an ACBCI monitor would be present to observe the stockpile, given the sensitive nature of the original location of the sediment.

Augustine Band of Cahuilla Mission Indians

On May 6, 2022, SRI was notified by letter from Tribal Vice-Chairperson Ms. Victoria Martin that the Augustine Band of Cahuilla Indians are unaware of specific cultural resources that may be affected by the proposed Project but requested that they be notified should any discovery be made during development.

Cabazon Band of Mission Indians

On May 4, 2022, SRI reached out to the Cabazon Band of Mission Indians by phone and was directed to Cultural Resources Coordinator Mr. Michael Mirelez. Mr. Mirelez indicated that the email with the Project information that was sent did not reach him, because he is taking over for the previous coordinator, and the email did not appear to have successfully transferred to his email address. Mr. Mirelez was previously employed as cultural resource coordinator for the Torres-Martinez Desert Cahuilla Indians. A second email was submitted to Mr. Mirelez with a copy of the initial outreach letter on May 4, 2022.

On May 9, 2022, Mr. Mirelez indicated that he was in discussion with the ACBCI to determine the best course of action moving forward with the Project. On May 12, 2022, SRI received a follow-up phone call from Mr. Mirelez to discuss the upcoming Project. Mr. Mirelez indicated that the Cabazon Band of Mission Indians does not have staff for monitoring, but he wanted to make sure that a Tribal Monitor from the ACBCI or the Morongo Band of Mission Indians would be on-site to monitor the survey and ground disturbance. After assurances from SRI that we would work with these Tribes to ensure that a monitor was on-site, Mr. Mirelez also indicated that the Cabazon Band of Mission Indians would like to be informed of any discoveries and any time that activities are conducted on-site. Additionally, Mr. Mirelez would like to be present on the first day of fieldwork. Following the phone call, Mr. Mirelez sent an email to SRI summarizing the phone call.

On August 4, 2022, SRI notified Mr. Mirelez of the potential discovery of cremated human remains at a site discovered during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Mr. Mirelez of an agreement between the project landowner, Mr. Bernard Debonne, and the CVWD to place a substantial amount of material from a nearby CVWD

project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Mr. Mirelez was kept apprised of the situation and was updated following the August 15, 2022, meeting among the ACBCI, Pulte Homes, and Sukuts Construction (see Agua Caliente Band of Cahuilla Indians, above).

Cahuilla Band of Indians

SRI attempted to notify Chairperson for the Cahuilla Band of Indians Mr. Daniel Salgado by letter, email, and telephone. Although the letter was received on April 6, 2022, SRI received no response. SRI then attempted to contact Mr. Salgado by email on April 11, 2022, and by phone on May 4, 2022, but was unable to reach Mr. Salgado through either means.

Los Coyotes Band of Cahuilla and Cupeño Indians

SRI attempted to notify Chairperson for the Los Coyotes Band of Cahuilla and Cupeño Indians Mr. Raymond Chapparosa by letter and telephone. Although the letter was received on April 6, 2022, SRI received no response. On May 4, 2022, SRI attempted to reach Mr. Chapparosa by telephone but was unable to reach him. No email address was provided by the NAHC.

Morongo Band of Mission Indians

On May 11, 2022, SRI received a letter from Morongo Band of Mission Indians THPO Ms. Ann Brierty regarding the project. The letter requested the following:

- a records search to be conducted at the appropriate CHRIS center with at least a 1.0-mile search radius from the Project boundary, with copies of the cultural resource documentation (reports and site records) generated through that search given to the Tribe so that these may be compared against the ACBCI records in order to begin productive consultation;
- Tribal participation during the pedestrian survey and testing, with a copy of the current Phase I study or other cultural assessments (including the cultural resource inventory) furnished to the Morongo Band of Mission Indians;
- shape files of the project area;
- a geotechnical report; and
- the currently proposed Project design and mass grading maps.

Because both the Morongo Band of Mission Indians and the ACBCI had expressed interest in monitoring, on May 16, 2022, SRI reached out to Ms. Brierty to inquire as to whether both Tribes could come to an agreement and decide who would be providing monitors. Ms. Brierty requested additional information (shape files, records-search information, maps, etc.) to get a better understanding of the Project. On May 31, 2022, Ms. Brierty contacted SRI via email to report that she had met with ACBCI THPO Operations Manager Ms. Lacey Padilla to discuss monitoring. Both the Morongo Band of Mission Indians and the ACBCI requested to have monitors on-site to concurrently monitor the survey and testing efforts as well as further ground disturbance. On June 9, 2022, SRI reached out to Ms. Brierty to plan a pre-field meeting among SRI, the ACBCI, and Meridian Consultants; the meeting occurred on June 16, 2022. During that meeting, SRI provided the ACBCI and the Morongo Band of Mission Indians all the information relevant to the upcoming field portion of the Project and planned to begin work immediately after contracts between the Tribes and Pulte Homes could be executed.

On August 4, 2022, SRI notified the Morongo Band of Mission Indians of the potential discovery of cremated human remains at a site discovered during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Ms. Brierty and Ms. Chatterton of an agreement between the project landowner, Mr. Bernard Debonne, and the CVWD to place a substantial amount of material from a nearby CVWD project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Ms. Brierty and Ms. Chatterton were kept apprised of the situation and were updated following the August 15, 2022, meeting among the ACBCI, Pulte Homes, and Sukuts Construction (see Agua Caliente Band of Cahuilla Indians, above).

Quechan Tribe of the Fort Yuma Reservation

Historic Preservation Officer for the Quechan Tribe of the Fort Yuma Reservation Ms. Jill McCormick responded by email on April 12, 2022, on behalf of the Tribe. Ms. McCormick wrote that the Quechan Tribe of the Fort Yuma Reservation does not wish to comment on this Project and that they defer to the more-local Tribes and support their decisions regarding the Project.

Ramona Band of Cahuilla

SRI attempted to contact Chairperson for the Ramona Band of Cahuilla Mr. Joseph Hamilton and Environmental Coordinator for the Ramona Band of Cahuilla Mr. John Gomez by letter, email, and telephone. Although the letters to both Mr. Hamilton and Mr. Gomez were received on April 6, 2022, SRI received no response from either gentleman. SRI then attempted to contact Mr. Hamilton and Mr. Gomez by email on April 11, 2022, and by phone on May 4 and May 6, 2022, but was unable to reach them through either means.

Santa Rosa Band of Cahuilla Indians

SRI attempted to notify Chairperson for the Santa Rosa Band of Cahuilla Indians Ms. Lovina Redner by letter, email, and telephone. Although the letter was received on April 6, 2022, SRI received no response. SRI then attempted to contact Ms. Redner by email on April 11, 2022, and by phone on May 4 and May 6, 2022, but was unable to reach Ms. Redner through either means.

Soboba Band of Luiseño Indians

On May 4, 2022, SRI contacted Cultural Resource Director for the Soboba Band of Luiseño Indians Mr. Joseph Ontiveros. Mr. Ontiveros indicated that the Project area is very sensitive but that the Soboba Band of Luiseño Indians defers to the Cabazon Band of Mission Indians regarding the Project.

Torres-Martinez Desert Cahuilla Indians

The NAHC indicated that Cultural Resource Coordinator Mr. Michael Mirelez was the contact for the Torres-Martinez Cahuilla Indians. Although SRI submitted a letter to the Torres-Martinez Cahuilla Indians in care of Mr. Mirelez, it was not until SRI reached out to the Cabazon Band of Mission Indians that it was

discovered that Mr. Mirelez was no longer employed by the Torres-Martinez Desert Cahuilla Indians and instead had transitioned to a new position as director of cultural affairs for the Cabazon Band of Mission Indians. SRI attempted to make use of the telephone number provided by the NAHC on May 4 and May 6, 2022, but was unable to reach any Tribal representatives of the Torres-Martinez Desert Cahuilla Indians.

Twenty-Nine Palms Band of Mission Indians

On May 4, 2022, SRI reached out to THPO for Twenty-Nine Palms Band of Mission Indians Mr. Anthony Madrigal. Mr. Madrigal directed our query to Twenty-Nine Palms Band of Mission Indians Cultural Resources Coordinator Ms. Sarah Bliss. On May 4, 2022, Ms. Bliss returned SRI's phone call, requesting further information, and indicated that she would provide a response by May 6, 2022. May 9, 2022, SRI reached out to Ms. Bliss by phone to find out whether she had further information, but we were unable to reach her.

CHAPTER 5

Research Design

A research design is an explicit statement of the theoretical and methodological approaches to be used in an archaeological study (California Office of Historic Preservation 1990:9). The following research design was developed as a tool to develop appropriate field and analytical methods to evaluate the resources that were discovered during the survey as to their eligibility for inclusion in the CRHR. The following sections address the various research theme important to the prehistoric components of the sites.

Prehistoric Research Themes

Prehistoric research themes and questions that apply to broad areas of the Project area are discussed in the following sections.

Chronology

The Coachella Valley has been home to prehistoric aboriginal populations for at least 2,500 years (Love and Dahdul 2002; Schaefer and Laylander 2007). In contrast to other neighboring regions, however, the antiquity of prehistoric occupations in the Colorado Desert is poorly understood. Schaefer (1994) defined the Paleoindian, Archaic, and Late Prehistoric periods for the region and the Late Archaic period was discussed by Love and Dahdul (2002) and Schaefer and Laylander (2007). The Late Archaic period (ca. 3000–1300 B.P.) record appears meager and is known from only a handful of sites, some of which appear to be associated with a stand (or stands) of Lake Cahuilla (Love and Dahdul 2002:77). In general, occupation during the Late Archaic period appears to have been sparse, preceramic, and perhaps associated with stands of Lake Cahuilla.

Lake Cahuilla (also known as Lake LeConte or Blake Sea) played a major role in the prehistory of the Colorado Desert (see Laylander 1997, 2006; Rogers 1945; Schaefer and Laylander 2007; Sutton 1993, 1998; Waters 1983; Weide 1976; Wilke 1978). This lake formed periodically when the Colorado River broke its channel and flowed into the Salton Basin (Coachella and Imperial Valleys), forming a body of water that extended some 184 km long, 54 km wide, and 96 m deep (Schaefer 1994:67). Once full, Lake Cahuilla overflowed into the Gulf of California along the Hardy River. When the Colorado River regained its original course, the lake evaporated and disappeared. Schaefer and Laylander (2007:250) estimated that it would have taken about 20 years for the lake to fill and about 60 years for it to evaporate (also see Wilke 1978:109).

At least six major lake cycles are known within the last 2,500 years (see Laylander 1997; Schaefer and Laylander 2007:250; Waters 1983; Wilke 1978:58): one in the Late Archaic period, sometime between about 2500 and 2000 B.P.; a second between about 1300 and 1100 B.P.; a third between about 1070 and 850 B.P.; a fourth between about 750 and 640 B.P.; a fifth between about 550 and 480 B.P.; and a sixth in historical-period times, between about 400 and 300 B.P. (Laylander 1997:68).

The apparent absence of any major occupation around Lake Cahuilla during either the ca. 2500–2000 B.P. cycle or the ca. 1300–1100 B.P. cycle is puzzling. Perhaps fishing technology of sufficient scope or effectiveness had not yet been adopted. Such technology was presumably obtained from River Yumans

(see White and Roth 2009), but Patayan influence was not very important in the northern Coachella Valley before about 1000 B.P. Perhaps the cultural system employed by Late Archaic period groups in the northern Coachella Valley was not flexible enough to adapt to the change. Whatever the case, the topic is worth exploring in future research.

Research Questions

Among the questions about chronology to be addressed are the following:

1. What information regarding the initial occupation of the area can be obtained from sites in the Project area?
2. What is the full temporal extent of the occupation of sites?
3. Did use of the sites intensify over time?
4. When did pottery appear at sites in the Project area?
5. When were the sites abandoned?
6. What is the relationship between sites and the presence or absence of Lake Cahuilla?

Data Requirements

The types of data needed to establish a chronological framework for any site include intact midden deposits with hearths, roasting pits, or other features that can be radiocarbon dated or temporally sensitive artifacts with well-established age ranges. Obsidian artifacts could yield relative chronological information through the measurement of hydration rinds, although variables affecting rates of hydration are as yet imperfectly understood.

Trade and Social Interaction

The study of trade and exchange networks looks at how humans acquire different technologies and ideas, in terms of both material goods and more-abstract notions, such as ideology. In some cases, the identification of trade goods is straightforward, such as the presence of marine shells at inland sites hundreds of miles from the coast. In other cases, sourcing studies, which allow researchers to see where materials came from, are necessary. For widely traded items, it can be difficult to determine whether their appearance in certain areas was the result of long-distance contact with the groups who originally acquired or produced them or the items were traded "down the line," passing through several groups before arriving at their final destinations. In these cases, multiple lines of evidence from a variety of material or artifact classes can help show patterns in the distribution of certain goods. Resolution of these issues is also dependent on sufficient data sets from excavated contexts at several different sites along trade routes.

The Coachella Valley and Colorado Desert area borders the territories of several known prehistoric cultural groups including the Gabrielino to the west, Serrano to the North, and Quechan and Chemehuevi to the east and south, and evidence of trade with these groups has been documented at sites in the valley (Bean 1972:68–70; Bean et al. 1995). The Cahuilla were known to have extensive trail systems in the valley (Bean 1972:74), as well as trails connecting the valley to other regions, such as the Cocomaricopa Trail (Bean 1972; Bean et al. 1995).

The location of the Project area just south of the Little San Bernardino Mountains puts it close to the territory of the Mountain Serrano, a neighboring ethnic group. The Cahuilla and Serrano shared a number of cultural traits and regularly interacted (Bean 1972:69; Strong 1929). Sources have shown that during the historical period, they intermarried and engaged in complex ceremonial relationships, and Strong (1929)

has argued that social interaction between neighboring tribes or clans was based more on their locations relative to one another than tribal or ethnic identification. Thus, it seems likely that Cahuilla living in the Project area would have traded for deer products, acorns, and other montane resources found in Serrano territory.

There are potentially several other sources of information relating to trade and exchange that are identifiable archaeologically, including lithics, shell, and pottery. The exchange of lithic materials between the Colorado Desert and other areas has been documented at several sites (Bean et al. 1995; Grenda 1998; McFarland 2000; Pigniolo 1995). The two major lithic sources are Obsidian Butte, located on the southern shore of the present-day Salton Sea, and the Wonderstone West Rainbow Rock Locality (CA-IMP-6300), on the western shore of Lake Cahuilla. Other sources and locations include San Felipe obsidian from northern Baja California, steatite from the California coast, and argillite from central Arizona.

Likewise, marine shells have been found at Coachella Valley sites, and the area may have functioned as a trade route between the Gulf of California and the Southern California coast (Ahlstrom 2000; Rosen 1995). Ceramic-figurine types from both the Great Basin and the lower Colorado River were found at sites in Tahquitz Canyon (Bean et al. 1995), Mission Creek (Altschul 1986), and Yucaipa (Grenda 1998), suggesting that the inhabitants were participants in larger areas of interaction in the southwestern United States.

Research Questions

Questions pertaining to trade and interaction include the following:

1. What evidence is there that prehistoric and protohistoric peoples occupying sites in the Project area engaged in trade with areas of coastal California, the U.S. Southwest, and other neighboring culture-regions?
2. What types of materials were traded prehistorically? Were finished goods or raw materials more likely to be traded? How did that change through time?
3. Were European goods used at the sites? When did they first appear at the sites?
4. Is there evidence of trade and ceremonial interaction between the Cahuilla living in the region and neighboring Mountain Serrano groups?

Data Requirements

The basic types of data required to address questions regarding trade and technology are lithic artifacts, pottery, shell ornaments, and other elements of material culture that are easily transportable. Food items, such as meat, shellfish, acorns, and pinyon nuts, may also have been important resources that were traded. Trade can be inferred from the distribution of nonlocal materials, such as marine shell and certain types of obsidian. Analyses of trade and exchange also require representative samples from other areas that can be used to show what materials were traded out of the study area. Sourcing studies and other chemical analyses would be required during further phases of research, to determine the origins of marine shell, obsidian, and pottery. Fortunately, the Obsidian Butte source has been well studied, and its specific mineral signatures can be easily recognized in sourcing studies (Hughes 1986). Pottery can also contain abundant information about exchange and interaction. The analysis of paste inclusions (small pieces of temper added to the clay prior to firing) can provide insights into the refinement of paste recipes, as well as the identification of possible traded or exotic goods.

Changes in tool manufacture or design can help us to identify changing social relations among occupants of a site or change through time in social connections among different social groups. The appearance of novel manufacturing techniques, such as changes in projectile point or pottery styles, can signal the incorporation of new ideas brought in from other areas.

Settlement and Subsistence

Issues of settlement and subsistence form the backbone of many archaeological investigations. These lines of inquiry often focus on the most basic types of questions archaeologists can ask, such as: "Who lived here?" "How was the use of space organized at the site level?" "What did they eat?" and "What time of the year were they here?" Although these questions may be simple, to answer them, researchers must draw on a number of disparate data sets, such as chronology, cultural affiliation, and technology. Settlement-pattern studies investigate the ways in which people organized themselves in relation to their surroundings. That includes not only environmental factors, such as access to food, water, and other important resources, but also cultural factors, such as sacred landscapes and other elements of an interactive natural world. Subsistence studies investigate how people acquired food and other necessities and how they organized themselves to meet those daily needs. Together, settlement-pattern and subsistence studies help to form a backdrop of basic archaeological knowledge that researchers can draw from to answer broader questions about cultural change within particular study areas.

A number of ideas have been proposed regarding the human adaptation to Lake Cahuilla. Aschmann (1959:45), in reference to the final desiccation of Lake Cahuilla, thought that people could have moved "to the Colorado River, where flood farming was practiced, or to the more humid lands west of the mountains where acorns were the major food source." Aschmann (1959:45) implied that any people moving to the Colorado River would have been met by a very hostile existing population and thought it "probable that the lake-shore dwellers around the former Blake Sea . . . [moved] to the coastal lands of their respective linguistic congeners," Takic in the north and Yuman in the south. It would have taken some time for the newly dry lakebed to establish a biotic community, and Wilke and Lawton (1975) suggested that the lakebed would have been basically uninhabitable until the establishment of mesquite (*Prosopis* spp.) stands.

Weide (1976:91) proposed a flexible settlement-and-subsistence model for Lake Cahuilla "similar to [that] of Great Basin people to the north who exploited similarly fluctuating resource bases." In the model, the lake was only part of the system, and small, mobile populations without permanent settlements moved to the lake to use the lacustrine resources as part of their overall seasonal round. When the lake desiccated, people would have simply readjusted their system back to terrestrial resources. Because of the frequent fluctuation of the lake, populations would not have significantly increased; so, no explanation of where large populations would have gone when Lake Cahuilla desiccated would be required (Weide 1976:91; see also Laylander 2006).

The Weide model would have two archaeological expressions: a high-stand expression and a recessional expression, each reflecting a seasonal round practiced by a residential group of both sexes and all ages. The high-stand expression would consist of upland, desert, and lakeshore sites linked to each other in some fashion. The recessional expression would include the same site types, but the lakeshore and some desert sites would be located below the maximum high-stand elevation. During times when the lake effectively disappeared, lakeshore sites would be absent. In the model, no "permanent" settlements would be present, although it is possible that some small special-purpose sites used by specialized task groups could have been used.

In contrast, Wilke (1978) proposed that, for the northern Coachella Valley at least, the settlement pattern consisted of generally permanent lakeshore villages coupled with a series of special-use sites in various upland ecozones, to exploit terrestrial resources. This generally sedentary collector-like system would have replaced the mobile forager-like system of the Late Archaic period. Presumably, the presence of the lake would have provided a large and stable economic base (the lacustrine resources) capable of supporting substantial populations living in permanent lakeshore villages.

A third settlement model was proposed by Sutton (1993, 1998, 2011) in which groups would have adopted a flexible settlement system so as to retain a focus on lacustrine resources even during fluctuations in lake levels. In that case, as the lake receded, the settlement system may have been adjusted to adapt to the changing geographic locations of the lacustrine ecozones. In such a system, the lakeshore would be expected to have been permanently occupied, with some combination of principal habitation and special-use sites utilized with varying duration and intensity. As a result, dependence on specific resources would

have fluctuated, with lacustrine resources remaining generally dominant but terrestrial resources varying in importance. This fluctuating resource dependency could be seen as variations in diet breadth and/or in the employment of various tactics within the overall strategic inventory (Sutton 2000).

Such a settlement system could have taken one of at least two different forms (see Sutton 2011). The first possibility is that principal settlements could have been moved to progressively lower elevations, to remain close to the receding shoreline and lake resources, e.g., fish and marsh plants. Wilke (1978:9) suggested that the increasing salinity of the receding lake did not become toxic until the lake was nearly gone, e.g., the current Salton Sea continues to support plants and fish. As the lake levels again rose, the principal settlements would have been relocated to progressively higher elevations, perhaps even to their old locations. The archaeological signature would be a series of major, but relatively short-lived, settlements spread from the high stand down to the (as yet undetermined) low stand elevation. In essence, then, the association between settlements and the lakeshore would have remained basically the same during high and low lakes levels, in that principal settlements would be located on the shoreline.

In that scenario, the principal settlements might look like relatively large temporary camps. Even if the sites were occupied for only short periods when water levels were fluctuating, they should still contain the full range of behaviors associated with high-stand principal settlements, specifically evidence of "permanent" habitation, e.g., structures, ecofacts from all seasons, or diversity of artifact types, ceremonial cycles, e.g., mourning ceremonies, and cremations. Special-use sites in upland, desert, and lakeshore ecozones would have continued to be used, although the distance to many such sites from the principal lakeshore settlements would have increased as the lake retreated. However, as the lake retreated, areas formerly underwater would have become "desert," and special-use sites would have been established in areas below the high-stand shoreline, to exploit the "desert" resources. In addition, a series of lakeshore special-use sites would have been established to follow the retreating lake.

The second possibility is that the principal settlements on the high-stand shoreline would not have been moved as lake levels fluctuated. As the water receded, the ecozone around the principal settlements would have become "desert" rather than lacustrine, and local resource procurement would then have been focused on the exploitation of desert resources. As before, upland, desert, and lakeshore special-use sites would have continued to be used, with desert and lakeshore special-use sites established below the high stand and located at variable distances from principal settlements, depending on the lake level at the time. They would have been occupied by relatively small task groups for comparatively brief periods of time, and the resources obtained would have been processed before being taken back to the principal settlements. Lakeshore special-use sites would contain considerable evidence of fish/marsh-plant procurement and processing but little evidence of habitation.

As a result, the principal settlements would contain "less" evidence of lacustrine-resource procurement and processing and perhaps "more" evidence of terrestrial-resource procurement and processing. In addition, one would expect changes in tool kits, processing facilities, and ecofactual remains at all of the lake-basin sites. Perhaps the stone fish traps known in some portions of the northern Coachella Valley and elsewhere in the Salton Basin (Schaefer and Laylander 2007; Treganza 1945; White and Roth 2009; Wilke 1980; Wilke and Lawton 1975) are examples of such lakeshore special-use sites. Special-use sites located below the high stand would have been inundated as the lake rose again and were probably covered with sediments, and many would now be very difficult to locate.

Research Questions

Questions pertaining to subsistence and settlement patterns include the following:

1. How well does site patterning conform to the settlement models posed for prehistoric societies in the area?
2. What evidence is there of habitation? Were sites occupied year-round, or were they seasonal camps? How many people were living at these sites, and how did population size change through time?

3. What other activities were conducted at sites?
4. What types of food were consumed at sites? What environments were people exploiting to acquire food? How important were montane resources?
5. What locally available materials were utilized?
6. Did the exploitation of certain resources change through time, and if so, how?
7. Were domesticated plants used at the sites? If so, which plants were used, and when did they appear at the sites?

Data Requirements

Studies of settlement patterns require not only intensively investigated individual sites but also enough regional comparative data to construct a complete model of site types. Given the extent of the research at Late Prehistoric period sites in the Coachella Valley, there should be sufficient comparative data to test the various models of prehistoric settlement patterns for the region.

Features and artifacts, as well as faunal and botanical remains, will give clues to the types of activities that occurred at sites, as well as the times of the year the activities took place. Comparisons between the types of activities at sites in the study area and activities at previously studied sites in the vicinity will be useful. These comparisons will also help determine whether the sites in the Project area represent the full range of activities documented in the surrounding region or a particular subset of activities.

Research Themes for the Historical Period

Historical-period research themes and questions that apply to broad areas of the Project area are discussed in the following sections. The major historical-period research themes focus on exploration, transportation, communication, resource exploitation, and settlement.

Exploration, Transportation, and Communication

The theme of exploration, transportation, and communication involves the collective topic encompassing the movement of people and information into and through a region. The Project area has long served as a travel corridor for aboriginal peoples as well as for missionaries, explorers, and others. Regional transportation includes roads, highways, and railroads. Communication sites include telegraph and telephone lines and alignments carrying power and other utility infrastructure. This theme also includes aspects of land use related to recreational activities, such as automobile tourism, hiking, camping, and hunting.

Historians have prepared numerous discussions on early explorations through Southern California. Likely routes have been identified, but the nature of those incursions left few tangible archaeological remnants, and no camps or other sites related to early exploration have been identified in the Project area. Exploratory routes often followed Native American trade routes, and explorers were frequently led by Native Americans or directed to previously established trails. Many of these trails ultimately became major transportation routes incorporating ancient river crossings and routes through mountain passes.

Transportation improvements were among the most significant agents of change in Southern California during the late nineteenth and early twentieth centuries, especially in communities that were relatively isolated from main population hubs. In 1900, most Southern Californians lived and worked within a small radius and traveled on foot, on horseback, or by horse-drawn wagons or buggies. After the turn of the twentieth century, however, automobile use rapidly increased, and residents lobbied for the development

and maintenance of improved roads capable of supporting the new form of transportation. Southern California railroad development had created a radiating pattern of settlement characterized by dispersed population centers, and the automobile provided the maximum freedom of mobility that was ideal in such a landscape. The ability to travel long distances between cities connected the region and the nation in unprecedented ways. Regional roads created a complex market web and supply network linking urban centers with outlying farms, ranches, and mines.

Communication networks, including telegraph and telephone lines, as well as utility transmission lines, are closely related to transportation routes, in large part because they typically share common linear alignments and provide linkages between nodes of settlement.

Research Questions

Research questions relating to exploration, transportation, and communication include the following:

1. Does any evidence of early exploratory routes remain in the Project area?
2. What types of historical transportation routes are present in the Project area?
3. What are the origin and destination points of the routes? Were the routes changed or realigned over time?
4. What type of traffic did the routes carry (pedestrian, wagon, motorized vehicle, or railroad)? Was the route expedient or engineered?
5. During what period did the routes serve the region?
6. What social, political, economic, and industrial developments were associated with the transportation routes?
7. What is the nature of the communication infrastructure in the Project area?
8. When was the communication infrastructure installed, and how was it modified over time?
9. What social, political, economic, and industrial developments were associated with the local communication infrastructure?

Data Requirements

Information to address research questions related to exploration, transportation, and communication include both physical and documentary sources. Sufficient intact portions of features and sites would be required to make adequate assessments.

As noted above, the earliest historical-period activity in the region of the Project area consisted of passages through the region by Spanish missionaries and soldiers and early American explorers. These were transient land uses, and the only archaeological resources associated with them might be the remains of trailside overnight camps, none of which has been documented in the area to date. Because diaries of many of these early travelers mention that they stopped at Native American villages along the way, evidence of their passage could occur in the form of historical-period artifacts found at archaeological sites of Native American villages and camps.

Understanding and evaluating transportation routes and communication infrastructure can prove challenging and is dependent on data about not only the linear alignments themselves but also information about points of origin and destination, as well as the complex historical narrative regarding the social, political, economic, and industrial development of the region. The role of the segment as part of a much larger, linear resource must be recognized and assessed. Evaluation of transportation routes and communication infrastructure should include assessment of information about their setting and construction, as well as

consultation of archival information, which can help provide data about the importance of the sites in regional history and their potential to yield chronological, technical, and functional information.

Transportation sites could include trails; wagon, stage, and automobile roads; highways; and railroads. Communication sites include telegraph and telephone lines and alignments carrying power and other utility infrastructure. A valuable compilation of historical information concerning transportation routes in the California deserts has been prepared by Warren and Roske (1981), and a regional railroad history has been compiled by Myrick (1963).

Irrigated Agriculture

During the historical-period, Farming was the primary economic activity in the valley, supported by a variety of wells that accessed sizable underground water resources. In 1948–1949, the construction of the Coachella Canal supplied additional water to the valley. Much of the area around the town of Indio is still an important agricultural center. Vegetables, cotton, citrus, and, particularly, dates were, and still are, important cash crops. One of the chief areas of interest is the development and growth of large-scale irrigation technologies, and the effects of irrigation agriculture on local and regional economies. This encompasses not only the technological feat of controlling the Colorado River and distributing its water to distant places, and the surviving features themselves, but also the activities of the laborers involved in constructing these hydraulic features and the farmers who cultivated the irrigable lands.

Research Questions

1. What features of the Coachella Canal of the All-American Canal System remain? Are they still functioning as originally intended? What modifications have been made to the system?
2. Are there remains of workers' encampments associated with construction of the Coachella Canal water distribution system? If so, what can they reveal about the working and living conditions under which the construction was performed?
3. What economic and social impacts did the construction of these irrigation systems have at the local, regional, and national levels?
4. Does evidence of historical-period irrigation features built and maintained by earlier water districts (e.g., the CVWD) still exist in the Project area?
5. What coping strategies were used to adjust agricultural practices to the local climate and environment?

Data Requirements and Property Types

The historical significance of the irrigation features in the Project area are best understood within the larger context of the USDI Bureau of Reclamation projects that brought thousands of acres of previously arid land under cultivation. The Boulder Canyon Project's All-American Canal System, which included the Coachella Canal, was a major engineering feat consisting of the Imperial Dam and desilting basins, pumps, main canals, lateral systems, and fields. The documentation of the Coachella Canal components can provide important information on mid-twentieth-century engineering as well as insight into the American perspective on land, water, and the control of nature.

Data required to answer questions regarding the irrigation features of earlier water districts can be obtained through the identification of irrigation-related archaeological sites (headings, canals, and laterals) and conducting archival research.

Settlement

The permanent settlement of the region by homesteaders was an important aspect of the development of the region. Under the Homestead Act of 1862, the U.S. Congress opened millions of acres of public domain to anyone that could pay the $10.00 registration fee and live on the land for 5 years (which was shortened to 3 years in 1912). Natural springs and other scarce water sources were the early focal points of homesteading in the Coachella Valley. The European settlement of the valley intensified after the completion of the Southern Pacific Railroad in 1877 (Heath 1945). In the 1880s, the Desert Land Act opened much of the public land in the area to private development.

Research Questions

Research questions related to historical-period settlement systems in the Project area include the following:

1. What was the nature of land occupation or ownership in the survey area, and what period of homesteading or other settlement is represented by the sites?
2. Can the relative success of a homestead be inferred from material remains?
3. Did site occupants subsist on the products of local ranching/farming, or did wage labor supplement their income? Where did site occupants obtain goods and supplies? What local, regional, national, and international spheres were included in the economic arrangement of this operation?
4. What was the demographic makeup of site occupants? Did site demography change over time?

Data Requirements

These questions can be addressed with both documentary and archaeological data. Land applications and patents made to the GLO, now the USDI BLM, as well as census documents, can provide information on the identities and origins of homesteaders. Tax-assessors' records provide data on land values, transactions, and improvements. Together, these sources can reveal the chronology of residential and agricultural land use and can provide important parcel-specific associations between resources and individuals.

Data to address questions of regional interaction can be drawn from a wide variety of materials. Residential trash deposits can provide information about the range of sources from which food and household materials (such as pottery) were acquired. Historical records, such as tax records, can also provide important information about the extent and sources of external funding.

Other settlement-related questions can be answered only through information obtained from the layout of properties, the analysis of architectural remains, and the contents of refuse scatters and trash dumps. For instance, architectural remains can reveal whether buildings were constructed by hand, whether they were built with purchased or scavenged materials, and whether they were made according to plan or reflect ongoing construction over time. Architectural remains—particularly residences in relation to industrial structures, other outbuildings, and land dividers (such as fences)—can indicate the organization of agricultural or stock-raising activities. The size and distribution of trash deposits, as well as the diagnostic items within them, can indicate periods of change, such as abandonment or refurbishment.

To answer these and other questions, we need to find undisturbed historical-period deposits in their original contexts at sites containing functionally and temporally diagnostic artifacts. Analysis of the material culture can then supplement and clarify the written record.

CHAPTER 6

Survey and Testing Methods

Survey Methods

Pedestrian survey of the Project area was conducted from August 1 to 15, 2022, by a team of two archaeologists, with Tribal representatives from the Morongo Band of Mission Indians and the ACBCI monitoring and assisting the survey efforts.

Although the entirety of the Project area was surveyed, an approximately 20-acre (8.1-ha) area was not covered by the initial survey, because it is privately owned, and permission to access the area had not been granted. Permission to access this area was granted on August 30, 2022, and the testing and evaluation crew temporarily halted the excavations to complete the survey.

For this Project, the entire Project area was surveyed using 15-m (49.2-foot) transects; more-intensive (5-m [16.4-foot]) intervals were used in areas of high surface-artifact concentration. A Trimble Juno 3D handheld Global Positioning System (GPS) unit was used to track transects and mark the presence of surface finds, including isolated resources, features, and sites. Photographs were taken during the survey to record surface finds, topography, features, sites, and modern disturbances. Diagnostic and unique artifacts were point-provenienced, and because no artifacts were to be collected during the survey, any artifacts that were encountered were subjected to in-field analysis. Although most sites were small and could be recorded in their entirety, one site (SRI 15) was very large and contained hundreds of ceramic sherds among artifacts of several other types. For this site, several 10-m- (32.8-foot-) diameter observation units (OUs) were placed to sample the large number of ceramic artifacts that were discovered. The ceramic artifacts within these OUs were fully analyzed, and the densities of artifacts within these OUs were used to extrapolate the general assemblage at the site. Nonceramic artifacts at this site, regardless of whether they were located in an OU or not, were all point-provenienced and analyzed.

CVWD Stockpile

On August 9, 2022, SRI was notified that a large stockpile of dirt from a neighboring CVWD project was to be placed within the Project area by Sukuts Construction. Following a grading plan that had been approved previously by the City, the stockpile was to be placed in an area that partially or completely covered sites that were discovered during the survey (Figure 6.1); placement was to begin on August 15, 2022. Because the stockpile location could not be moved or modified, SRI mobilized a team to initiate the testing phase of the Project and worked with representatives from the Morongo Band of Mission Indians, the ACBCI, and the Cabazon Band of Mission Indians to quickly and respectfully protect any materials that might be affected by the stockpile. Furthermore, SRI personnel cordoned off the locations of all known sites and isolated resources within or adjacent to the stockpile location, using rope and wooden stakes. Sukuts Construction personnel agreed to give these areas wide berth until SRI could implement a testing plan to evaluate the resources and to collect surface artifacts from this area once permission was granted.

The project from which the sediment originated was extremely sensitive, and there were potential cultural materials and cremated human remains mixed into the sediments. The ACBCI was originally involved with the project from which the sediment originated; therefore, an ACBCI monitor was on-site to observe the placement. SRI personnel worked with this monitor to record and address any new cultural materials found during stockpile placement.

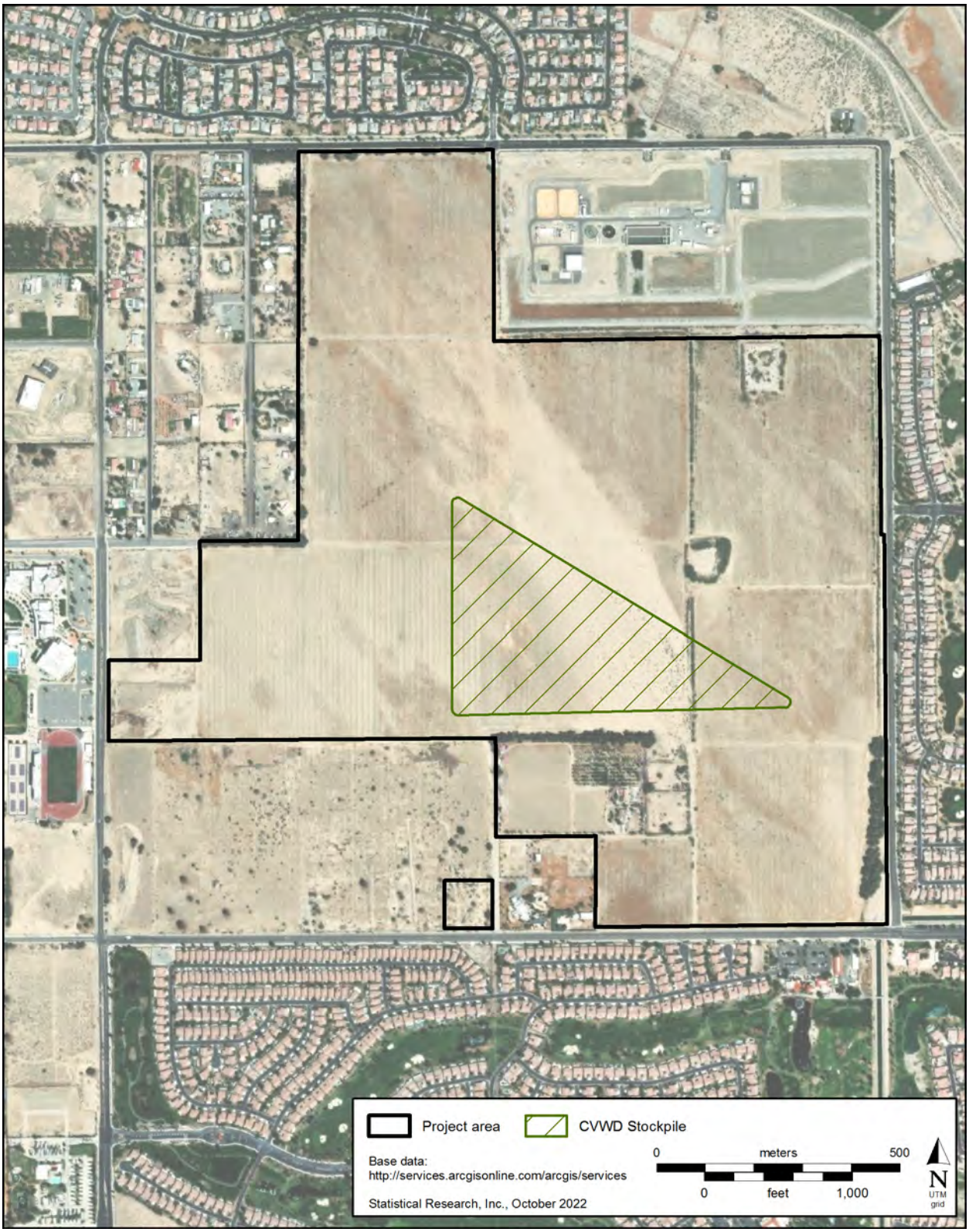

Figure 6.1. Map of the CVWD stockpile.

Testing Methods

From August 22 through September 23, 2022, SRI staff tested the prehistoric sites that were identified during the survey, as part of the evaluation process. The testing crew consisted of four SRI archaeologists and ACBCI and Morongo Band of Mission Indians Tribal Monitors. During testing, SRI employed a variety of units, including shovel-test pits (STPs), test pits (TPs), and hand augers, to help define the subsurface components of the sites.

STPs

The STPs excavated within the Project area measured 40 by 40 cm (15.7 by 15.7 inches) and were excavated to depths within the physical limitations of the crew, between 80 and 120 cm (between 31.5 and 47.2 inches) deep. The STPs were systematically placed within site boundaries approximately every 10 m (32.8 feet), with some variation due to surface conditions. STPs between site boundaries were systematically placed approximately every 20 m (65.6 feet) to test the subsurface relationships of the sites identified during survey.

Each STP was excavated using 20-cm (7.9-inch) levels, and all sediments from each level were screened through $^{1}/_{8}$-inch-mesh screen. The soil conditions in each level were recorded, and any artifacts found in the levels were photographed and analyzed.

Hand Augers

If the results of the STP excavation suggested that a deeper cultural deposit may be present beyond the excavation-depth limits of an STP, a 10-cm- (3.9-inch-) diameter hand auger was placed within the STP. Like the STPs, the hand augers were excavated in 20-cm (7.9-inch) levels. The hand-auger excavations reached depths of no greater than 250 cm (98.2 inches) below the original ground surface. Material recovered from the hand augers was screened through $^{1}/_{8}$-inch-mesh screen. Any artifacts identified in the levels were photographed and analyzed.

TPs

TPs were judgmentally placed based on the findings from the STPs. If no STPs at a site were positive, TPs were placed at the site based on the density of the surface finds and stratigraphically representative locations.

The TPs generally measured 1 by 1 m (3.3 by 3.3 feet), with one exception: TP 676, which was 0.5 by 1 m (1.6 by 3.3 feet) in size. TPs were excavated in 10-cm (3.9-inch) levels to a depth of 1 m (3.3 feet), and all sediments from each level were screened through $^{1}/_{8}$-inch-mesh screen. The soil conditions in each level were recorded, and any artifacts found in the levels were photographed and analyzed.

Artifact-Collection Protocol

Initially, no artifact collection was allowed during the survey and testing components of the Project. However, on August 24, 2022, permission by the landowner, Mr. Bernard Debonne, was granted to collect artifacts from his property. Following that approval, SRI collected surface artifacts at sites that were in danger of being damaged by the CVWD stockpile and artifacts identified in units during testing. All the collected

artifacts were placed in 2-ml (0.1-ounce) open-ended, resealable polyethylene bags and labeled with the appropriate provenience information. These artifacts were given to the ACBCI Tribal Monitor for off-site storage at ACBCI facilities.

Because of the potential for human remains, bone artifacts that could not be positively identified as faunal remains were reburied approximately 20 cm below surface (cmbs; 7.9 inches below surface) within the units from which they were discovered. Taking photographs of the bone was forbidden by the Tribal Monitors unless the bone was positively identified as faunal remains.

Postfield Analysis and Special Studies

Although artifacts collected during the Project were analyzed in the field and given to the ACBCI for storage, the single thermal feature identified at SRI 15 required additional, postfield analysis and special studies. In order to date this feature, a sample of charcoal was collected and submitted to Beta Analytic, Inc. (Beta), for radiocarbon dating. The results of that analysis are presented in Appendix C.

Additionally, the sediments collected from the feature were processed at SRI's Redlands office by using a Flote-Tech Flotation Systems (Model No. A1A) flotation machine. This equipment is designed to recover paleobotanical remains as well as site microconstituents (e.g., shell beads, microdebitage, and fish bone). The heavy fraction was screened through $^{1}/_{16}$-inch mesh and was examined for small artifacts and carbonized material other than charcoal, to help ascertain the nature of the feature. The materials recovered from these samples were cataloged and analyzed. The light fractions obtained from the flotation and pollen samples collected during fieldwork were retained for future macrobotanical and pollen analysis.

CHAPTER 7

Survey and Testing Results

Current Conditions

The Project area has been heavily disturbed during the historical and modern periods, for agricultural use. Currently, the area is dominated by sand flats; sand dunes aggrading around ram's horn plants (*Proboscidea louisianica*); small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. A large hill, also near the center of the property, was observed in association with this berm. Both the berm and the hill are likely human made and are possibility related to agricultural activity or property upkeep. Additionally, the surface of the Project area is covered with historical-period and modern debris including remains of domestic animals, such as pigs and dogs; refuse; and agricultural debris. The Project area is divided into several smaller agricultural fields and crisscrossed by bladed access roads. A small indigent population was noted along the tamarisk tree line in the central portion of the Project area, and at least one individual had excavated a small bunker, which was filled in during the placement of the CVWD stockpile. Because of extensive past agricultural activity, the ground surface was noted during survey as nearly devoid of vegetation, allowing for almost 100 percent visibility.

Results Summary

In total, 11 sites were recorded during this Project survey (Figure 7.1; Table 7.1): 3 historical-period agricultural sites associated with irrigation and 8 prehistoric artifact scatters largely composed of ceramic sherds and including smaller numbers of ground stone and flaked stone artifacts and pieces of fire-affected rock (FAR), worked shell, and burned bone (Tables 7.2 and 7.3). At SRI 15, bone possibly associated with a prehistoric cremation was identified, and a single buried thermal feature was identified. The previously recorded prehistoric site in the Project area (CA-RIV-8908/P-36-17111) could not be relocated. The site records for the recorded sites are provided in Appendix D.

In addition to sites, 30 isolated resources (map label "IO") were identified (Table 7.4; see Figure 7.1): 22 prehistoric and 4 historical period. The isolated-resource records are provided in Appendix D.

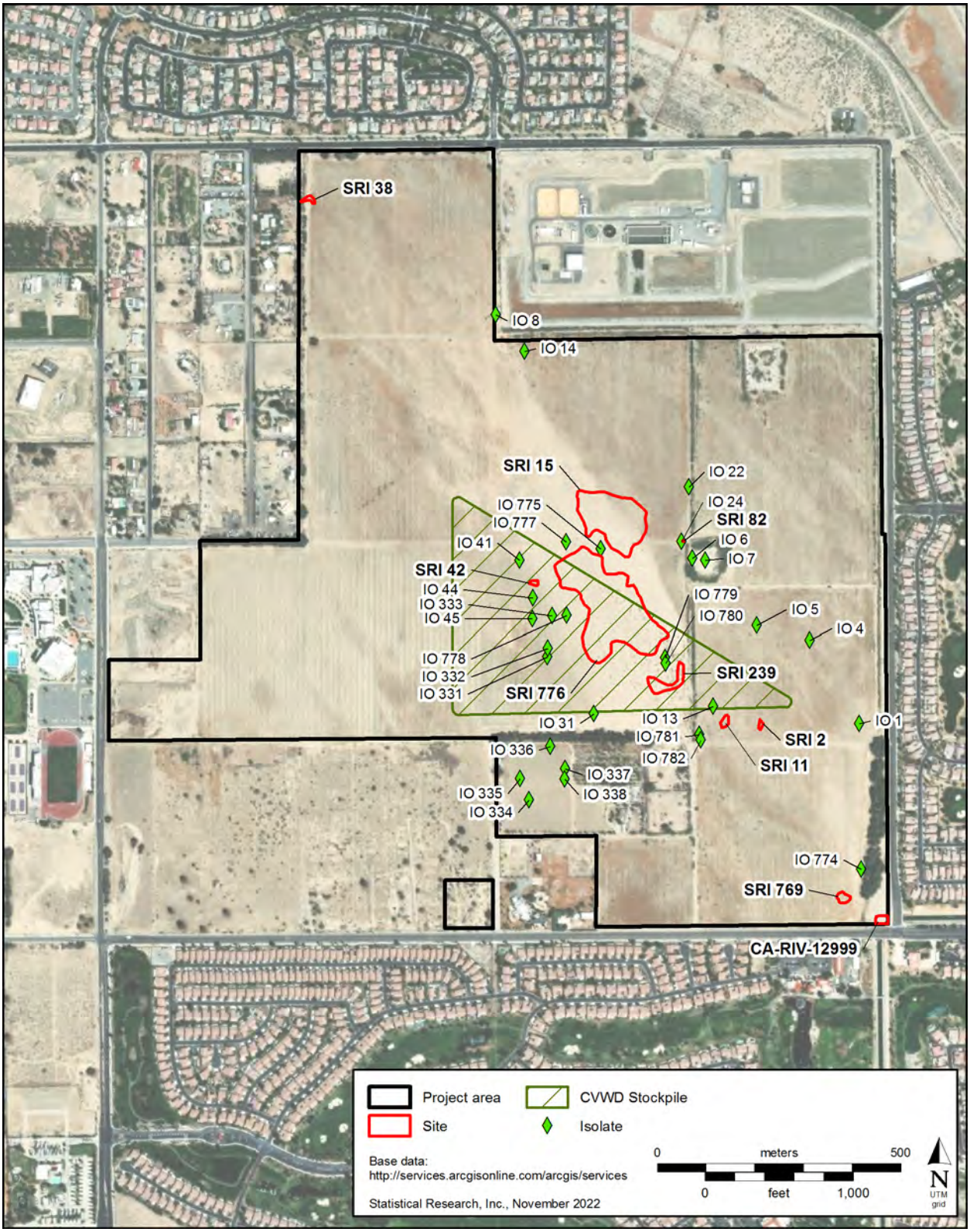

Figure 7.1. Map of the results of the survey and testing.

Table 7.1. Recorded Sites within the Project Area

Site No.	Temporal Affiliation	Site Type	Key Artifacts
CA-RIV-8908	prehistoric	artifact scatter	ceramic sherds, lithic debitage, and fire-affected clay
CA-RIV-12999	historical period	Coachella Canal	canal feature
SRI 2	prehistoric	artifact scatter	ceramic sherds
SRI 11	prehistoric	ceramic scatter	ceramic sherds
SRI 15	prehistoric	Late Prehistoric period campsite	ceramic sherds, ground stone, a projectile point, shell beads, and lithic debitage
SRI 38	historical period	historical-period agricultural water-conveyance system	cement features, including a foundation, a well, a well foundation, and a standpipe
SRI 42	prehistoric	ceramic scatter	ceramic sherds and marine shell
SRI 82	historical period	historical-period agricultural water-conveyance system	cement feature: water standpipe
SRI 239	prehistoric	ceramic scatter	ceramic sherds and marine shell
SRI 769	prehistoric	ceramic scatter	ceramic sherds
SRI 776	prehistoric	Late Prehistoric period campsite	ceramic sherds, marine-mollusk-shell fragments, lithic debitage, and faunal bone

Table 7.2. Lithic Debitage Recovered from the Debonne Property, by Site

Location	Type	Material	Size Class (mm)										Total Count
			<10	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89	90+	
						SRI 2							
Surface	core flake	quartzite	—	1	—	—	—	—	—	—	—	—	1
						SRI 15							
Surface	core flake	chert	—	1	1	—	—	—	—	—	—	—	2
	core flake	granite	—	—	—	—	1	—	—	—	—	—	1
	core flake	rhyolite	—	—	—	1	—	—	—	—	—	—	1
	core flake	quartz	1	2	—	—	—	—	—	—	—	—	3
	flake-core fragment	quartzite	—	1	—	—	—	—	—	—	—	—	1
	shatter	quartz	—	2	—	1	—	—	—	—	—	—	3
TP 676 (40–50 cmbs)	biface flake	quartzite	—	—	1	—	—	—	—	—	—	—	1
Subtotal			1	6	2	2	1	—	—	—	—	—	12
						SRI 239							
Surface	core flake	rhyolite	—	—	—	—	1	—	—	—	—	—	1
						SRI 776							
Surface, Locus A	shatter	chert	—	1	—	—	—	—	—	—	—	—	1

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Location	Type	Material	Size Class (mm)										Total Count
			<10	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89	90+	
	shatter	metamorphic (igneous)	—	—	—	—	1	—	—	—	—	—	1
Surface, Locus D	core flake	chert	—	—	—	1	—	—	—	—	—	—	1
	core flake	metamorphic (igneous)	—	—	—	—	—	1	—	—	—	—	1
	core flake	quartzite	—	—	—	—	—	—	1	—	—	—	1
Subtotal			—	1	—	—	1	1	1	—	—	—	5
Total													19

Table 7.3. Modified Lithic Tools Recovered from the Debonne Property, by Site

Location	Tool Type	Point Provenience (PP)	Material	Condition	Length (mm)	Width (mm)	Thickness (mm)	Notes
				SRI 15				
Surface	ground stone, indeterminate	56	metamorphic, indeterminate	fragment	70	60	25	gray fragment, possible mano or metate
	mano, one-handed	57	granite	complete	50	66	63	bifacially shaped
	mano, one-handed	67	granite	fragment	98	64	48	bifacially shaped
	mano, one-handed	550	granite	complete	138	103	36	bifacially shaped, with a tapered profile
	projectile point, Cottonwood	524	rhyolite	fragment	25	18	7	impact fracture on the distal tip of the point
	slab metate	53	granite	fragment	235	120	40	thin and reddish in color
	slab metate	55	granite	fragment	100	90	20	likely related to PP 55; thin and reddish in color
				SRI 776				
Surface	ground stone end fragment	346	granite	fragment	68	55	17	grinding edge of an indeterminate ground stone implement
	hammerstone		quartzite	complete	55	43	4	small river-cobble hammerstone
	unifacial tool	784	metavolcanic, indeterminate	complete	25	20	12	small, gray unifacial tool flaked along two edges
STP 146	flattened-stone fragments		granite	fragment				five small fragments of a flattened stone that came off a larger piece of ground stone encountered in STP 146
				Isolate				
Surface	multidirectional flake core	1	quartzite	fragment	48		35	

Table 7.4. Isolated Artifacts

IO No.	Artifact Description	Temporal Period	Condition	Notes
1	multidirectional metavolcanic flake core, gray	prehistoric	fragment	48 × 47 × 35 mm
4	brown ware body sherd, indeterminate	prehistoric	fragment	
5	indeterminate brown or gray ware body sherd	prehistoric	fragment	
6	brown ware body sherd, indeterminate	prehistoric	fragment	
7	brown ware body sherd, indeterminate	prehistoric	fragment	
8	historical-period glass bottle	historical period	complete	partial label "SAN . . ."; base markings "Santa Fe Vintage // 134B // Refilling // 4 // Prohibited"; "LM" monogram in a circle (Latchford-Marble Glass Company, 1939–1957 [Lockhart et al. 2017:49)]); heel embossed "4/5 Pint"
13	brown ware body sherd, indeterminate	prehistoric	fragment	
14	Coca-Cola bottle	historical period	complete	"Coca-Cola // Trademark registered // min contents 6 FL ozs"; on one side, "bottle pat.D-105529"; base embossed "San Bernardino//Calif."
22	two ceramic body sherds, red exterior, fine paste	prehistoric	fragment	two ceramic sherds of the same production type
24	buff ware body sherd, indeterminate	prehistoric	fragment	
31	Salton Buff Ware, body sherd	prehistoric	fragment	two ceramic sherds of the same production type
41	Tumco Buff Ware, rim sherd	prehistoric	fragment	rim is 1.5 cm and has a slight outward curve
44	Topoc Buff Ware, body sherd	prehistoric	fragment	
45	Topoc Buff Ware, body sherd	prehistoric	fragment	
331	indeterminate brown or gray ware body sherd	prehistoric	fragment	two ceramic sherds of the same production type
332	marine-mollusk shell	prehistoric	fragment	two marine shells
333	indeterminate brown or gray ware body sherd	prehistoric	fragment	
334	indeterminate brown or gray ware body sherd	prehistoric	fragment	
335	burned bone	historical period	fragment	large mammal bone
336	indeterminate brown or gray ware body sherd	prehistoric	fragment	
337	burned cow bone	historical period	fragment	
338	indeterminate brown or gray ware body sherd	prehistoric	fragment	
774	indeterminate brown or gray ware body sherd	prehistoric	fragment	
775	marine-mollusk shell	prehistoric	fragment	scalloped
781	cluster of 4 ceramic body sherds, brown ware	prehistoric	fragment	cluster of 4 body sherds of the same production type

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IO No.	Artifact Description	Temporal Period	Condition	Notes
782	indeterminate brown or gray ware body sherd	prehistoric	fragment	
777	indeterminate ceramic body sherd	prehistoric	fragment	
778	indeterminate brown ware body sherd	prehistoric	fragment	small, 10 × 10 mm
779	indeterminate brown or gray ware body sherd	prehistoric	fragment	
780	indeterminate brown or gray ware body sherd	prehistoric	fragment	

Previously Recorded Sites

CA-RIV-8908 (P-33-017111)

CA-RIV-8908 was previously recorded as an 18-by-7-m (59.1-by-23.0-foot) artifact scatter composed of 11 ceramic sherds, 4 lithic flakes, and 6 fire-affected clay fragments (Ballester 2008). The original site description placed the site to the east of an agricultural field and atop a crescent-shaped dune in the southeastern corner of the Project area. Ballester (2008) noted that the dune on which CA-RIV-8908 was situated had been previously disturbed, possibly from construction of the Coachella Canal or nearby roads or from agricultural activity (Tang et al. 2008b:13). The location of the site in the records-search data, however, was farther west than had been described in the site record.

During the current Project, SRI personnel examined both the location plotted by the CHRIS EIC and the location described in the site record. Using both aerial imagery and the previous site description, a small section of the Project area was intensively surveyed in 5-m (16.4-foot) transects to relocate the site, but no surface artifacts were encountered in either location. The surface of the Project area in this location, however, exhibited extensive mechanical disturbance, which suggests that the site may have been buried or destroyed completely.

To test for subsurface components, two STPs (STPs 732 and 737) were excavated in the location provided in the site record. STP 732 was placed atop the sand dune, and STP 737 was placed at the base of the dune. Both STPs tested negative for cultural material. In STP 732, green hydro-mulch was found between 40 and 80 cmbs (between 15.7 and 31.5 inches below surface), whereas in STP 737, a broken pipe was found between 20 and 40 cmbs (between 7.9 and 15.7 inches below surface), and wires were found at 78 cmbs (30.7 inches below surface). These modern disturbances suggest that components of the dune are of modern construction.

CA-RIV-12999 (P-33-005705; Coachella Canal)

The Coachella Canal, a historical-period irrigation canal, a branch of the All-American Canal, was determined eligible for listing in the NRHP in 2004, under Criterion a (Stanton and Becker 2016), and is therefore also eligible for listing in the CRHR under Criterion 1. The canal enters the southeastern corner of the Project area from the south, where it crosses 40th Avenue before making an immediate 90° turn to the east and then exiting the Project area by crossing Madison Street. Based on aerial imagery observed on Google Earth, the portion of the Coachella Canal within the Project area was covered during the widening of Madison Avenue sometime between April 27, 2006, and May 24, 2009, and is no longer visible in the Project area (Google Earth 2006, 2009). Because this segment of the canal is hidden beneath a layer of fill, its condition is unknown.

Newly Recorded Sites

SRI 2

SRI 2 was identified as a small prehistoric artifact scatter composed of three undecorated brown ware ceramic sherds (two body sherds and one rim sherd) and one quartzite core flake covering a 9-by-22-m (29.5-by-72.2-foot) area (Table 7.5; Figure 7.2). A single STP (STP 368) was placed within the borders of the site but was negative for cultural material (Table 7.6). Charcoal flecks, likely from a natural origin, were found throughout the STP from the surface to 60 cmbs (23.6 inches below surface). The surface of SRI 2 has been heavily disturbed from agricultural activities, which have significantly reduced the site's integrity.

Table 7.5. Ceramic-Artifact Summary

Artifact Description	PP No.[a]	Quantity	Notes
		SRI 2	
Salton Brown Ware		3	2 body sherds and 1 rim sherd
		SRI 11	
Brown ware, indeterminate		9	8 body sherds and 1 rim sherd
		SRI 15	
Salton Buff Ware		95	
Salton Buff Ware cordage-impressed body sherd	68	4	4 pieces refit, cordage mark perpendicular to the rim edge: 2 body sherds and 2 rim sherds
Tizon Brown Ware		45	
Hedges Buff Ware		12	
Tumco Buff Ware		8	
Topoc Buff Ware incised body sherd	73, 74	3	1 cluster of 2 body sherds; the incision is perpendicular to the rim on all 3 body sherds
Parker Buff Ware		21	
Brown ware body sherd		24	
Brown ware rim sherd		2	
Buff ware body sherd		53	
Buff ware rim sherd		4	
Gray ware body sherd		32	
Gray ware rim sherd		1	
Red plain ware indeterminate body sherd		1	
Indeterminate brown or gray ware body sherd		71	
Indeterminate brown or gray ware rim sherd		4	
Indeterminate brown or gray ware, painted	523	1	painted and incised with seven diagonal lines

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Artifact Description	PP No.[a]	Quantity	Notes
		SRI 42	
Tumco Buff Ware		6	body sherds
		SRI 239	
Salton Buff Ware		8	body sherds
Topoc Buff Ware		4	body sherds
Hedges/Salton Buff Ware		1	body sherds
Salton Brown Ware		1	body sherds
Tumco Buff Ware		5	body sherds
Tizon Brown Ware		1	body sherds
Brown ware, indeterminate		2	body sherds
Buff ware, indeterminate		2	body sherds
Gray ware, indeterminate		2	body sherds
		SRI 769	
Buff ware, indeterminate		3	2 body sherds and 1 rim sherd
		SRI 776	
Salton Buff Ware		9	2 rim sherds
Topoc Buff Ware		10	1 rim sherd and 1 painted body sherd with black dots
Tumco Buff Ware	39	10	1 notched rim sherd
Hedges/Salton Buff Ware		2	both pieces are painted, 1 with a black line and 4 dots and the other painted solid black
Salton Brown Ware		8	2 rim sherds
Brown ware, indeterminate		18	
Buff ware, indeterminate		32	4 rim sherds
Gray ware, indeterminate		8	1 rim sherd with an incised interior
Indeterminate brown or gray ware body sherd	355	129	incised body sherd

[a] Artifacts without PP numbers were recorded as general sitewide observations.

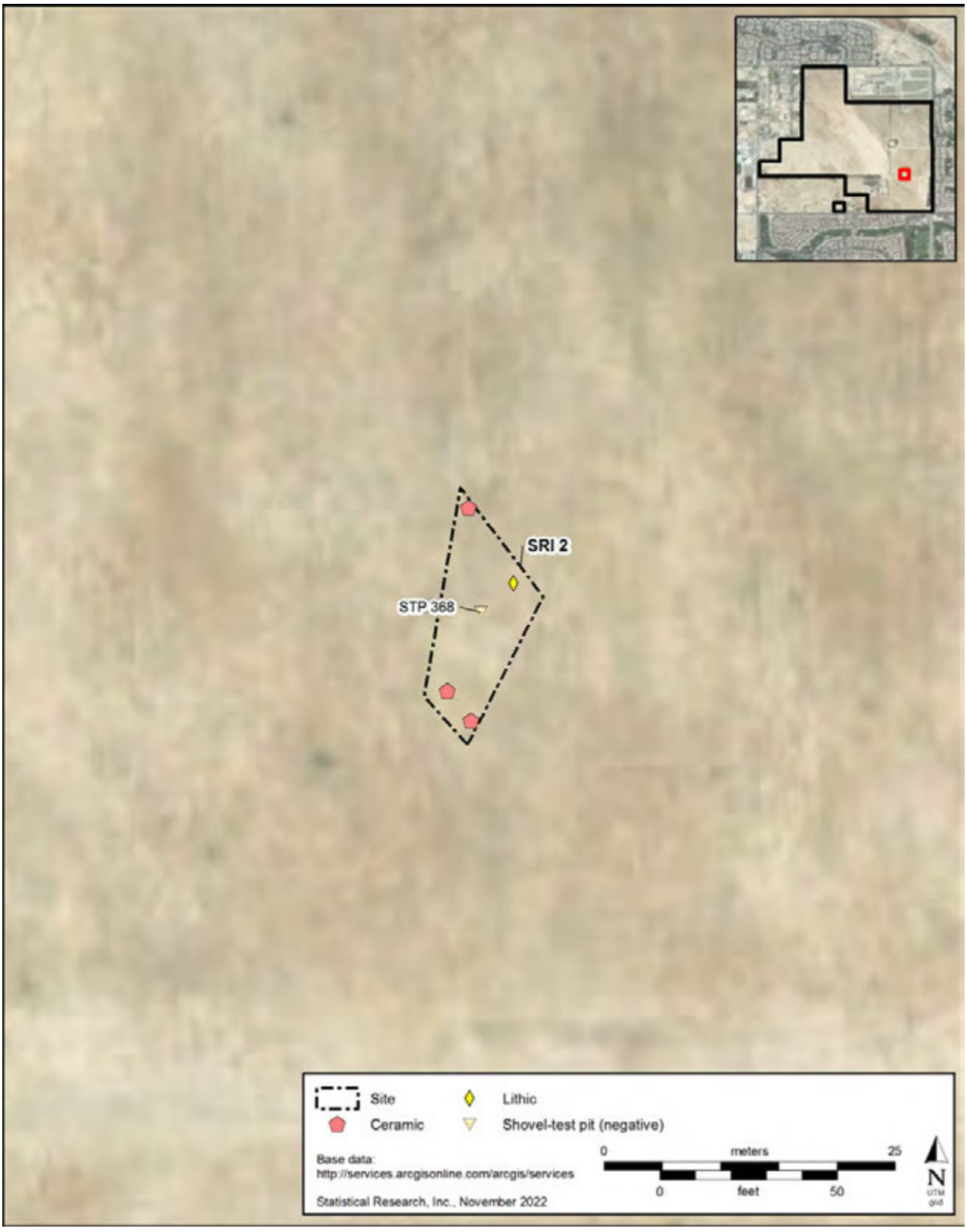

Figure 7.2. Sketch map of SRI 2.

Table 7.6. Results of the STP Testing within Site Boundaries, by Site

STP No.	Level Thickness (cm)	Final Depth (cmbs)	Positive/Negative	Reason for Termination	Notes
			SRI 2		
368	20	80	negative	sterile deposit	
			SRI 11		
363	20	80	negative	sterile deposit	
			SRI 15		
473	20	80	**positive**	sterile deposit	artifacts found in Level 2
508	20	80	negative	sterile deposit	
530	20	80	negative	sterile deposit	
535	20	80	negative	sterile deposit	
540	20	80	**positive**	sterile deposit	artifacts found in Level 2
545	20	80	negative	sterile deposit	
551	20	80	negative	sterile deposit	
556	20	80	negative	sterile deposit	
561	20	80	**positive**	sterile deposit	artifacts found in Level 3
566	20	80	**positive**	sterile deposit	artifacts found in Level 2
571	20	80	negative	sterile deposit	
576	20	80	negative	sterile deposit	
581	20	80	negative	sterile deposit	
586	20	80	negative	sterile deposit	
591	20	80	negative	sterile deposit	
596	20	80	**positive**	sterile deposit	artifacts found in Level 1
601	20	80	negative	sterile deposit	
606	20	80	negative	sterile deposit	
611	20	80	negative	sterile deposit	
616	20	80	negative	sterile deposit	
621	20	80	negative	sterile deposit	
626	20	40	**positive**	thermal feature	feature found at the bottom of Level 2
631	20	80	negative	sterile deposit	
636	20	80	negative	sterile deposit	
641	20	80	negative	sterile deposit	
646	20	80	negative	sterile deposit	
651	20	80	negative	sterile deposit	
656	20	80	negative	sterile deposit	
661	20	80	negative	sterile deposit	
666	20	80	negative	sterile deposit	
671	20	80	negative	sterile deposit	
			SRI 42		
104	20	80	negative	sterile deposit	
			SRI 239		
251	20	80	negative	sterile deposit	
317	20	100	negative	sterile deposit	
325	20	100	negative	sterile deposit	

STP No.	Level Thickness (cm)	Final Depth (cmbs)	Positive/Negative	Reason for Termination	Notes
			SRI 769		
688	20	80	negative	sterile deposit	
693	20	80	negative	sterile deposit	
698	20	80	negative	sterile deposit	
703	20	80	negative	sterile deposit	
708	20	80	negative	sterile deposit	
			SRI 776		
108	20	80	negative	sterile deposit	
120	20	100	negative	sterile deposit	
128	20	100	negative	sterile deposit	
142	20	100	negative	sterile deposit	
146	20	120	**positive**	sterile deposit	two auger levels were excavated to test beneath the flattened granite rock
150	20	100	negative	sterile deposit	
171	20	100	negative	sterile deposit	
179	20	100	negative	sterile deposit	
183	20	80	negative	sterile deposit	
187	20	80	negative	sterile deposit	
204	20	80	negative	sterile deposit	
208	20	100	negative	sterile deposit	
212	20	100	negative	sterile deposit	
216	20	100	negative	sterile deposit	
220	20	80	negative	sterile deposit	
233	20	100	negative	sterile deposit	
241	20	80	**positive**	sterile deposit	artifacts found in Levels 1 and 2
256	20	80	negative	sterile deposit	
261	20	100	negative	sterile deposit	
266	20	100	negative	sterile deposit	
273	20	80	negative	sterile deposit	
278	20	100	negative	sterile deposit	
285	20	100	negative	sterile deposit	
290	20	100	**positive**	sterile deposit	artifacts found in Level 2
295	20	80	**positive**	sterile deposit	artifacts found in Levels 1–3
300	20	80	**positive**	sterile deposit	artifacts found in Levels 1 and 3
305	20	100	negative	sterile deposit	
310	20	80	negative	sterile deposit	
373	20	80	negative	sterile deposit	
378	20	80	**positive**	sterile deposit	possibly positive; petrified wood found in Level 2
383	20	80	negative	sterile deposit	
388	20	80	negative	sterile deposit	
393	20	80	negative	sterile deposit	
398	20	80	negative	sterile deposit	

continued on next page

STP No.	Level Thickness (cm)	Final Depth (cmbs)	Positive/Negative	Reason for Termination	Notes
403	20	80	negative	sterile deposit	
408	20	80	negative	sterile deposit	
413	20	80	**positive**	sterile deposit	artifacts found in Level 3
418	20	80	negative	sterile deposit	
423	20	80	negative	sterile deposit	
428	20	80	negative	sterile deposit	
438	20	80	negative	sterile deposit	
443	20	80	negative	sterile deposit	
448	20	80	negative	sterile deposit	
488	20	80	negative	sterile deposit	

SRI 11

SRI 11 was identified as a small prehistoric ceramic scatter composed of 9 undecorated brown ware sherds (8 body sherds and 1 rim sherd; see Table 7.5) covering a 16-by-22-m (52.5-by-72.2-foot) area (Figure 7.3). A single STP (STP 363) was placed within the borders of the site but was negative for cultural material (see Table 7.6). Charcoal flecks, likely from a natural origin, were found throughout the STP from the surface to 60 cmbs (23.6 inches below surface). The surface of SRI 11 has been heavily disturbed from agricultural activities, which have significantly reduced the site's integrity.

SRI 15

SRI 15 was identified as a large prehistoric artifact scatter covering a 143-by-110-m (469.2-by-360.9-foot) area (Figure 7.4). The site contains an array of artifacts in 2 distinct artifact concentrations likely including an estimated 500+ (381 recorded) ceramic body and rim sherds (see OUs, below; Table 7.5), 2 complete manos (Point Proveniences [PPs] 57 and 550; Figure 7.5) and 1 mano fragment, 2 slab metates (PPs 53 and 55), 4 ground stone fragments (PPs 56 and 67), 1 spire-lopped *Olivella* shell bead (PP 69; Figure 7.6), 1 shell disc bead (PP 72; Figure 7.7), faunal bone, 11 marine-shell fragments (including PPs 28 and 59), 1 quartzite biface flake, 1 rhyolite core flake, 2 chert core flakes, 3 quartz core flakes, a quartzite flake-core fragment (PP 66), 3 pieces of quartzite shatter, 1 rhyolite Cottonwood projectile point (PP 524; Figure 7.8), and 10 pieces of FAR. Three pieces of pottery were identified as incised brown ware (PP 74; Figure 7.9), 1 was painted with diagonal lines (PP 523; Figure 7.10), and 4 were cordage-pressed brown ware (PP 68; Figure 7.11). Though scattered throughout the site, artifact concentrations were notably greater in depressions between sand dunes and plant growth. No features were observed on the surface, but a single thermal feature (Feature 681) was recorded at approximately 40 cmbs (15.7 inches below surface) in STP 626 and TP 676 (see Features, below).

In addition to the identifiable faunal bone, the survey revealed the presence of a small number of burned and calcined bone fragments. With this bone in association with the FAR and artifacts that are often found in association with human burials/cremations, such as beads, there is a possibility that at least one heavily disturbed human cremation is associated with this site. However, neither SRI nor the Riverside County Coroner's Office could positively identify any bone as human or animal, because of the heavily fragmented nature of the materials and the lack of diagnostic traits. Still, the Riverside County Coroner's Office did notify the NAHC to alert them to the potential for human remains on-site (see Riverside County Coroner Site Visit, below).

Although a large variety and a large quantity of artifacts were discovered at SRI 15, agricultural activities and the construction of the dirt road that bisects the southern portion of the site have greatly reduced the site's integrity on the surface and within the plow zone. The presence of an intact feature (Feature 681) suggests that the site maintains some degree of depth and subsurface integrity below the plow zone.

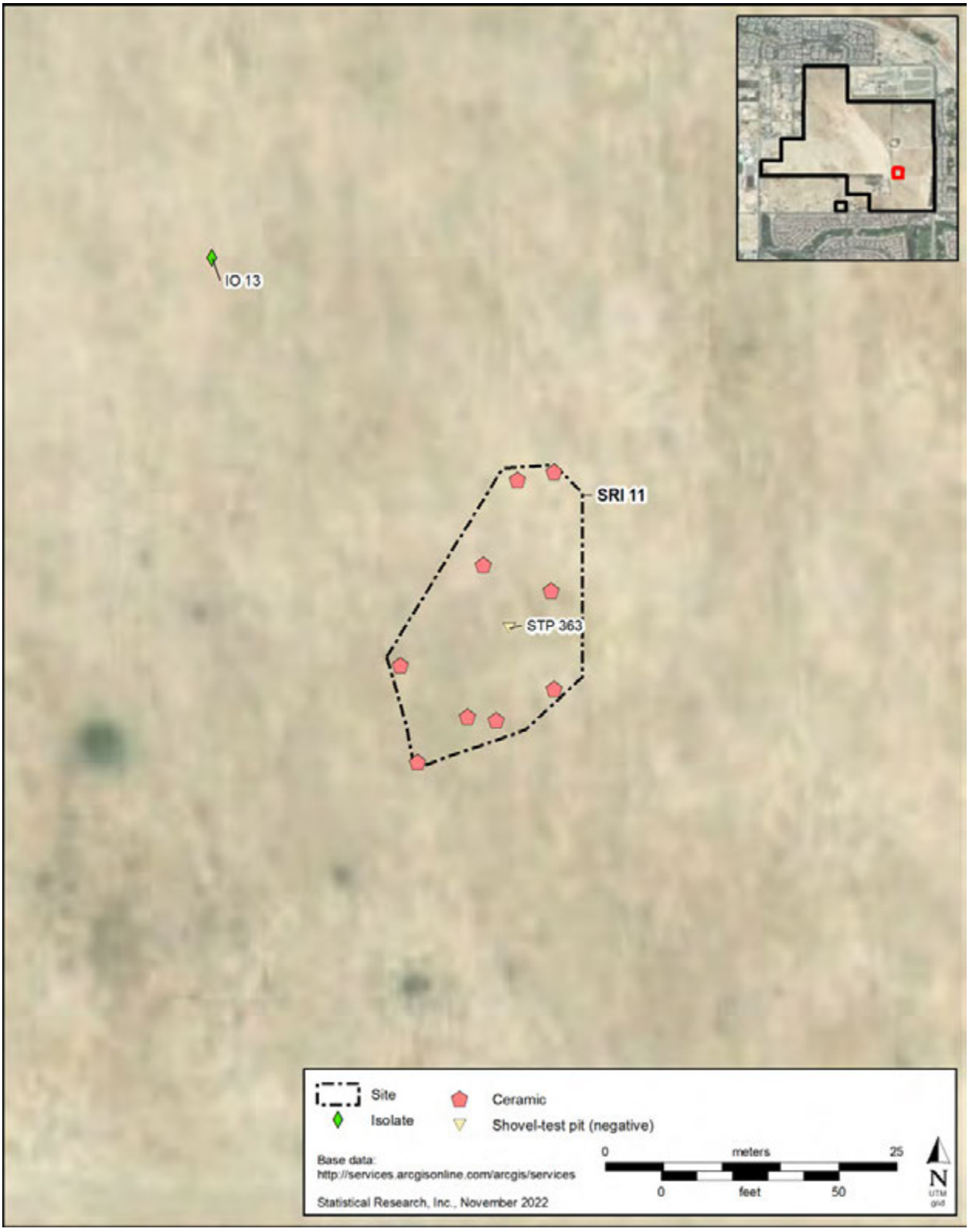

Figure 7.3. Sketch map of SRI 11.

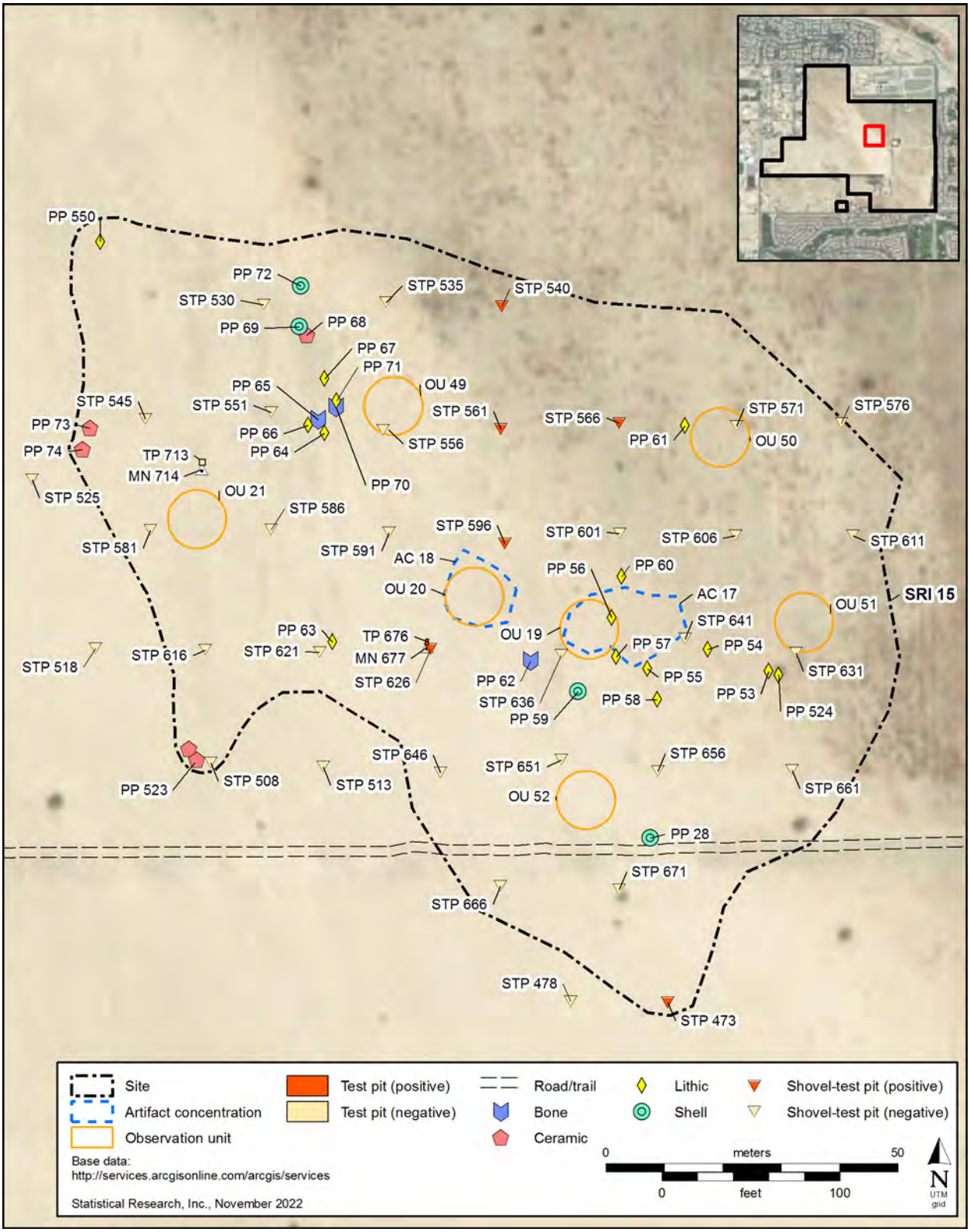

Figure 7.4. Sketch map of SRI 15.

Figure 7.5. Photograph of the complete mano (PP 550) recorded at SRI 15.

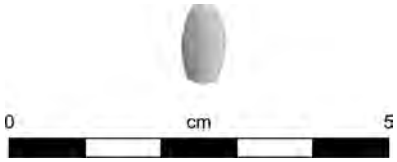

Figure 7.6. Photograph of the spire-lopped *Olivella* shell bead (PP 69) recorded at SRI 15.

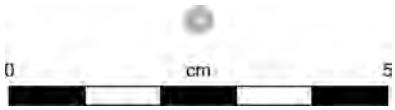

Figure 7.7. Photograph of the shell disc bead (PP 72) recorded at SRI 15.

Figure 7.8. Photograph of the Cottonwood projectile point recorded at SRI 15.

Figure 7.9. Photograph of the incised brownware ceramic body sherd (PP 74) recorded at SRI 15.

Figure 7.10. Photograph of the painted ceramic with diagonal lines (PP 523) recorded at SRI 15.

Figure 7.11. Photograph of the cordage-pressed ceramic body sherd (PD68) recorded at SRI 15.

OUs

Because of the high density of artifacts on the surface of SRI 15, 7 10-m (32.8-foot) OUs were created to gain a clearer understanding of the site's surface. The findings from these OUs were extrapolated to provide an estimate regarding the presence of ceramic artifacts across the site surface as a whole (Table 7.7). The artifacts observed within the OUs were primarily ceramic sherds (n = 181); 3 pieces of quartz shatter, a piece of FAR, and a marine-shell fragment were also recorded. Of the 181 ceramic sherds found within the OUs, over half were identified as Salton Buff Ware, and approximately 24 percent were identified as Tizon Brown Ware; the rest of the sherds in the OUs were identified as Parker Buff Ware, Tumco Buff Ware, and Hedges Buff Ware.

Table 7.7. Results from the OUs at SRI 15

Artifacts, by Unit No.	Count
OU 19	
FAR	1
Quartz shatter	2
Salton Buff Ware sherds	29
Tizon Brown Ware sherds	17
Hedges Buff Ware sherds	12
Tumco Buff Ware sherds	2
OU 20	
Salton Buff Ware sherds	18
Tizon Brown Ware sherds	6
OU 21	
Marine-shell fragments	1
Parker Buff Ware sherds	21
Salton Buff Ware sherds	31
Tizon Brown Ware sherds	14
OU 49	
Salton Buff Ware sherds	4
Tizon Brown Ware sherd	1
Tumco Buff Ware sherds	6
OU 50	
Salton Buff Ware sherds	4
OU 51	
Quartz shatter	1
Salton Buff Ware sherds	8
Tizon Brown Ware sherds	4
OU 52	
Salton Buff Ware sherd	1
Tizon Brown Ware sherds	3

Features

A single thermal feature (Feature 681) was discovered at 39 cmbs (15.4 inches below surface) in STP 626 and was further explored in TP 676. The feature terminated at 48 cmbs (18.9 inches below surface). The thermal feature had substantial white, ashy deposits mixed with the silty-clay matrix that expanded across the entire unit. Large pieces of intact charcoal were found above and within the feature. All sediment from the feature was retained for flotation. Light-fraction findings included charcoal, and the heavy fraction included fire-affected clay, charcoal, and three brown ware ceramic sherds**.** Three charcoal samples were taken from Feature 681 during excavation; a single sample was sent to Beta for radiocarbon dating. The results of the radiocarbon dating placed the feature at approximately 210 (±30) cal B.P., or approximately cal A.D. 1729–1808 (see Appendix C).

Feature 681 has been interpreted as resulting from anthropogenic burning, possibly from a cooking fire or other short-term-use fire, within a small temporary camp along the edge of Lake Cahuilla. The fire-affected-clay layers directly beneath the feature are likely the results of heat radiating down into the clay layer below the feature.

Excavation Units

In total, 31 STPs were excavated at SRI 15. Twenty-four STPs were negative except for charcoal flakes, likely from a natural origin, observed between the surface and 40 cmbs (15.7 inches below surface). Six STPs (STPs 473, 540, 561, 566, 596, and 626), however, were positive for cultural materials. In STP 473, a small weather-worn ceramic body sherd was found between 40 and 60 cmbs (between 15.7 and 23.6 inches below surface). In STP 540, an unmodified piece of obsidian gravel and small faunal remains were found between 20 and 40 cmbs (between 7.9 and 15.7 inches below surface). In STP 561, an indeterminant fire-affected bone fragment was found between 40 and 60 cmbs (between 15.7 and 23.6 inches below surface; see Table 7.6). The presence of cultural material at this depth suggests that it is in situ, because it is below the average plow zone of the Project area. No other cultural material was excavated from the STP.

In STPs 566 and 596, a single ceramic sherd each was discovered. A rim sherd was found at 26 cmbs (10.2 inches below surface) in STP 566, and a body sherd was found between the surface and 20 cmbs (7.9 inches below surface) in STP 596. Both sherds were found in the plow zone and are unlikely to be in situ.

In STP 626, the aforementioned thermal feature (Feature 681) was found at 39 cmbs (15.4 inches below surface). The top of the thermal feature consisted of a layer of fire-affected sand, increased ash within the silty-sand matrix, increased charcoal, and visibly baked clay. This STP was terminated at 40 cmbs (15.7 inches below surface), and a TP (TP 676) was placed over the STP for further testing (Figure 7.12).

In addition to the 29 STPs, 2 TPs (TPs 676 and 713) were excavated to help characterize the sediment within the site. TP 676 was placed slightly overlapping STP 626, to further explore Feature 681. To preserve the subsurface content of the feature for future potential data recovery efforts, TP 676 was reduced in size to 100 by 50 cm (39.4 by 19.7 inches). Nearly all the levels within this TP were sterile for cultural materials, but an increase in charcoal content (flecks) associated with Feature 681 was noted between 20 and 30 cmbs (between 7.9 and 11.8 inches below surface) and between 40 and 60 cmbs (between 15.7 and 23.6 inches below surface; see Table 7.6). A compact fire-affected-clay layer was observed in this TP below Feature 681, at a depth of 40–50 cmbs (15.7–19.7 inches below surface). Three ceramic body sherds, burnt clay, and large pieces of charcoal were found in this layer. One ceramic body sherd, burnt clay, and 1 quartzite biface flake were excavated from the layer directly under the feature. The other levels were sterile and followed a pattern of increased clay and clay loam from 60 to 100 cmbs (from 23.6 to 39.4 inches below surface; Figure 7.13). Some of the clay layers were finely laminated, suggesting an evaporative lake deposition (Carroll and Bohacs 1999). This indicates that the Lake Cahuilla boundaries included the Project area before 210 B.P., which aligns with the most recent inundation of the lake by the Colorado River around 300 B.P. (Wilke 1978).

TP 713 was placed on the western side of the site to further test the subsurface component. Surface finds nearby included a complete granite mano (PP 57), ceramic body sherds, quartz flakes, burned bone, and incised pottery (Figure 7.14). All 10 levels of the TP were negative for cultural material (Figure 7.15; Table 7.8).

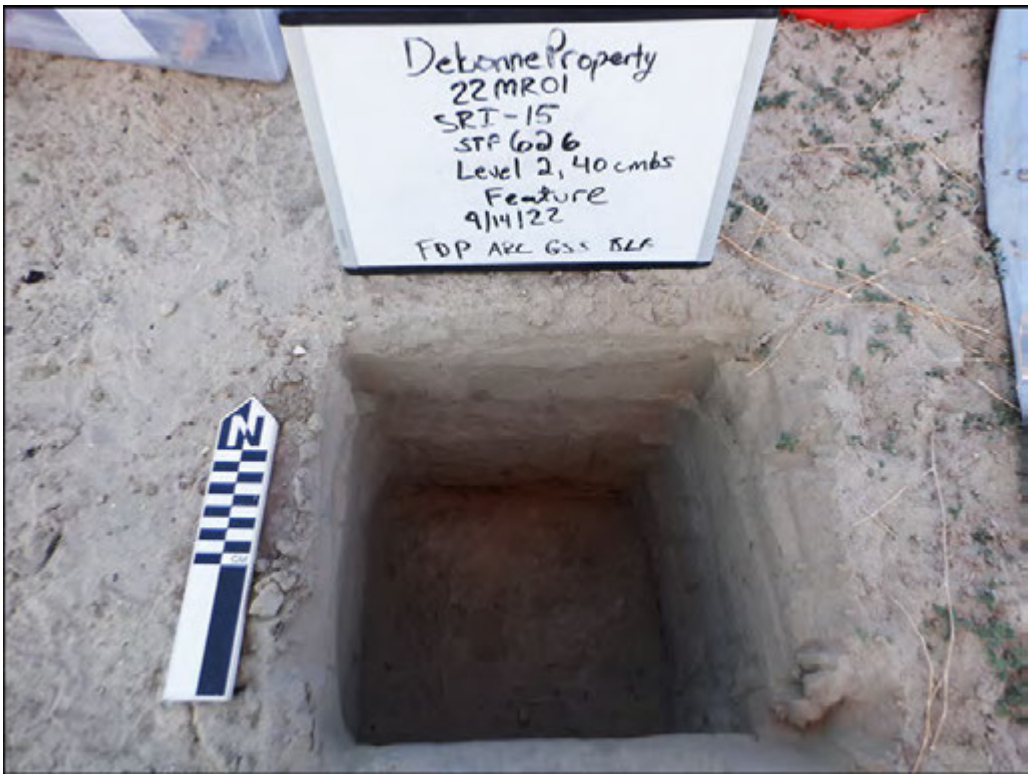

Figure 7.12. Photograph of the thermal feature encountered in STP 626 at SRI 15.

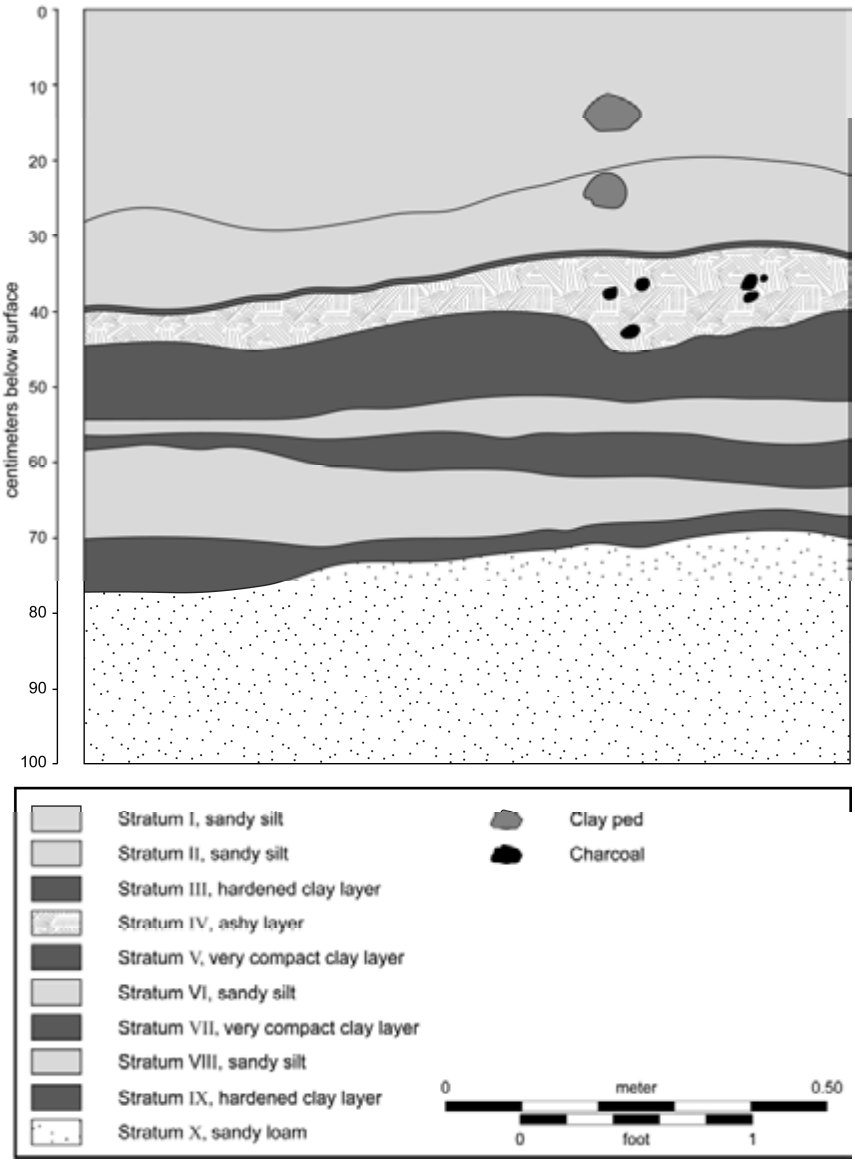

Figure 7.13. Profile drawing of TP 676 at SRI 15.

Figure 7.14. Photograph of the incised brownware ceramic body sherd (PD 16) recorded at SRI 15.

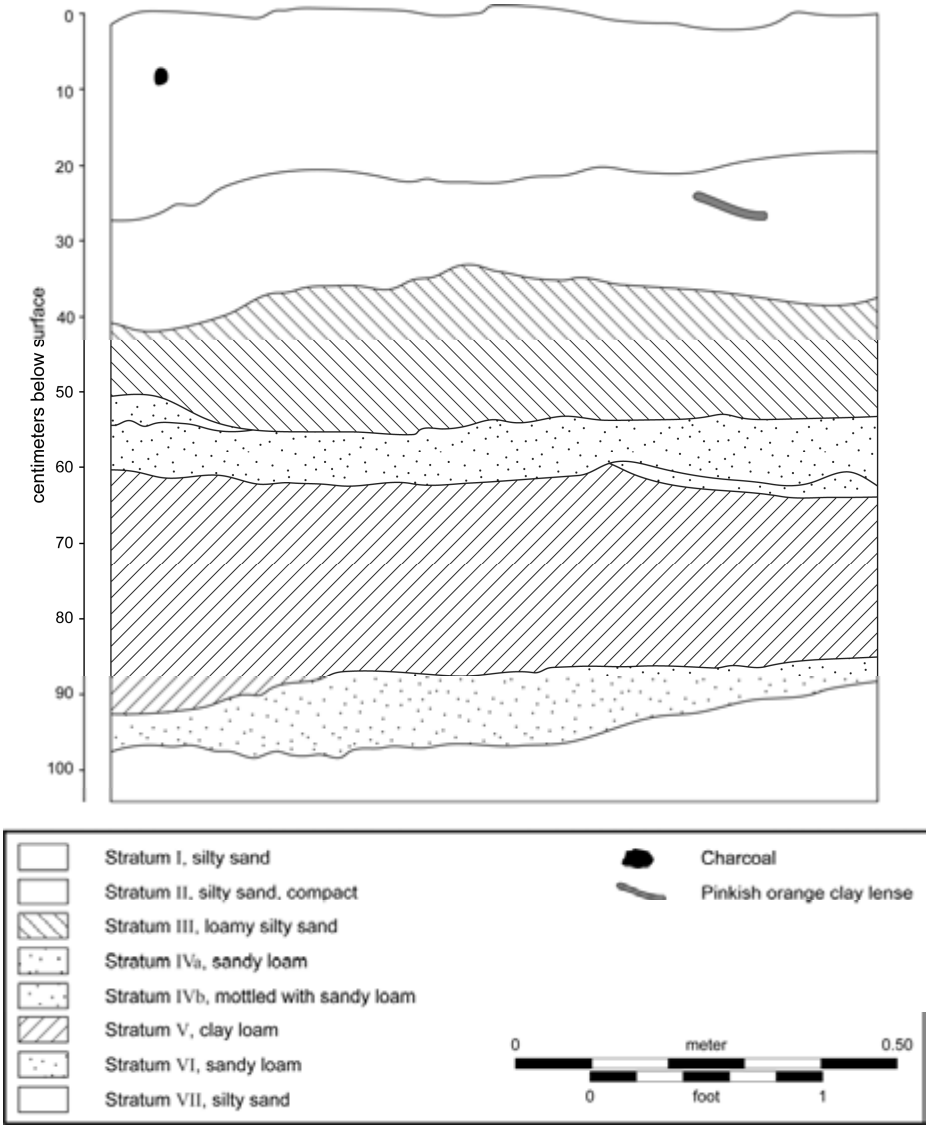

Figure 7.15. Profile drawing of TP 713 at SRI 15.

Table 7.8. TP Results, by Site

TP No.	Level No.	Depth of Level (cmbs)	Positive/ Negative	Soil Texture	Soil Color	Notes
				SRI 15		
676	1	0–10	negative	sandy silt	2.5Y 5/2	
	2	10–20	negative	sandy silt	2.5Y 5/3	
	3	20–30	negative	sandy silt	2.5Y 6/2	
	4	30–40	negative	sandy silt	2.5Y 6/2	
	Feature 681	40–50	positive	sandy silt with ash	2.5Y 5/2	3 ceramic body sherds, burnt clay, and large pieces of charcoal (feature extended from 39 to 48 cmbs)
	5	50–60	positive	sandy clay	2.5Y 6/3	1 ceramic body sherd, 1 quartzite flake, burnt clay, and a large piece of charcoal
	6	60–70	negative	clay silt	2.5Y 5/3	
	7	70–80	negative	clay silt	2.5Y 5/4	
	8	80–90	negative	clay silt	2.5Y 5/4	
	9	90–100	negative	sandy loam	2.5Y 4/3	
713	1	0–10	negative	silty sand	2.5Y 5/3	surface was 2.5Y 6/3
	2	10–20	negative	silty sand	2.5Y 5/3	
	3	20–30	negative	sandy clay	2.5Y 5/3	
	4	30–40	negative	sandy clay	2.5Y 4/3	
	5	40–50	negative	clay loam	2.5Y 6/2	
	6	50–60	negative	clay loam	5Y 4/2	
	7	60–70	negative	sandy clay	2.5Y 5/3	
	8	70–80	negative	sandy clay	2.5Y 5/3	
	9	80–90	negative	silty sandy clay	2.5Y 5/3	
	10	90–100	negative	silty sand	2.5Y 5/3	
				SRI 776, Locus A		
742	1	0–10	negative	silty sand	2.5Y 4/3	surface was 2.5Y 5/3
	2	10–20	negative	sandy silt	2.5Y 4/3	
	3	20–30	negative	sandy silt	2.5Y 5/3	
	4	30–40	negative	sandy clay	2.5Y 5/3	modern faunal disturbance
	5	40–50	negative	sandy clay	2.5Y 5/3	modern faunal bones and disturbance
	6	50–60	negative	silty sand	2.5Y 4/2	
	7	60–70	negative	sandy clay	2.5Y 4/3	
	8	70–80	negative	clay	2.5Y 4/3	
	9	80–90	negative	clay	2.5Y 4/3	
	10	90–100	negative	clay	2.5Y 4/3	
				SRI 776, Locus B		
754	1	0–10	negative	silty sand	2.5Y 6/3	
	2	10–20	negative	silty sand	2.5Y 6/3	
	3	20–30	negative	silty sand	2.5Y 5/3	
	4	30–40	negative	silty sand	2.5Y 6/3	
	5	40–50	negative	sandy clay	2.5Y 5/3	
	6	50–60	negative	sandy clay	2.5Y 3/3	
	7	60–70	negative	sandy clay	2.5Y 5/3	
	8	70–80	negative	silty sand	2.5Y 6/3	
	9	80–90	negative	clay	2.5Y 4/3	
	10	90–100	negative	sandy clay	2.5Y 4/3	

SRI 38

SRI 38 is a historical-period site consisting of a cluster of agricultural features covering a 14-by-29-m (45.9-by-95.1-foot) area. The features include a concrete foundation (Feature 35), a concrete well foundation (Feature 37), a well (Feature 36), and a standpipe (Feature 34) that may correspond to a historical-period structure plotted on the 1972 Myoma, California, 7.5-minute USGS topographic quadrangle map. The concrete well foundation measures 27.5 feet (7.6 m) long and 15.5 feet (4.7 m) wide. The well, which includes an adjacent cement pad, measures 4 feet (1.2 m) long and 10.5 feet (3.2 m) wide. The standpipe measures approximately 5 feet (1.5 m) long and 6 feet (1.8 m) wide (Figure 7.16; see Figure 7.1).

The features associated with this site exhibited poor to fair integrity. Previously associated buildings no longer exist in context at the site, but some features, such as the standpipe, are intact.

SRI 42

SRI 42 was identified as a small prehistoric site covering a 10-by-19-m (32.8-by-63.2-foot) area (Figure 7.17). Artifacts identified within the site boundaries included six similar ceramic body sherds (composed of orange paste with a fine sand temper) and one marine shell. A single STP, STP 104, was placed within the boundaries of the site but was negative for cultural material (see Table 7.6).

The surface of SRI 42 has been heavily disturbed from agricultural activities, which have significantly reduced the site's integrity. Furthermore, placement of the CVWD stockpile atop the site required collection of all the surface artifacts.

SRI 82

SRI 82 is a historical-period agricultural site associated with a single concrete water standpipe (Feature 23). This well feature is approximately 10.5 feet (3.2 m) tall and 3.5 feet (1.1 m) in diameter (Figure 7.18). The site retains good integrity; the cement feature appears to be completely intact.

SRI 239

SRI 239 is located 7 m (23 feet) west of a large series of sand dunes and modern berms (Figure 7.19). The site was identified during monitoring of the destruction and backfill of a subterranean indigent bunker by heavy machinery operated by Sukuts Construction personnel. That work was carried out using a bulldozer and was monitored by ACBCI staff. During monitoring, 26 ceramic body sherds, 1 rim sherd, 1 rhyolite core flake, and 1 marine-shell fragment were discovered. Three STPs were placed to test for a subsurface component; all 3 STPS were negative for cultural materials (see Table 7.6).

The surface of SRI 239 has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity. Furthermore, placement of the CVWD stockpile atop the site required collection of all the surface artifacts.

SRI 769

SRI 769 was identified during the process of relocating CA-RIV-8908 and consists of a 29-by-23-m (95.1-by-75.5-foot) ceramic scatter composed of two ceramic body sherds (PPs 770 and 773), one ceramic rim sherd (PP 771), and a piece of burnt clay (PP 772). Five STPs were excavated within the site area to test for a subsurface component; all were negative for cultural materials (Figure 7.20; see Table 7.6). The surface of SRI 769 has been heavily disturbed from agricultural activities, which have significantly reduced the site's integrity.

Figure 7.16. Sketch map of SRI 38.

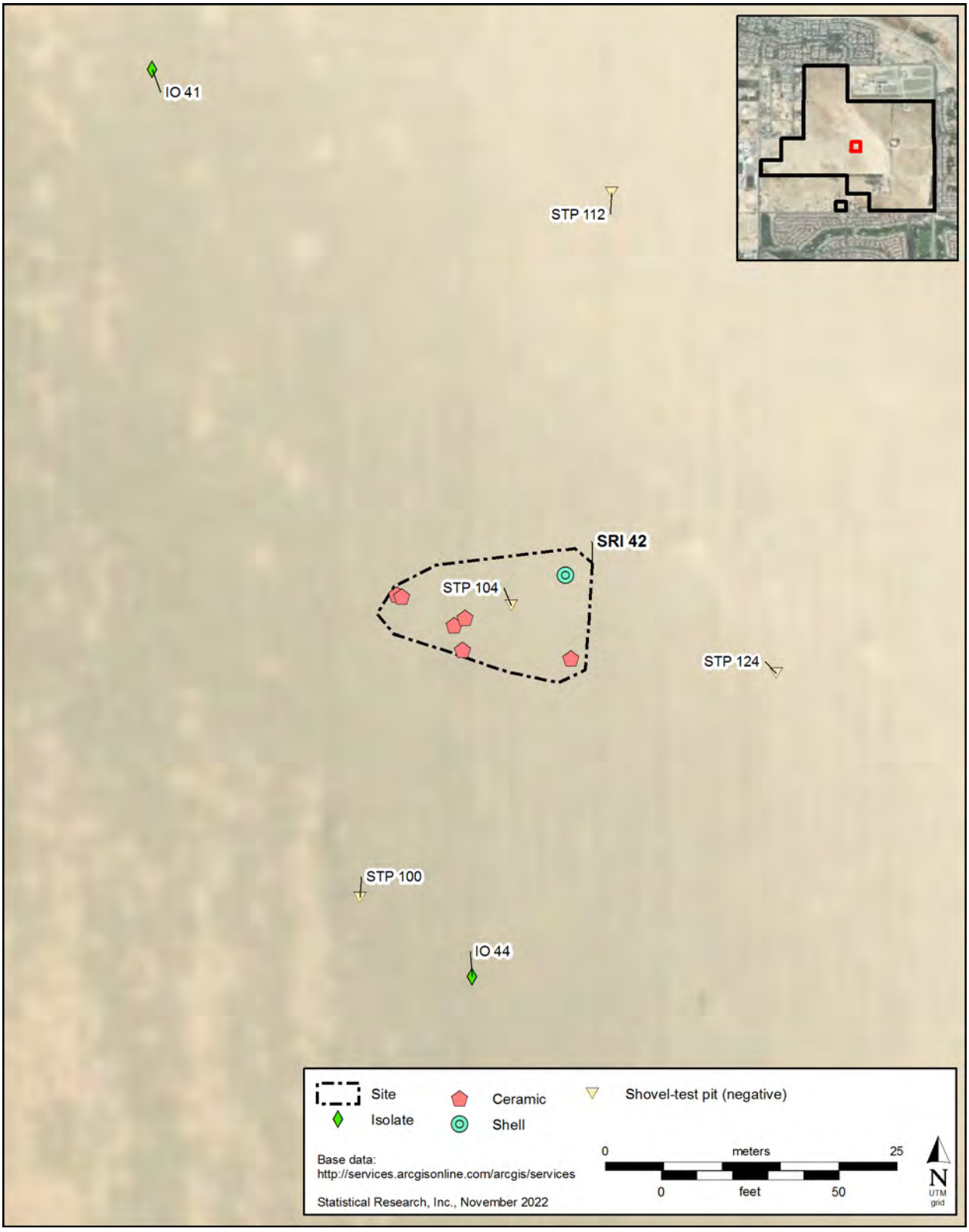

Figure 7.17. Sketch map of SRI 42.

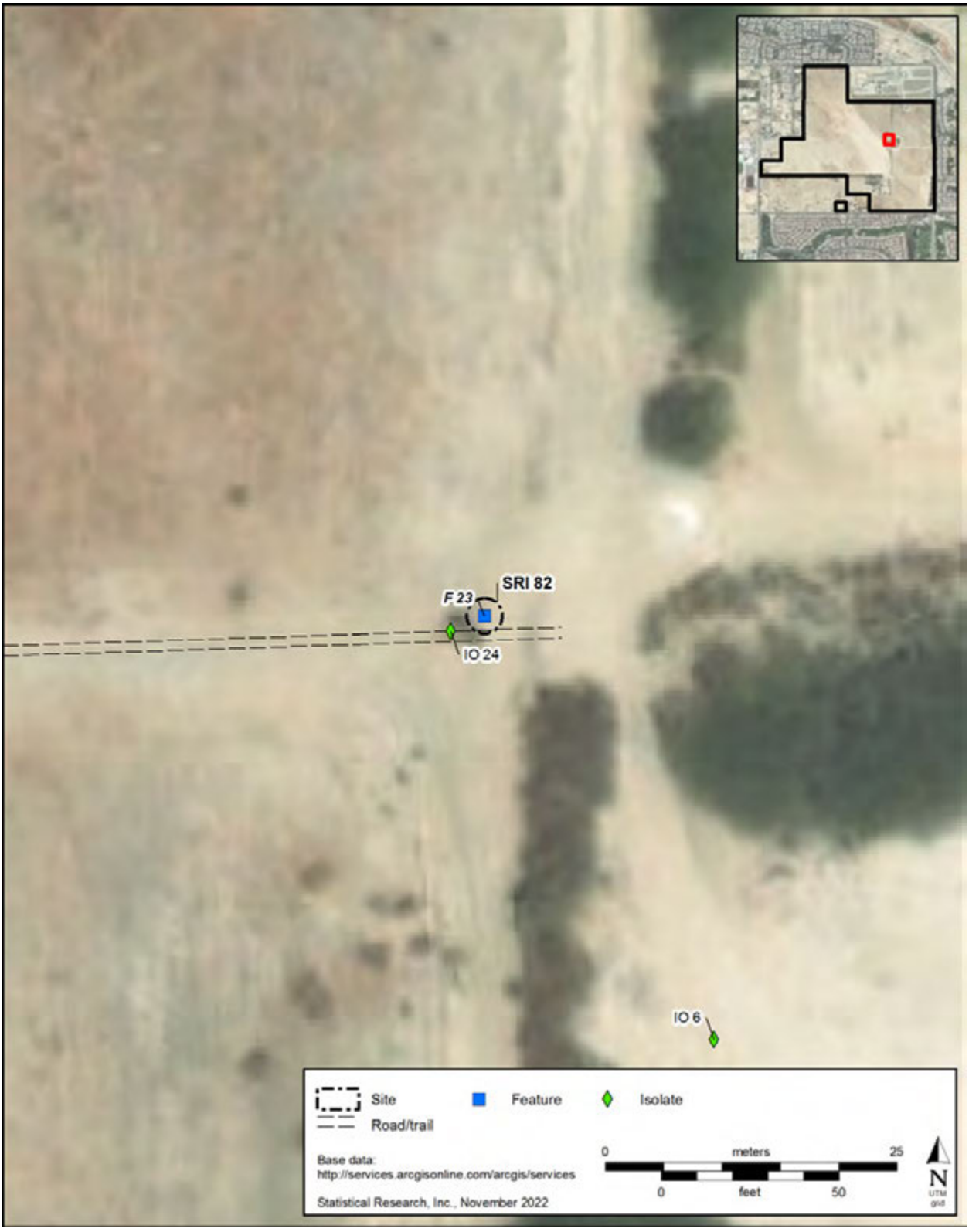

Figure 7.18. Sketch map of SRI 82.

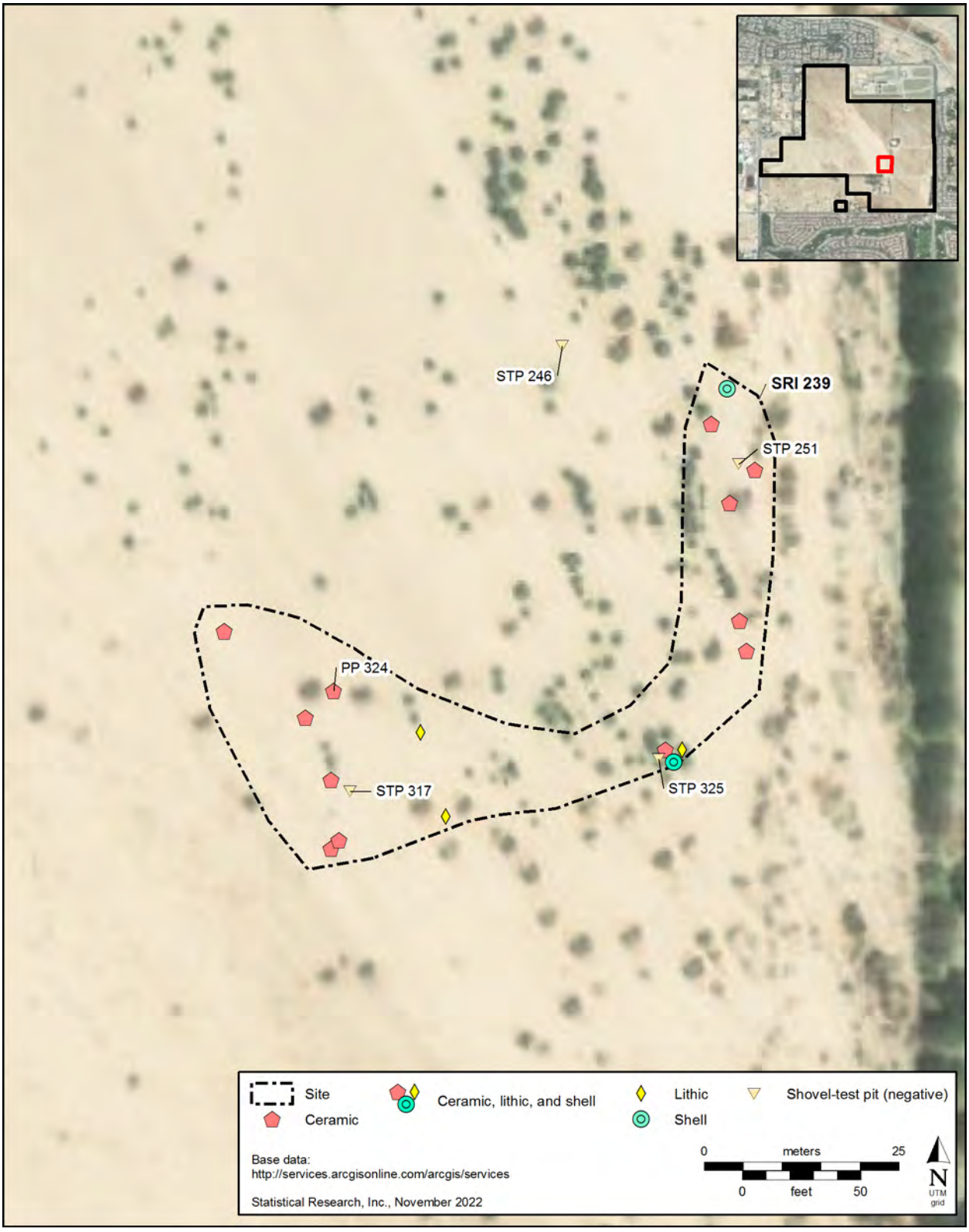

Figure 7.19. Sketch map of SRI 239.

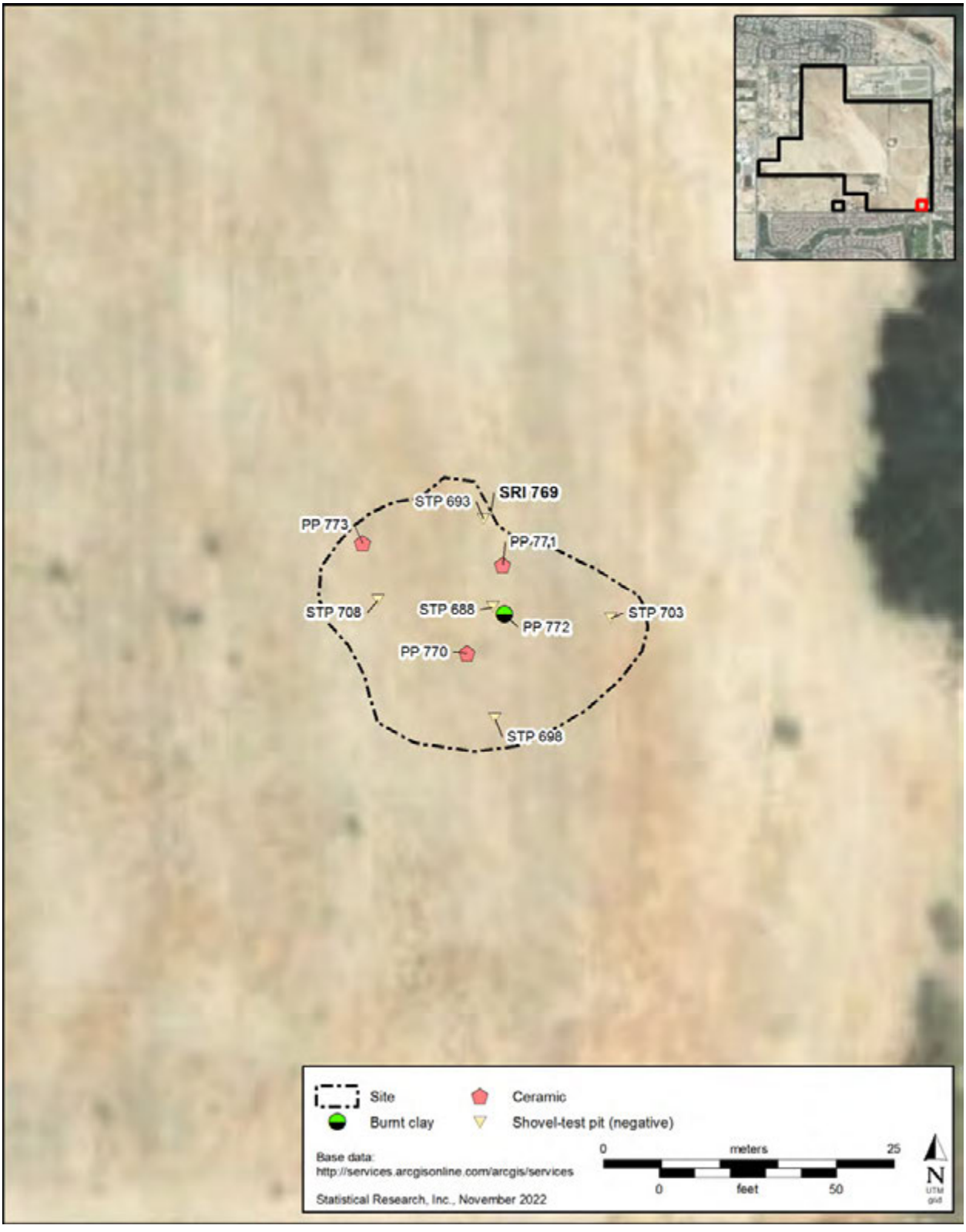

Figure 7.20. Sketch map of SRI 769.

SRI 776

SRI 776 was identified as a large prehistoric site covering a 227-by-179-m (744.8-by-587.3-foot) area (Figure 7.21). In total, 293 artifacts were recorded within the site boundaries: 3 pieces of nondiagnostic historical-period glass, 44 pieces of marine-mollusk shell, 1 burnt faunal-bone fragment, 2 weathered faunal-bone fragments, 1 small-mammal (rodent) bone, 2 pieces of lithic shatter, 1 hammerstone, 2 lithic manuports, a ground stone fragment (PP 346), 2 pieces of FAR, 3 core flakes, a unifacial tool (PP 784), 5 pieces of flattened stone, 214 ceramic body sherds, and 11 ceramic rim sherds. Of the ceramic sherds, 6 are painted, and 1 is incised gray ware (PP 355; Figure 7.22). The site consists of 4 dense artifact loci (Loci A–D), as well as isolated artifacts scattered between loci. In total, 44 STPs were excavated within the site boundaries, 6 of which were positive for cultural materials (STPs 146, 241, 290, 295, 300, and 413; see Table 7.6) and 1 of which was possibly positive for cultural materials (STP 378; see Table 7.6).

Because of the placement of the CVWD stockpile, the artifacts on the surface of SRI 776 were collected, with the exception of those in Locus B, which is outside the stockpile area. As a result of the collection of artifacts, the placement of the CVWD stockpile atop the site, and the heavy agricultural disturbance, the site's integrity has been drastically impacted.

Locus A

Locus A is a large ceramic scatter covering a 120-by-50-m (393.7-by-164.0-foot) area (Figure 7.23). Artifacts within the locus boundaries included 72 undecorated ceramic body sherds, 6 painted ceramic body sherds, 8 ceramic rim sherds, and 15 marine-shell fragments (Table 7.9). The lithic artifacts recorded in Locus A were 1 piece of jasper shatter, 1 piece of metavolcanic shatter, 1 small hammerstone, 5 pieces of flattened stone, and 2 manuports.

Twelve STPs were placed within the locus boundaries; 11 were negative for cultural materials, and 1 (STP 378) was potentially positive (see Figure 7.1 and Table 7.6). These STP results align with the findings from STPs in other parts of the Project area in that charcoal flakes, likely from a natural origin, were observed from the surface to 40 cmbs (15.7 inches below surface).

STP 378 was potentially positive; a piece of petrified wood was discovered between 20 and 40 cmbs (between 7.9 and 15.7 inches below surface). This material may have been brought to the site; conversely, because the sediment within the Project area is sensitive for paleontological resources, it may represent a naturally occurring paleontological resource. Because the material was found in the plow zone, its provenance is difficult to ascertain.

STP 146 was likewise possibly positive for cultural material (Figure 7.25). The top of a flattened granitic rock appeared in the southeastern corner of the STP at 70 cmbs (27.6 inches below surface). The modified rock ended at approximately 82 cmbs (32.3 inches below surface; Figure 7.26). After continuing excavation to 90 cmbs (35.4 inches below surface) to test the extent of the modified rock, an auger was used to test for cultural material below the final excavated level. Two 10-cm (3.9-inch) levels were probed using an auger, and both levels were negative.

A single TP, TP 742, was placed on the northwestern side of the locus, in an artifact-dense location, to further test the subsurface component of the locus. All 10 levels of TP 742 were negative for cultural materials (Figure 7.27; see Table 7.8).

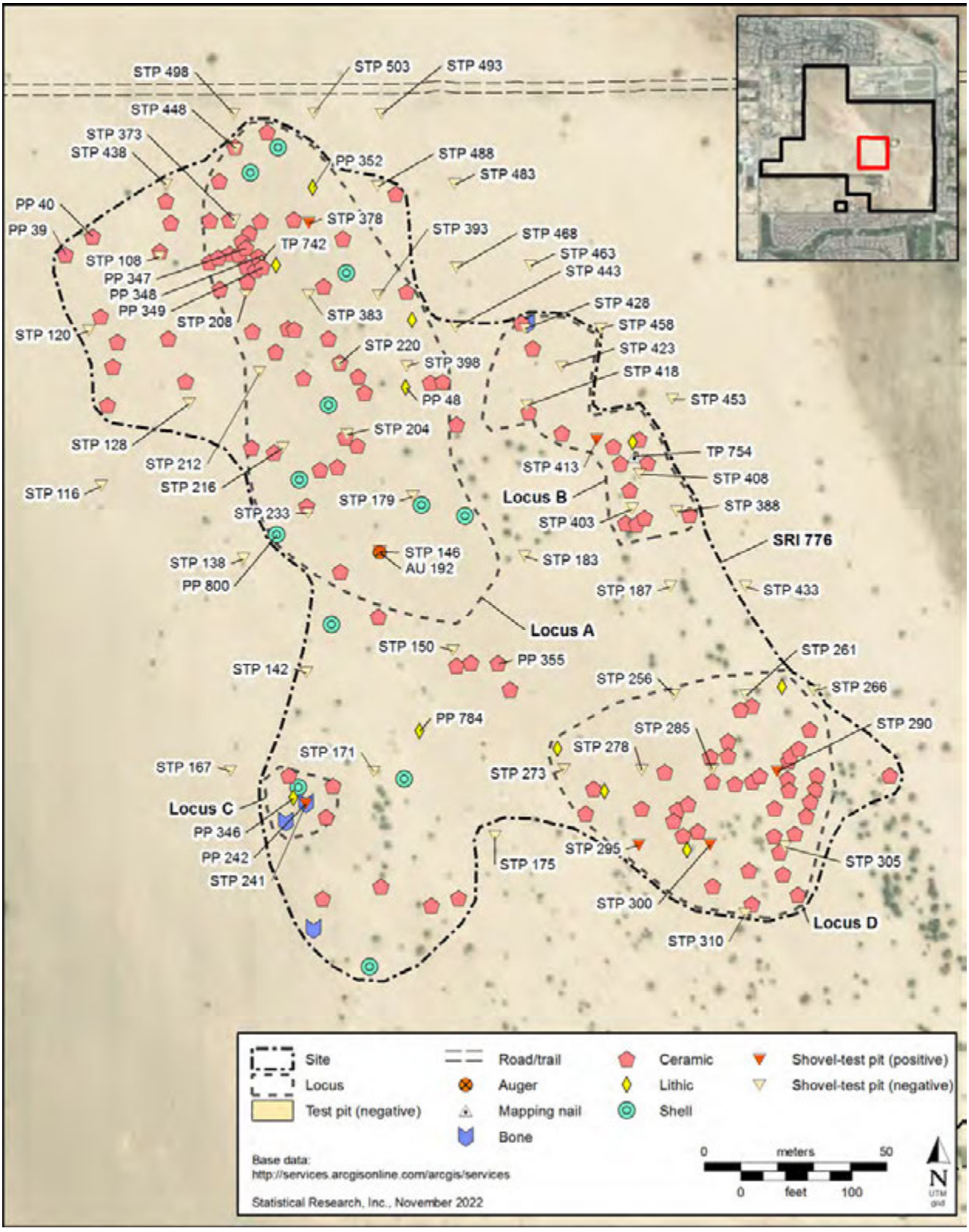

Figure 7.21. Sketch map of SRI 776.

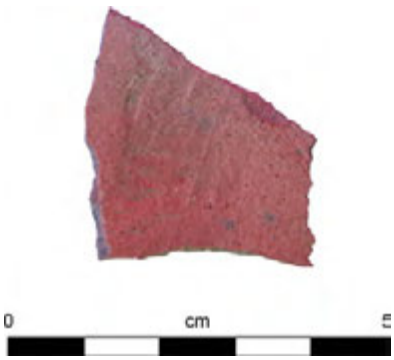

Figure 7.22. Photograph of the incised grayware body sherd (PP 355) recorded at SRI 776.

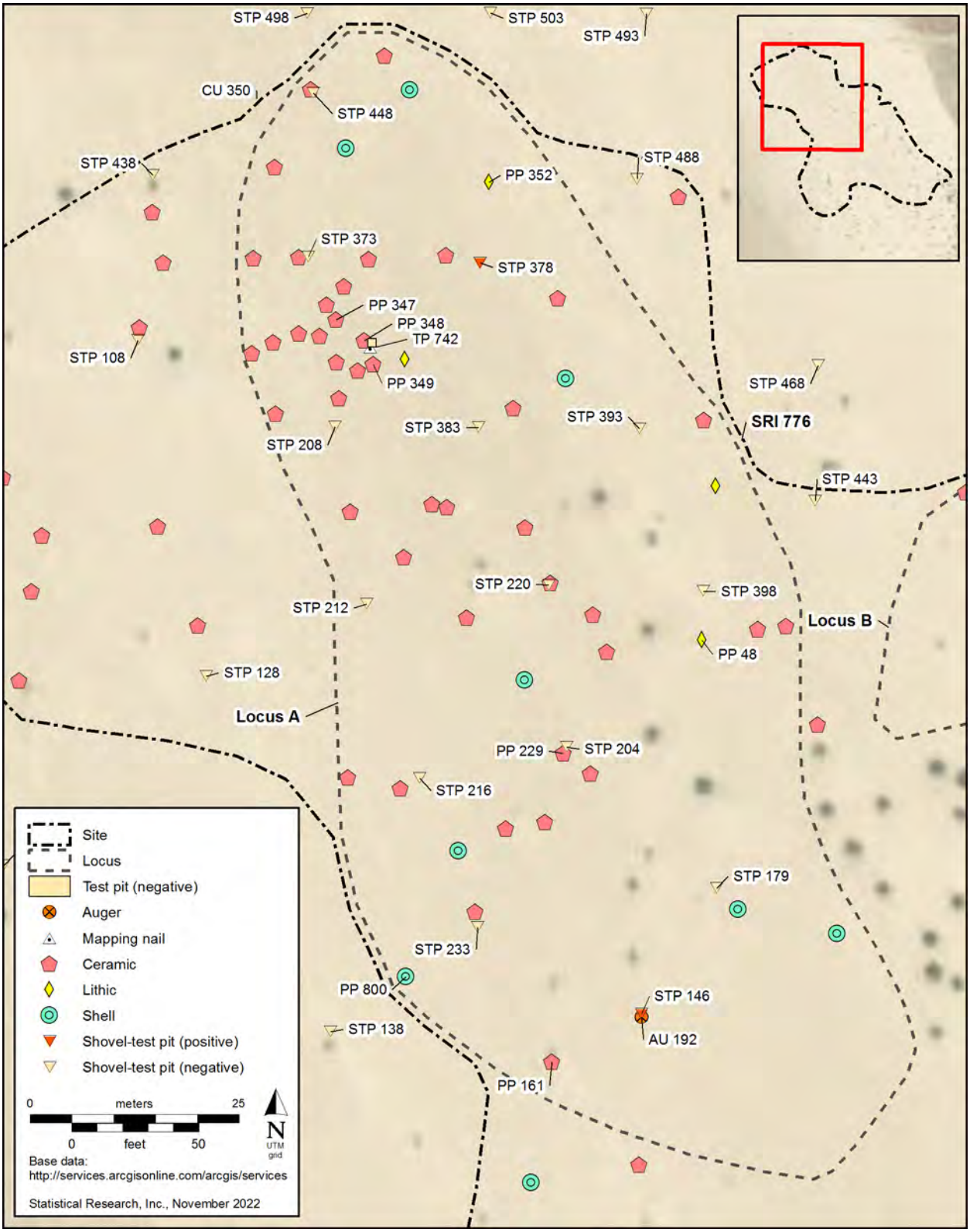

Figure 7.23. Detail sketch map of Locus A at SRI 776.

Figure 7.24. Photograph of the painted ceramic body sherd recorded in Locus A at SRI 776.

Table 7.9. SRI 776 Artifact Summary, by Location

Artifact Type, by Category	Condition	PP No.[a]	Artifact Count
	Locus A		
Faunal			
Mollusk shell	fragment		15
Lithic			
Flattened stone, granite	fragment		5
Hammerstone	fragment		1
Manuport, metavolcanic	complete	352	1
Manuport, petrified wood	fragment		1
Shatter, jasper	fragment		1
Shatter, metavolcanic	fragment	48	1
Ceramic			
Brown ware body sherd	fragment		8
Brown ware rim sherd	fragment		2
Buff ware body sherd	fragment		16
Gray ware body sherd	fragment		2
Gray ware rim sherd	fragment		2
Gray ware rim sherd, incised	fragment	355	1
Hedges/Salton Buff Ware	fragment		2
Indeterminate brown or gray ware body sherd	fragment		33
Indeterminate brown or gray ware body sherd, painted	fragment		6
Salton Brown Ware	fragment		6
Salton Buff Ware	fragment		3
Salton Buff Ware rim	fragment		1
Topoc Buff Ware rim	fragment		2
Tumco Buff Ware	fragment		2
Subtotal			111

continued on next page

Artifact Type, by Category	Condition	PP No.[a]	Artifact Count
	Locus B		
Faunal			
Burnt mammal bone	fragment		1
Weathered mammal long bone	fragment		1
Lithic			
FAR, granite	fragment	30	1
Ceramic			
Buff ware, body sherd	fragment		2
Gray ware, body sherd	fragment		1
Indeterminate brown or gray ware body sherd	fragment		3
Indeterminate brown or gray ware incised rim sherd	fragment		1
Salton Brown Ware	fragment		1
Salton Buff Ware	fragment		1
Topoc Buff Ware	fragment		2
Subtotal			14
	Locus C		
Faunal			
Marine-mollusk shell	fragment		1
Weathered ungulate phalanx	complete		1
Lithic			
Indeterminate ground stone, granite	fragment	346	1
Ceramic			
Brown ware, indeterminate	fragment		2
Salton Brown Ware	fragment		2
Subtotal			7
	Locus D		
Faunal			
Mollusk shell	fragment		25
Small-mammal (rodent) flat bone	fragment		1
Lithic			
Debitage: chert core flake	fragment	27	1
Debitage: metamorphic core flake	complete	27	1
Debitage: quartzite core flake	complete	27	1
FAR, granite	fragment	27	1
Ceramic			
Brown ware body sherd	fragment		6
Brown ware rim sherd	fragment		1
Buff ware body sherd	fragment		12
Buff ware rim sherd	fragment		1
Gray ware body sherd	fragment		2
Indeterminate brown or gray ware body sherd	fragment		72

Artifact Type, by Category	Condition	PP No.[a]	Artifact Count
Salton Brown Ware	fragment		4
Salton Buff Ware	fragment		5
Topoc Buff Ware	fragment		7
Tumco Buff Ware	fragment		3
Historical-period artifacts			
Indeterminate glass	fragment		3
Subtotal			146
	Non-Locus Artifacts		
Faunal			
Marine-mollusk shell	fragment		3
Ceramic			
Buff ware body sherd	fragment		2
Indeterminate brown or gray ware body sherd	fragment		8
Tumco Buff Ware	fragment		1
Lithic			
Unifacial tool, metavolcanic	complete		1
Subtotal			15
Total			289

[a] Artifacts without PP numbers were recorded as general sitewide observations.

Figure 7.25. Photograph of STP 146 at SRI 776, showing the flattened stone recorded in Locus A.

Figure 7.26. Photograph of the flattened stone excavated from Level 4 (60–80 cmbs) in STP 146 at SRI 776.

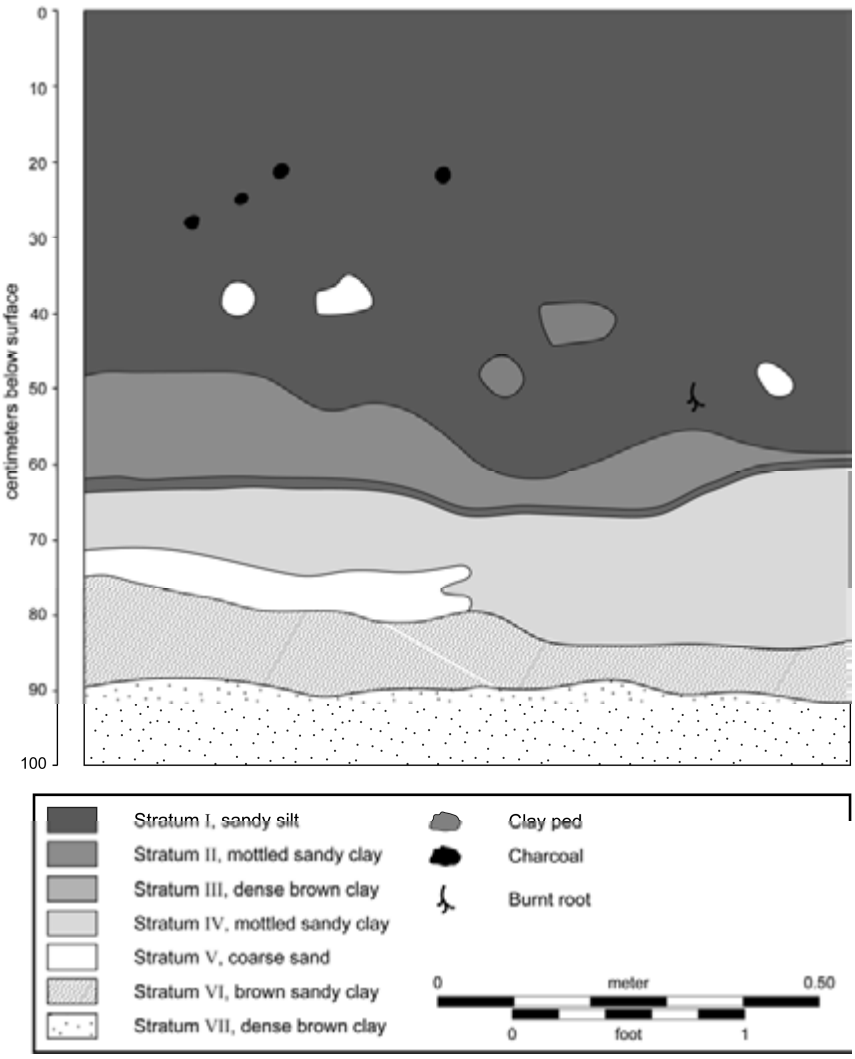

Figure 7.27. Profile drawing of TP 742 at SRI 776.

Locus B

Locus B covered a 64-by-48-m (210.0-by-157.5-foot) area (Figure 7.28). One burnt bone fragment, 1 weathered bone fragment, 10 ceramic body sherds, 1 indeterminate brown or gray ware rim sherd, and a piece of FAR (PP 30) were found within the site boundaries (see Table 7.9).

Seven STPs were placed within the locus boundaries (see Table 7.5). Six were negative. The results from these six STPs aligned with the findings from the STPs in other parts of the Project area in that they contained charcoal flakes, likely from a natural origin, from the surface to 40 cmbs (15.7 inches below surface).

Only one STP, STP 413, was positive for cultural material. This STP contained a small, weathered faunal long-bone fragment that was discovered between 40 and 60 cmbs (between 15.7 and 23.6 inches below surface). The presence of cultural material at this depth suggests that it is in situ, because it is below the average plow zone of the Project area.

In addition to the STPs, a single TP, TP 754, was placed on the eastern side of the locus, in an artifact-dense location, to further test the subsurface component of the site. All 10 levels of TP 754 were negative for cultural materials (Figure 7.29; see Table 7.9).

Locus C

Locus C was identified as a small prehistoric ceramic scatter covering a 20-by-19-m (65.6-by-62.3-foot) area (Figure 7.30). Artifacts identified within the site boundaries included four ceramic body sherds, one indeterminate ground stone fragment (PP 346), one marine shell, and a weathered ungulate phalanx (PP 242).

A single STP, STP 241, was placed within the boundaries of the locus (see Figure 7.1 and Table 7.6). A single ungulate phalanx was discovered between 20 and 40 cmbs (between 7.9 and 15.7 inches below surface) in the STP. Cultural material found at this depth was likely part of the plow zone and not from a primary context.

Locus D

Locus D was identified as a large prehistoric ceramic scatter covering a 76-by-64-m (249.3-by-210.0-foot) area (Figure 7.31). In total, 111 ceramic body sherds, 2 ceramic rim sherds, 3 core flakes, 25 pieces of mollusk shell, a small rodent flat-bone fragment, 3 historical-period glass fragments (PPs 295 and 300), and a piece of FAR were found within the locus boundaries (see Table 7.9).

Eleven STPs were excavated within the locus, 3 of which were positive for cultural materials (STPs 290, 295, and 300). The negative STPs contained charcoal flakes, likely from a natural origin, from the surface to 40 cmbs (15.7 inches below surface; see Table 7.6).

In STPs 290 and 295, several artifacts were found between the ground surface and 40 cmbs (15.7 inches below surface), within the plow zone: three ceramic sherds (two of which measured less than 1 cm in diameter) in STP 290 (at 20–40 cmbs [7.9–15.7 inches below surface]), two pieces of historical-period glass and a rodent rib bone in STP 295 (at 20–40 cmbs [7.9–15.7 inches below surface]), and two mollusk shells in STP 300 (at 0–20 cmbs [0–7.9 inches below surface]). Because of their presence within the plow zone, these artifacts and ecofacts are likely to have been displaced. Only one artifact was likely in situ: a ceramic body sherd discovered below the plow zone, at 40–60 cmbs (15.7–23.6 inches below surface), in STP 295 (see Figure 7.1).

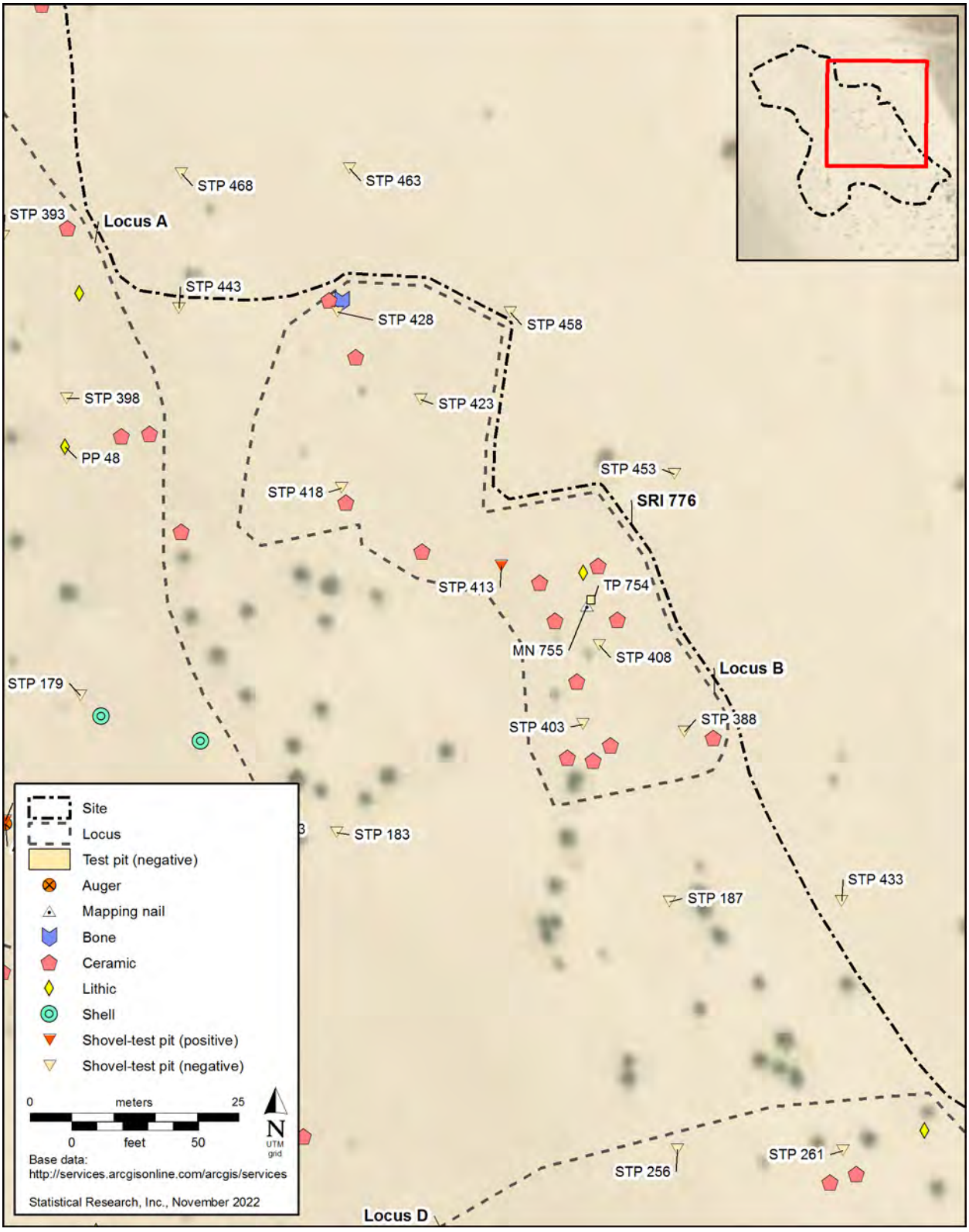

Figure 7.28. Sketch map of Locus B at SRI 776.

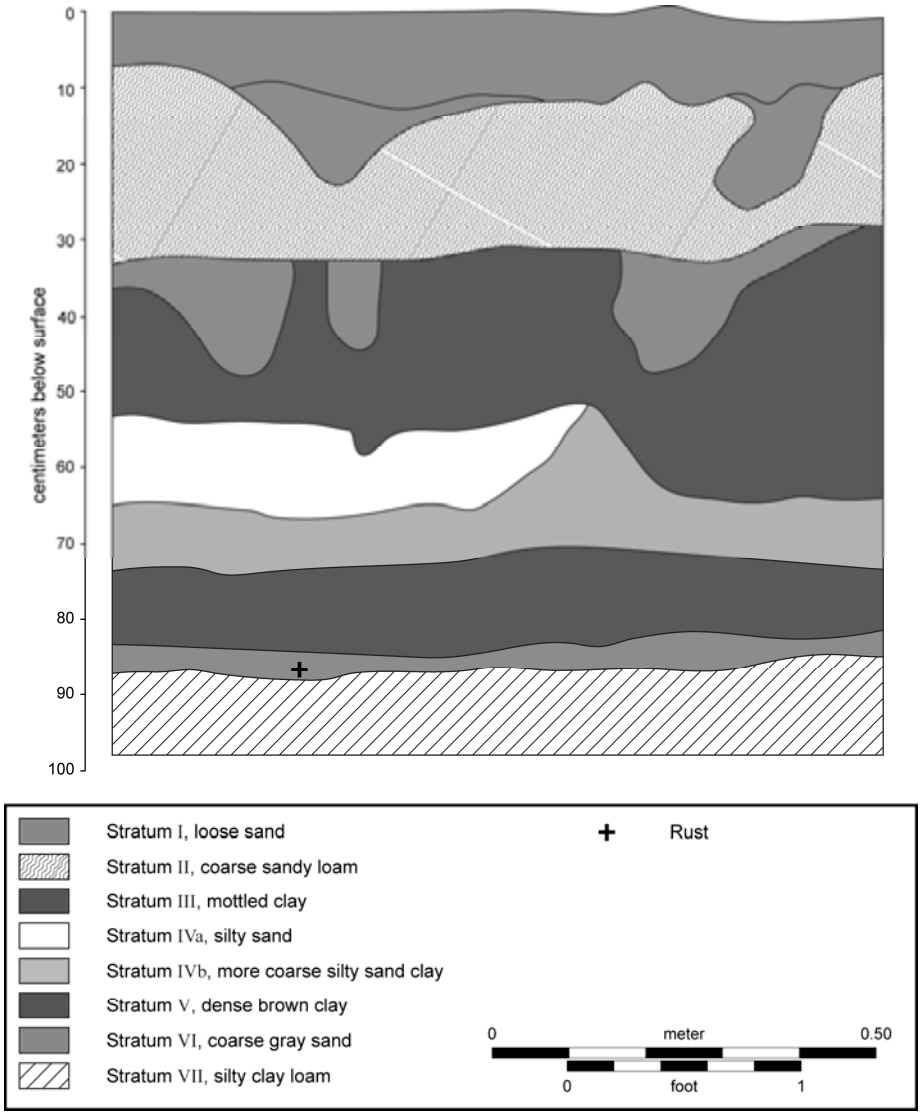

Figure 7.29. Profile drawing of TP 754 at SRI 776.

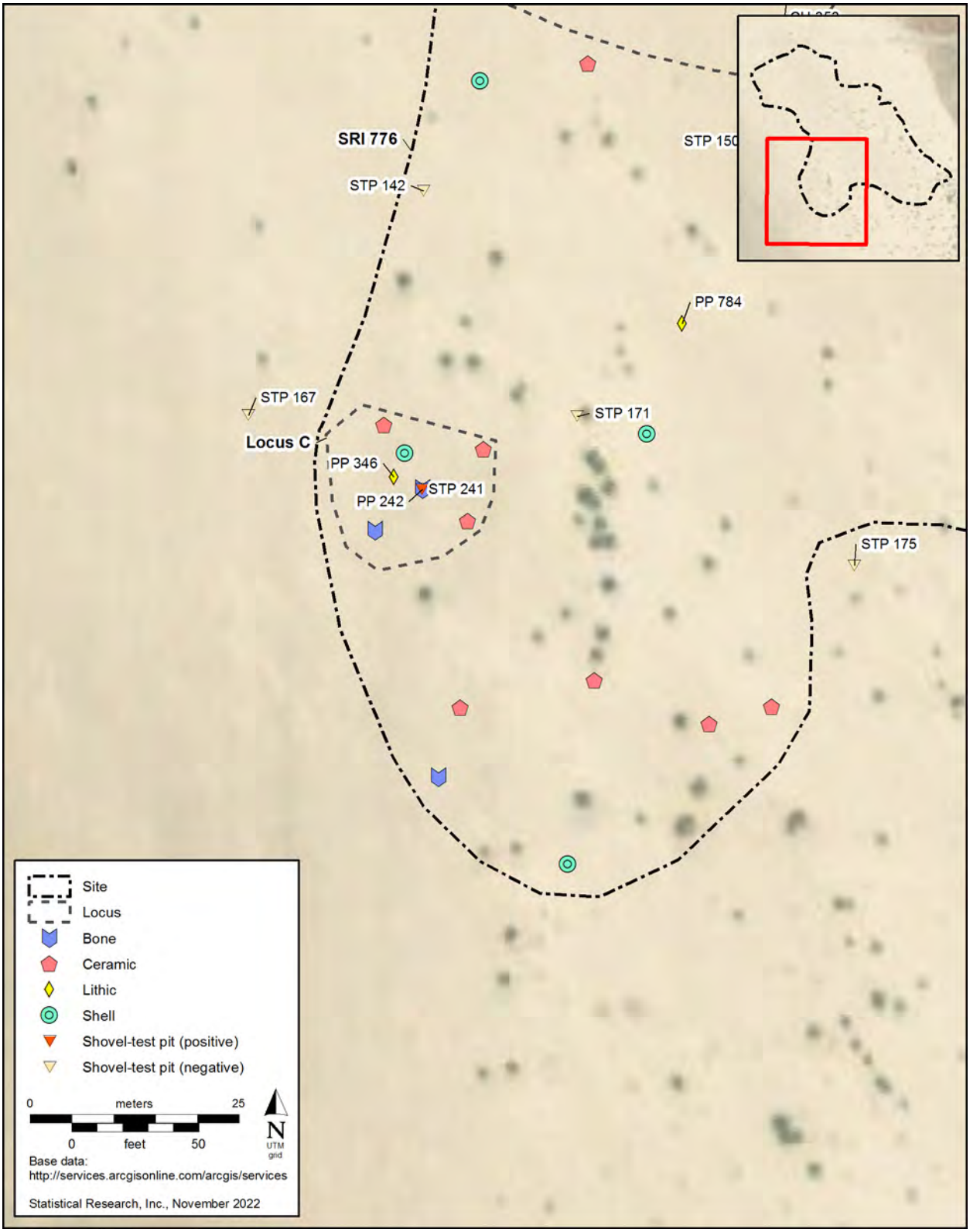

Figure 7.30. Sketch map of Locus C at SRI 776.

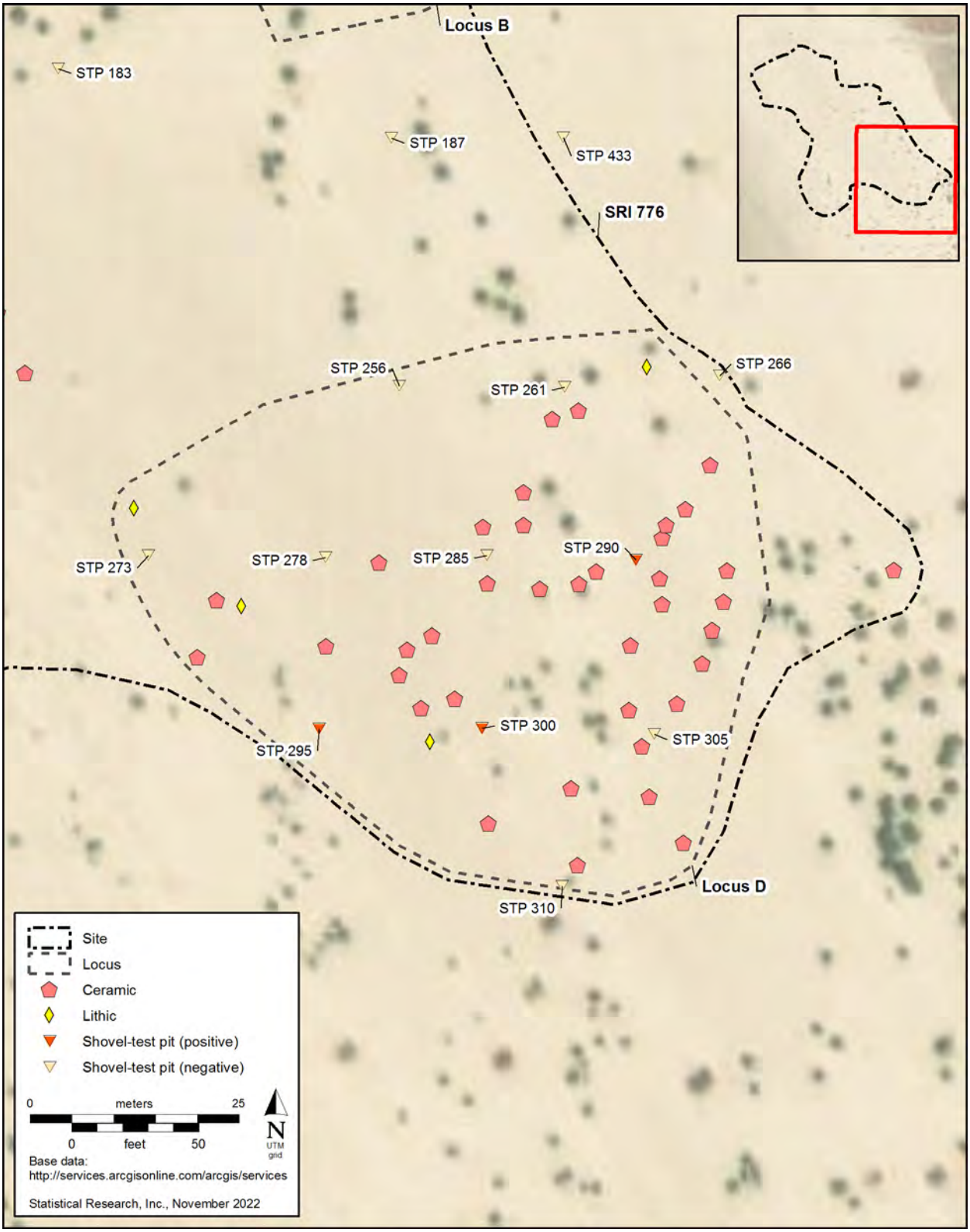

Figure 7.31. Sketch map of Locus D at SRI 776.

Isolated Resources

Twenty-six prehistoric and 4 historical-period isolated resources were found. The isolated resources consisted of 1 multidirectional flake core (IO 1), 3 marine-mollusk shells (IO 332 consists of a cluster of 2 shells, and IO 775 consists of a single shell), a Santa Fe Vintage Company bottle dating to 1939–1957 (IO 8; Figure 7.32; Lockhart et al. 2017:49), a Coca-Cola bottle dating to 1962–1982 (IO 14; Figure 7.33; Lockhart and Porter 2010; Stanton 1984), 2 burned faunal bones (IOs 335 and 337), and 20 ceramic sherds (3 sets of 1 ceramic sherd each and 1 set of 4 ceramic sherds were found clustered and were identified as being of the same production type [IOs 10, 22, 31, and 331]). The ceramic sherds included Tizon Brown Ware, Salton Buff Ware, Tumco Buff Ware, unidentified brown ware, and indeterminate brown ware or gray ware body sherds (see Table 7.2).

Figure 7.32. Photograph of the Santa Fe Vintage Company bottle (IO 8), an isolated resource.

Figure 7.33. Photograph of the Coca-Cola aqua-glass bottle (IO 14), an isolated resource.

STP Excavation between Sites

Twenty-five STPs were excavated between site boundaries to test for subsurface components that might connect the surface expressions of the sites. All 25 of the STPs, however, were negative for cultural materials (Table 7.10). Across all the STPs, modern agricultural plastics were found consistently at depths of approximately 40 cmbs (15.7 inches below surface), which suggests the termination of the plow zone. Terrestrial gastropod mollusk shell (order Stylommatophora) fragments and small charcoal flecks were consistent in all of the STPs from the surface to 60 cmbs (23.6 inches below surface). Clay content increased generally around 60 cmbs (23.6 inches below surface), either diffusely or in clear, laminated layers, suggesting undisturbed soils below that depth.

Table 7.10. Results from the Nonsite STPs

STP No.	Level Thickness (cm)	Final Depth (cmbs)	Positive/Negative	Reason for Termination
100	20	80	negative	sterile deposit
112	20	40	negative	caliche layer
116	20	80	negative	sterile deposit
124	20	80	negative	sterile deposit
138	20	80	negative	sterile deposit
167	20	100	negative	sterile deposit
175	20	80	negative	sterile deposit
246	20	100	negative	sterile deposit
358	20	80	negative	sterile deposit
433	20	80	negative	sterile deposit
453	20	80	negative	sterile deposit
458	20	80	negative	sterile deposit
463	20	80	negative	sterile deposit
468	20	80	negative	sterile deposit
478	20	80	negative	sterile deposit
483	20	80	negative	sterile deposit
493	20	80	negative	sterile deposit
498	20	80	negative	sterile deposit
503	20	80	negative	sterile deposit
513	20	80	negative	sterile deposit
518	20	80	negative	sterile deposit
525	20	80	negative	sterile deposit
683	20	42	negative	environmental hazards
732	20	80	negative	sterile deposit
737	20	78	negative	environmental hazards

Riverside County Coroner Site Visit

During the survey, several burned bone fragments were encountered on the surface of SRI 15. Because these bone fragments were encountered in association with artifacts that are often associated with mortuary features, such as shell beads, and because the bone could not be positively identified by SRI personnel, the Riverside County Coroner's Office was contacted. On August 5, 2022, the Riverside County Coroner's Office dispatched forensic anthropologist Dr. Deborah Gray and Corporal Stephanie Anderson to examine the bone. Dr. Gray identified several calcined bone fragments but concluded that the remains were too fragmented for positive identification as human. She did, however, indicate that the fragments were consistent with a large mammal. Furthermore, she noted that the treatment of the remains (i.e., cremated with differential burning) was consistent with a prehistoric cremation and that several types of broken pottery, pieces of FAR, and *Olivella* shell beads were found in association with the bone fragments.

Dr. Gray indicated that without a positive identification as to whether the remains were human, the NAHC would not act to name a Most Likely Descendant, but if additional remains were found that could be identified as human, she would notify the NAHC.

Although no positively identified human remains were encountered, on August 12, 2022, at the request of Morongo Band of Mission Indians THPO Ms. Ann Brierty, Dr. Gray reached out to the NAHC to notify them of the discovery of a potential prehistoric cremation.

Discussion

Prehistoric

Given the findings within the Project area, it is possible to discuss questions related to chronology, trade, and social interaction. The presence of buff, brown, and gray ware suggests habitation of the area between A.D. 1000 and 1700 (Schaefer 2018), and the single Cottonwood point suggests a similar period of A.D. 1000–1800. These relative dates, combined with the radiocarbon date acquired from the thermal feature at SRI 15, indicate that the site was occupied between cal A.D. 1729 and 1808. To further contextualize the presence of Native peoples in the region, ancient Lake Cahuilla had its most-recent high stand between A.D. 1650 and 1680 (Laylander 1995) and would likely have required approximately 56 years to completely dry up (Laylander 1997). This suggests that ancient Lake Cahuilla was in an evaporative phase between A.D. 1650 and 1736. The culmination of these data suggests that Native peoples utilized these sites as ephemeral camps along the edge of the receding lake during the Late Prehistoric period, between A.D. 1650 and 1800. Previous research has indicated that lakeshores were preferentially selected for village placement during the Late Prehistoric period (Sutton and Wilke 1998). Considering the minimal presence of subsurface features and artifacts and the paucity of daily-practice evidence such as middens, high debitage frequencies, habitation evidence or firepits, it is unlikely that this area was used for extended periods of time. Rather, the archaeological evidence best suggests short-term encampments along the lakeshore for hunting, plant processing, and gathering of lacustrine resources.

The plow zone within the Project area is consistently at a depth of approximately 40 cmbs (15.7 inches below surface). Diffuse clay deposits generally begin at 60 cmbs (23.6 inches below surface), and distinct bands of brown clay and laminated brown clay often occur around 70–80 cmbs (27.6–31.5 inches below surface), leading to a solid clay layer below 90 cmbs (35.4 inches below surface). These intact clay layers suggest that (1) agricultural practices did not disturb deeper deposits, (2) ancient Lake Cahuilla's shoreline extended into the Project area, and (3) it is likely that many of the surface finds are highly disturbed from agricultural practices over the last 100 years. The presence of artifacts on the surface and their sparce presence subsurface suggest that most of the 11 prehistoric sites retain limited integrity. SRI 15 is the only site

that has a subsurface feature and thus maintains integrity. Notably, the thermal feature at SRI 15 is directly above clay deposits, indicating that ancient Lake Cahuilla once extended into the area but that the use of the thermal feature occurred after the lake had begun to recede from the area, because there were no clay deposits above the feature.

Exotic materials like the *Olivella* shell bead and marine-mollusk-shell fragments are marine resources and suggest trade relationships with coastal populations. Previous research has linked the Coachella Valley to coastal regions of California through trade routes such as the Cocomaricopa Trail (Bean 1972; Bean et al. 1995). More data regarding trade and social interaction may be derived from the Project area, particularly from SRI 15.

Settlement and subsistence data are limited within the Project area. Surface finds like ground stone and FAR offer the most information about the daily activities that occurred in the camps. The intact thermal feature at SRI 15 does suggest the possibility that other subsurface features are present that could expand the current understanding of settlement and subsistence practices during the Late Prehistoric period. The identifiable faunal remains within the Project area are predominantly domestic species and are likely related to the historical-period agricultural phase at the site.

Historical Period

The two newly recorded historical-period sites (SRI 38 and SRI 82) revealed little information regarding early European settlement and use of the area. The archaeological evidence predominantly represents periods of irrigated agriculture. Features like cement wells, standpipes, and cement well foundations are not visible in historical aerial imagery, but nearby buildings that are no longer present are marked on historical Myoma, California, 7.5-minute USGS topographic quadrangle maps, which also indicate orchards in the southern part of the Project area, at one of the proposed substation locations.

SRI 26 contains indeterminate historical-period bottle-glass fragments within the plow zone. The site has not maintained its integrity, because agricultural turbation has obliterated stratigraphic layers and removed contextual evidence needed to further investigate the site's subsurface. SRI 38 and SRI 82, composed of aboveground cement features, retain their integrity to some degree, although their potential to provide new information regarding agricultural practices in the Coachella Valley is limited.

Though not visible on the surface, a segment of the Coachella Canal intersects the southeastern corner of the Project area. This canal was extremely important to the development of agriculture in the Coachella Valley.

CHAPTER 8

Paleontological Resource Assessment and Buried-Site Sensitivity

Paleontological Resources and Significance Criteria

Paleontological resources (fossils) are the remains or trace remains (both physical and chemical) of prehistoric organisms (i.e., animals, plants, and microorganisms). These resources can be preserved as body fossils, such as bones, teeth, shells, and plant matter, or as trace fossils, such as burrows and footprints. Geologic deposits make up the context in which fossil remains were originally buried and provide information about the environment in which an organism lived. In the broadest sense, a fossil can be defined as any remains documenting past life. Typically, to be considered of paleontological significance, fossils must be at least 10,000 years in age (i.e., dating from before the beginning of the modern Holocene). However, some early Holocene remains are also considered of paleontological interest, such as the specimens of the late-surviving woolly mammoths from Wrangel Island, which went extinct approximately 4000 B.P. Alteration or replacement (e.g., permineralization or petrification) of the original organic material is not required for determination of whether an object is a fossil or not.

In general, paleontological resources are preserved in sedimentary rocks; however, they can occasionally be preserved in low-grade metamorphic rocks and can, on rare occasions, be preserved in volcanic rocks. Beyond acting as a vessel for the preservation of fossil remains, sedimentary strata record telltale information reflecting the environment in which they were deposited (e.g., sedimentary structures, maturity, and lithology). For example, fossil remains found within the fine-grained sediments of a floodplain deposit represent organisms that died and were later buried on an ancient floodplain. Because of the interwoven relationship between fossil remains and their geologic contexts, for the purpose of this report, paleontological resources can be thought of as also including fossil-collecting localities and the geological formations containing those localities.

Significant paleontological resources are defined by the Society of Vertebrate Paleontology (SVP) as identifiable vertebrate, invertebrate, plant, and trace fossils that provide taphonomic, taxonomic, phylogenetic, paleoecological, stratigraphic, or biochronological data (SVP 2010). These data are important for a multitude of scientific purposes, including examination of evolutionary relationships, understanding the development of biological communities and the interactions between organisms within them, and establishment of chronologies for geologic units (Scott and Springer 2003). Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. Fossils are considered to be limited, nonrenewable resources, because they typically represent organisms that are now extinct or life in a context that no longer exists. Therefore, if destroyed, a particular fossil can never be replaced, and the information associated with it is forever lost.

Methods of Paleontological Resource Assessment

To assess the potential for significant paleontological finds in the Project area, SRI requested a review of the paleontological specimen and locality records held by the Western Science Center (WSC). The search was conducted by Andrew McDonald, curator, who provided a written report of his findings. The purpose of the records search was to identify all previously recorded paleontological remains and fossil localities discovered within the Project footprint and the surrounding area. Records of paleontological remains found in proximity to the Project and in the same geologic setting help inform the paleontological potential of the Project site.

SRI conducted limited archival and background research that focused on the geologic setting and history of the Project vicinity and the identification of paleontological resources within and around the Project area, with the intent of identifying the subsurface paleontological potential of the Project parcel. Of particular importance to that effort was the review of topographic maps, geologic maps, soils maps, published scientific literature, and published and unpublished technical literature.

Paleontological Resource Sensitivity

Currently, there are no specific agency guidelines for the assessment of paleontological resource potential (i.e., "sensitivity"). So, any of three main sets of guidelines are used by most professional paleontologists in California for determining fossil sensitivity. Caltrans (2014b) suggests a tripartite scale to characterize paleontological sensitivity that is composed of the ranks of no, low, and high, in order of increasing paleontological resource sensitivity. The USDI BLM (2007, 2016 [update]) developed a multilevel ranking system termed the Potential Fossil Yield Classification (PFYC). Under the PFYC system, geologic formations are ranked on a scale of 1–5 for paleontological sensitivity, based on the relative abundance of known vertebrate fossils and scientifically significant invertebrate or plant fossils. The final major set of guidelines was developed by the SVP. Among the three major guidelines, the SVP's (2010) *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* is the most favored by professional paleontologists because of its detailed protocols for the assessment of paleontological resource potential. For this assessment, SRI followed the SVP (2010) procedures for paleontological resource assessment.

Under the SVP (2010) guidelines, geologic units are classified in one of four categories of paleontological resource sensitivity: no, low, undetermined, and high. The criteria for each of these sensitivity categories are presented in Table 8.1.

In order to prevent project delays, the SVP highly recommends that the owner or developer retain a qualified professional paleontologist in the advance planning phases of a project in order to conduct an assessment and to implement paleontological mitigation during construction, as necessary.

Paleontological resources are potentially disturbed during construction activities, specifically earthmoving activities such as mass grading of geologic units where fossils are potentially buried. If a project area is determined to have high or undetermined potential for paleontological resources, then a paleontological resource mitigation plan must be developed prior to construction activities and implemented during the construction phase of a project. That mitigation plan would describe when and where paleontological monitoring will take place and establish the protocols to be followed in the event that an unanticipated fossil discovery is made during project development (e.g., preconstruction discoveries or discoveries from geologic units where monitoring was not required). The mitigation plan is prepared by a qualified professional paleontologist and is based on the results of the initial paleontological assessment and survey.

Table 8.1. Categories of Paleontological Resource Sensitivity

Paleontological Potential	Criteria	Recommendations
High	Geologic formations that are known to yield vertebrate or significant invertebrate, plant, or trace fossils. Highly sensitive formations also may be those that are likely to produce new vertebrate materials, traces, or trackways.	A field survey as well as on-site construction monitoring is required. Any significant specimens discovered will require preparation, identification, and curation as well as eventual accession into an appropriate museum collection. A final report documenting the significance of any finds is required.
Low	Geologic formations that have yielded few fossils in the past based on review of available literature and museum-collections records. Low potential also may include formations that yield fossils only under unusual circumstances. This also includes formations that, based on their relative youthful age or high-energy depositional history, are unlikely to produce important fossil remains.	Mitigation is not typically required.
No	Geologic formations that are formed under or exposed to immense heat and pressure, such as high-grade metamorphic rocks and plutonic igneous rocks. Artificial fill materials also are designated as having no potential because of the loss of stratigraphic context of any contained organic remains.	No mitigation is required.
Undetermined	Geologic formations for which available literature on paleontological resources is scarce, making it difficult to determine whether it is potentially fossiliferous. Under these circumstances, further study (i.e., field survey) is needed to determine the unit's paleontological resource potential.	A field survey is required to further assess the unit's paleontological potential.

Note: Modified from SVP (2010).

Buried-Site-Sensitivity Assessment

SRI conducted a simplified buried-site-sensitivity analysis based on geologic data to determine whether parts of the study area could contain buried archaeological resources. This section discusses the methods used in the analysis and the results of that analysis.

The basic theoretical concept of BSSMs is based on the relationship between landform age and the accepted dates of human habitation in North America. Put simply, buried archaeological resources do not exist below landforms that developed before the colonization of the continent, which—according to our present understanding—occurred sometime during the latest Pleistocene (ca. 15,000 B.P.). With this concept as a methodological framework, the first step in BSSM construction is to distinguish relict Pleistocene landforms (nonsensitive) from those that aggraded coevally with potential human habitation (sensitive). Although most latest Pleistocene through Holocene (ca. 15,000 B.P. to recent) landforms are considered sensitive for buried archaeological resources, it is important to note that discrepancies will exist between the "geologic potential" for and the actual "probability" of buried archaeology (Meyer et al. 2010; Onken et al. 2015). Whereas geologic potential is based simply on relative landform age (i.e., young surfaces have

higher sensitivity than older surfaces), the probability of finding buried sites is dependent on other environmental factors, including slope gradient, the depositional environment of the sediments underlying the landform (lower-energy deposits have greater potential for intact archaeology than higher-energy sediments), the presence or absence of buried soils within the planned depth of disturbance, proximity to water, and proximity to known surficial archaeological sites.

The development of this simplified BSSM for the study area involved collection of geologic data from sources such as government agencies and scientific journals. A more in-depth and complete BSSM would further include environmental and cultural data, such as cultural resource management reports, review of as-built construction plans and geotechnical reports, aerial photographs, and analysis of records of known archaeological sites within and around the study area. From the utilized data sources, we were able to assess the approximate ages and origins of the geologic deposits and soils in the study area; that work, in turn, allowed us to separate the local landforms into sensitive (latest Pleistocene through Holocene) and nonsensitive (older than latest Pleistocene) categories. Generally, landforms considered sensitive for buried archaeology would then be further subdivided into categories of moderate, high, and very high sensitivity, based on other environmental and cultural criteria—namely, proximity to previously recorded archaeological sites provided via records searches.

Inaccuracies in BSSMs are most commonly related to the limitations inherent in the soil and geologic maps that, in most instances, form the foundation of a BSSM. Map scale and the generalizations used to define mapping units are the most common sources of error (Holliday 2004). The BSSM presented here is based largely on preexisting geologic maps obtained from the USGS and the California Geological Survey. Soils maps from the USDA Natural Resources Conservation Service (NRCS) and other published records also were used.

Landform age in the study area was determined by examining the geomorphic surface characteristics visible in high-resolution satellite imagery and analyzing geologic and soil-survey maps (Soil Survey Staff 1999). The soil taxonomic classification for each of the soil series provided information on relative soil age and the soil-forming environment. Soils are considered a relative-age indicator because soil development is time dependent (Birkeland 1999; Holliday 2004; Jenny 1941). Older landforms have well-developed (if not severely eroded) soils with diagnostic subsurface horizons (B horizons), whereas younger landforms have weakly developed soils with simple A-C horizonation (no B horizon). Surficial geologic maps of Palm Desert and the Coachella Valley indicate that the study area is underlain by Holocene to recent alluvium (Lancaster et al. 2012).

The primary objective of this geoarchaeological study was to assess the potential for intact buried archaeological resources in the study area. Based on recent NRCS Soil Survey Geographic Database (SSURGO) soil-survey data, the study area is dominated by two soil series representing one soil order. All these local soils have developed on alluvial deposits.

Results

Project Geology and Soils

The current California Geological Survey geologic map of the region (Lancaster et al. 2012) shows the Project resting on Pleistocene to Holocene alluvial deposits of varying identity. These alluvial deposits have been divided by Lancaster et al. (2012) into the Alluvial wash deposits (Qw), Young alluvial fan deposits (Qyf), Young alluvial valley deposits (Qya), and Young aeolian and dune deposits (Qye). The following section provides a general overview of the types of geologic deposits and soils located within the Project area (in order from oldest to youngest).

Quaternary Deposits

Alluvial fans are cone- or fan-shaped deposits of sediment that form at the boundaries between areas of high and low topography. The detrital sediments of the alluvial fan are transported and deposited by gravity, wind, and (most often) water. Such features are common in mountainous regions of the world, and in tectonically active regions, alluvial fans can reach over 50 km (31 miles) in width and 60 km (37 miles) in length. Braided streams and meandering rivers can transport such sediments over great distances before they are finally deposited.

Quaternary alluvial deposits are extensively exposed throughout portions of the Coachella Valley and encompass most of the deposits beneath the study area. These deposits are not definitively dated but likely span the Holocene to recent, with Pleistocene deposits occurring at depth. Lancaster et al. (2012) identified four such sedimentary units within the study area: Alluvial wash deposits (Qw), Young alluvial fan deposits (Qyf), Young alluvial valley deposits (Qya), and Young aeolian and dune deposits (Qye). These units are Pleistocene to Holocene in age and are likely comparable to the Quaternary alluvial-fan deposits (Qa) of Dibblee and Minch (2008).

Mapped Soil Units

SSURGO soil-survey data reported three mapped soil units, composed primarily of two soil series representing one soil order, underlying the study area. Each map unit is composed of a complex of multiple soil series but is often dominated by a single soil type. The soil descriptions below focus primarily on the predominant soil series because they make up a significant portion of the mapped area underlying the study area.

Soil developmental and geomorphic processes are often so closely interconnected in desert environments that the evolution of many desert landforms can be directly linked to soil-formation processes (Dixon 2009). The most significant of these processes include the development of surface crusts and pavements, the formation of vesicular A horizons, and the accumulation of clay and/or salts in the soil subsurface (Buol et al. 1997). In modern U.S. soil taxonomy, desert soils most commonly fall into two soil orders, Aridisols and Entisols. The Aridisol order, by definition, includes soils in an aridic soil moisture regime[1] that have either a cambic, calcic, gypsic, petrocalcic, petrogypsic, salic, or duripan subsurface horizon (B horizon; Buol et al. 1997; Soil Survey Staff 2014). Put more simply, an Aridisol is a desert soil with a diagnostic subsurface horizon (B horizon). Because the development of a subsurface horizon requires a fair amount of time, Aridisols are commonly associated with desert landforms that have been stable for thousands to hundreds of thousands of years (Gile et al. 1981). Many of these soils developed under more-mesic conditions than today and could be considered relicts of the last full glacial climate.

Soils in an aridic soil-moisture regime that do not have a subsurface horizon are classified as Entisols (Soil Survey Staff 2010). These soils have an A horizon over pedogenically unaltered parent material (C horizons)—most commonly, stratified alluvium or aeolian sand. Entisols are generally considered to be "young" soils and are typically associated with deposits that aggraded during the latter half of the Holocene. All soils discovered within the study area are classified as Entisols.

The Coachella, Gilman, and Indio soil series represent weakly developed soils in the Entisol soil order. All these soil series are mapped on recently abandoned Holocene and active or recently active alluvial deposits that are present throughout most of the study area (the Qa mapping unit of Dibblee and Minch [2008]). These soils have developed in stratified gravel and coarse sandy alluvium derived from mixed igneous and sedimentary rock types. All three soil series are mapped on floodplains, young alluvial fans, dunes, and basin floors across the Mojave, Sonoran, and southern Great Basin Deserts.

[1] Moist soil conditions are present less than 90 consecutive days with a soil temperature at 50 cm of 5°C or higher *or* the soil is dry in all parts more than half of the cumulative days in a year with a soil temperature at 50 cm of 8°C or higher.

Paleontological Resource Assessment

Paleontological Records Search

A records search at the WSC was conducted on August 25, 2021, by Paleontology Curator Dr. Andrew McDonald. His report is provided in full in Appendix E. The search found no previously recorded vertebrate fossil locality directly underlying the Project site. However, one vertebrate fossil locality (WSC 195) was found approximately 3 miles (4.8 km) east of the Project footprint. This locality was recorded within Pliocene- to Holocene-age Quaternary alluvium, which the author portends is equivalent to the sediments underlying the Project area and produced specimens of fossil rodents and lizards at an undisclosed depth.

Site-Specific Paleontological Resource Sensitivity

Background research, including analysis of geologic and topographic maps, aerial photographs, and recent published and unpublished literature, has resulted in an understanding of the Project site and the areas within it where subsurface paleontological resources might remain undisturbed. The Project site is underlain by several Pleistocene- to Holocene-age alluvial deposits (Alluvial wash deposits [Qw], Young alluvial fan deposits [Qyf], Young alluvial valley deposits [Qya], and Young aeolian and dune deposits [Qye]). Quaternary alluvial deposits are generally assigned a high paleontological resource potential for their Pleistocene components and a low paleontological resource potential for their Holocene components. Because these deposits are undifferentiated by age within the Project area, it can be assumed that Pleistocene-age deposits with a high paleontological resource potential could be encountered at depth but are likely too young to produce paleontological resources at the surface. The depth that this transition occurs is currently unknown but is likely at significant depth (greater than 5 feet [1.5 m] below grade). Locality records from the WSC corroborate the assignment of a high paleontological resource potential to these alluvial deposits (at least at depth), as documented by the presence of significant fossil finds in Quaternary alluvial deposits in close proximity to the Project area. Therefore, it can be assumed that the upper 5 feet (1.5 m) of the sediments underlying the Project area should be assigned a low paleontological resource sensitivity and any deposits discovered at greater than 5 feet (1.5 m) of depth below grade be assigned a high paleontological resource sensitivity.

Site-Specific BSSM

The soils, landforms, and geologic units within the study area have been classified as either sensitive or nonsensitive for intact buried archaeological resources on the basis of age and geologic context. In a more-complete BSSM, sensitive areas would be further subdivided into moderate and high sensitivity based on multiple parameters, including soil type and level of disturbance as revealed in historical aerial photographs and as-built construction plans.

Nonsensitive Areas

No portions of the Project area are nonsensitive for buried cultural resources.

Sensitive Areas

The locations considered sensitive for buried archaeological resources include Holocene alluvial deposits. The sediments underlying these landforms accumulated while humans may have been present on the

landscape, and given the depositional environment associated with these sediments, it is unlikely that buried archaeological sites would have been significantly impacted during aggradation events. It is also probable that many of these areas contain buried soils that mark significant periods of nondeposition in the stratigraphic record. Buried soils typically have significant potential for archaeology because they represent former stable land surfaces that would have been available for human occupation for long periods (long enough for a soil to develop). All the areas within the study area where Holocene sediments and soils are present in lower-energy depositional settings are considered sensitive, including the Quaternary alluvial deposits.

The Coachella, Gilman, and Indio soil series are generally assigned a high sensitivity for buried archaeological resources. These soils have relatively simple A-C soil profiles and lack distinct B horizons. Broadly, greater differentiation of soil horizons is indicative of extended surficial exposure. Because the probability of accumulating and preserving archaeological resources is inextricably linked to the duration that a surface is exposed, these less-differentiated soil units are less likely to preserve cultural resources at the surface but have a higher level of potential to be underlain by buried soils of relevant age to contain buried cultural resources. Based on the soil-series descriptions, these soils are approximately 1.5 m (5 feet) in thickness and have the potential to contain buried archaeological resources to their bases. However, it cannot be ruled out that early prehistoric sites could be present at greater depths in unknown buried soils.

CHAPTER 9

Evaluation and Recommendations

This chapter consists of three sections. In the first section, we describe the process for making CRHR evaluations of cultural resources and historic properties. In the second section, we present our CRHR-eligibility recommendation for each of the sites evaluated as part of this Project. We conclude, in the third section, with management recommendations for these sites based on the evaluations of their CRHR eligibility and the relative assessments of the level of risk to their integrity and preservation.

Evaluation of CRHR Eligibility

The development is considered a "project" subject to CEQA (PRC 21000 *et seq.*), which mandates that the lead agency consider the effects of the Project on historical and archaeological resources. Additionally, the State of California provides protection for paleontological resources as historical resources under CEQA guidelines (14 CCR 15064.5[a][3]). The City is the CEQA lead agency for this Project.

As lead agency, the City requires that the sites within the Project area be evaluated to assess their eligibility for listing in the CRHR. These evaluations will also help determine how the sites evaluated by SRI will be affected by the proposed development, as required by PRC 21084.1.

The three main goals of testing are

1. to collect additional field data relevant to making CRHR-eligibility recommendations;
2. to determine the boundaries of sites and assess the possibility that buried site deposits are present, to assist in impact analysis; and
3. to collect data for planning data recovery efforts at CRHR-eligible sites that will be adversely affected by the Project.

CRHR-Evaluation Criteria

The CRHR is the authoritative guide to California's significant archaeological and historical resources, and it serves to identify, evaluate, register, and protect those resources. For the purposes of CEQA, a historical resource is any building, site, structure, object, or historic district listed in or eligible for listing in the CRHR (PRC 21084.1). A resource is considered eligible for listing in the CRHR if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history [PRC 5024.1(c)].

Historical resources meeting one or more of the criteria listed above are eligible for listing in the CRHR (PRC 5024.1). Furthermore, properties formally determined eligible for, or listed in, the NRHP are also listed in the CRHR. In addition to significance, resources must have integrity for a period of significance—the date or span of time within which significant events transpired or significant individuals made important contributions. Important archaeological resources are required to be at least 50 years old to be considered. "Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (14 CCR 4852[c]). Simply put, resources must "retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance (14 CCR 4852[c]).

CEQA also requires the lead agency to consider whether there is a significant effect on unique archaeological resources that are not eligible for listing in the CRHR (PRC 21083.2[g]). As defined in CEQA, a unique archaeological resource is

> an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person [PRC 21083.2(g)].

If an archaeological resource is deemed eligible for listing in the CRHR, then it is considered under CEQA to be a historical resource that needs to be protected. That may also apply to unique archaeological resources. If a historical resource may be impacted by activity, avoidance and preservation in place is the preferred alternative under CEQA. If these measures are not possible, then a data recovery plan will need to be created and enacted to reduce impacts to the resource to a less-than-significant level. If the archaeological resource is not eligible for listing in the CRHR and it is not a "unique archaeological resource" (PRC 21083.2[g]), then no further action is required to protect or mitigate impacts to it.

In addition to having significance, a resource must have integrity for its period of significance. A period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. According to CEQA,

> [i]ntegrity is the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the California Register must meet one of the criteria of significance . . . must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance [14 CCR 4852(c)].

Applying the CRHR-Eligibility Criteria

Each of the sites was evaluated according to the CRHR criteria above to determine whether further consideration will be required in the planning process for the Project, in accordance with the CEQA guidelines. SRI's CRHR-eligibility evaluations and recommendations for the sites are summarized in Table 9.1.

In addition to considering whether sites might be eligible for listing in the CRHR, we also have carefully evaluated whether sites recommended not eligible for listing the CRHR might still qualify as "unique archaeological resources" under CEQA. We have concluded that none of the sites recommended not eligible for listing in the CRHR meets the criteria for consideration as a "unique archaeological resource" (PRC 21083.2[g]) under CEQA.

The following section presents the CRHR-eligibility recommendation for each of the sites studied during this Project. None of the isolated resources discovered during the Project work meets any of the eligibility criteria; therefore, all the isolated resources are recommended not eligible for listing in the CRHR.

Prehistoric Sites

CA-RIV-8908

CA-RIV-8908 was recorded in 2008 as a small prehistoric site with 11 ceramic sherds, 4 lithic flakes, and 6 fire-affected clay fragments (CRM TECH 2008). SRI conducted two pedestrian surveys in the site area, as well as subsurface testing with STPs, but was unable to relocate the site. It was likely destroyed during the covering of the Coachella Canal (CA-RIV-12999). CA-RIV-8908 has no surface or subsurface component and therefore lacks all integrity.

Based on the available information, this site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, the site does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, this site is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4).

In sum, CA-RIV-8908 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 2

SRI 2 was identified as a small prehistoric artifact scatter composed of three undecorated brownware ceramic sherds (2 body sherds and 1 rim sherd) and one quartzite core flake. Subsurface testing of the site resulted in negative findings. The surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity.

Based on the available information, this site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, the site does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials.

In sum, SRI 2 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

Table 9.1. Summary of the CRHR-Eligibility Recommendations

Site No.	Temporal Affiliation	Subsurface Component	Key Artifacts	Integrity	Eligibility Recommendation	CRHR-Eligibility Criterion	Description
CA-RIV-8908	prehistoric	absent	ceramic sherds, lithic debitage, and fire-affected clay	not relocated, likely destroyed	not eligible	—	ceramic scatter
CA-RIV-12999	historical period	not tested	canal feature	intact	eligible	1	Coachella Canal
SRI 2	prehistoric	absent	ceramic sherds	highly disturbed	not eligible	—	ceramic scatter
SRI 11	prehistoric	absent	ceramic sherds	highly disturbed	not eligible	—	ceramic scatter
SRI 15	prehistoric	present	ceramic sherds, ground stone, a projectile point, shell beads, and lithic debitage	subsurface feature intact	eligible	4	Late Prehistoric period campsite
SRI 38	historical period	not tested	cement features, including a foundation, a well, a well foundation, and a standpipe	intact	not eligible	—	historical-period agricultural water-conveyance system
SRI 42	prehistoric	absent	ceramic sherds and marine shell	highly disturbed	not eligible	—	ceramic scatter
SRI 82	historical period	not tested	cement feature: water standpipe	intact	not eligible	—	historical-period agricultural water-conveyance system
SRI 239	prehistoric	absent	ceramic sherds and marine shell	highly disturbed	not eligible	—	ceramic scatter
SRI 769	prehistoric	absent	ceramic sherds	highly disturbed	not eligible	—	ceramic scatter
SRI 776	prehistoric	present	ceramic sherds, marine-mollusk-shell fragments, lithic debitage, and faunal bone	highly disturbed	eligible	—	Late Prehistoric period campsite

SRI 11

SRI 11 was identified as a small prehistoric ceramic scatter composed of 9 undecorated brownware sherds (8 body sherds and 1 rim sherd). Subsurface testing of the site resulted in negative findings. The surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity.

Based on the available information, this site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials.

In sum, SRI 11 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 15

SRI 15 was identified as a large prehistoric artifact scatter with an array of artifacts in 2 distinct artifact concentrations including an estimated 500+ (281 recorded) ceramic body and rim sherds, 2 complete manos and 1 mano fragment, 2 slab metates, 4 ground stone fragments, 1 spire-lopped *Olivella* shell bead, 1 shell disc bead, faunal bone, 11 marine-shell fragments, 1 quartzite biface flake, 1 rhyolite core flake, 2 chert core flakes, 3 quartz core flakes, a quartzite flake-core fragment, 3 pieces of quartzite shatter, 1 rhyolite Cottonwood projectile point, and 10 pieces of FAR. Three pieces of pottery were identified as incised brown ware, 1 was painted with diagonal lines, and 4 were cordage-pressed brown ware. Though scattered throughout the site, the artifact concentrations were notably greater in depressions between sand dunes and plant growth.

Although a large variety and a large quantity of artifacts were discovered at SRI 15, agricultural activities and the construction of the dirt road that bisects the southern portion of the site have greatly reduced the site's integrity on the surface and within the plow zone. The presence of an intact buried feature, however, suggests that the site maintains some degree of depth and subsurface integrity below the plow zone.

Based on the available information, although this site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2) and does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3), it is likely to yield additional information that might be used to address three of the research themes presented in Chapter 5 (Criterion 4): chronology, trade and social interaction, and settlement and subsistence.

Several chronologically sensitive artifacts were recovered from SRI 15 during testing, including a Cottonwood projectile point, charcoal, and ceramics. These artifacts all point to Late Prehistoric period habitation of the site. Radiocarbon dating of the single intact feature identified at SRI 15 likewise indicated that SRI 15 was occupied during the Late Prehistoric period. No European goods were recovered during testing or survey, indicating that the sites were likely not in use prior to the historical period.

The presence of *Olivella* shell beads and fragments of marine shell at SRI 15 suggests contact with coastal populations that traded beads or raw materials. These trade networks have been well documented in southern California and the Great Basin (Bennyhoff and Hughes 1987; Jackson and Ericson 1994; King 1978). The Coachella Valley was linked to the west by several trade routes, including the Cocomaricopa Trail. The Chumash, Gabrielino, and Juaneño traded steatite, *Olivella* shells, animal pelts, food, and a host of other products to the east. Beyond economics and trade, the shell beads relate to personal adornment and possibly ritual.

Finally, although only a small number of artifacts associated with subsistence (i.e., ground stone and FAR) were found at SRI 15, based on the information provided by these artifacts, the site may be able to provide some insight into the presence or absence of subsistence-related activities. Although the upper site

levels are likely mixed, general subsistence questions can be addressed by gross artifact analysis. Furthermore, the discovery of a potentially intact thermal feature may provide additional context that could answer questions regarding when the site was occupied and how diets changed over time.

In sum, although SRI 15 does not meet the standards for eligibility under Criteria 1–3, it does meet the standards for eligibility under Criterion 4. Therefore, the site is recommended eligible for listing in the CRHR.

SRI 42

SRI 42 was identified as a small prehistoric site with surface artifacts that included six similar ceramic body sherds (composed of orange paste with a fine sand temper) and one marine shell. Subsurface testing of the site resulted in negative findings.

In terms of integrity, the surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity. Furthermore, placement of the CVWD stockpile atop the site required collection of all the surface artifacts.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials. Furthermore, most, if not all, of the artifacts associated with the site have been collected to avoid damage from the placement of the CVWD stockpile, which also makes it unlikely that the site could yield additional information.

In sum, SRI 42 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 239

SRI 239 is located 7 m (23 feet) west of a large series of sand dunes and modern berms. The surface artifacts identified at the site consisted of 26 ceramic body sherds, 1 rim sherd, 1 rhyolite core flake, and 1 marine-shell fragment. Subsurface testing of the site resulted in negative findings.

In terms of integrity, the surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity. Furthermore, placement of the CVWD stockpile atop the site required collection of all the surface artifacts.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials. Furthermore, most, if not all, of the artifacts associated with this site have been collected to avoid damage from the placement of the CVWD stockpile, which also makes it unlikely that the site could yield additional information.

In sum, SRI 239 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 769

SRI 769 was identified during the process of relocating the previously identified CA-RIV-8908 and consists of a ceramic scatter composed of two ceramic body sherds, one ceramic rim sherd (PP 772), and a piece of burnt clay. Subsurface testing of the site resulted in negative findings. The surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials.

In sum, SRI 769 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 776

SRI 776 was identified as a large prehistoric site with a total of 293 artifacts: 3 pieces of nondiagnostic historical-period glass, 44 pieces of marine-mollusk shell, 1 burnt faunal-bone fragment, 2 weathered faunal-bone fragments, 1 small-mammal (rodent) bone, 2 pieces of lithic shatter, 1 hammerstone, 2 lithic manuports, a ground stone fragment (PP 346), 2 pieces of FAR, 3 core flakes, a unifacial tool (PP 784), 5 pieces of flattened stone, 214 ceramic body sherds, and 11 ceramic rim sherds. The site consists of four artifact-dense loci (Loci A–D), as well as isolated artifacts scattered between loci. Subsurface testing of the site resulted in positive findings.

Because of the placement of the CVWD stockpile, the artifacts on the surface of SRI 776 were collected, with the exception of those in Locus B, which was outside the stockpile area. As a result of the collection of artifacts, the placement of the CVWD stockpile atop the site, and the heavy agricultural disturbance, the site no longer retains integrity.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, although the site contains temporally diagnostic artifacts in the form of ceramic sherds, it is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4), beyond what was gathered during its initial recordation, especially given the lack of apparent subsurface materials. Furthermore, most, if not all, of the artifacts associated with this site have been collected to avoid damage from the placement of the CVWD stockpile, which also makes it unlikely that the site could yield additional information.

In sum, SRI 776 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

Historical-Period Sites

CA-RIV-12999

The Coachella Canal, a historical-period irrigation canal, is a branch of the All-American Canal and was determined eligible for listing in the NRHP in 2004 at the local and state levels, under Criterion a. The canal enters the southeastern corner of the Project area from the south, where it crosses 40th Avenue before making an immediate 90° turn to the east and then exiting the Project area by crossing Madison Street. Based on aerial imagery observed on Google Earth, the portion of the Coachella Canal within the Project

area was covered during the widening of Madison Avenue sometime between April 27, 2006, and May 24, 2009, and is no longer visible in the Project area (Google Earth 2006, 2009). Because this segment of the canal is hidden beneath a layer of fill, its condition is unknown, and its integrity could not be assessed, but it is assumed to be intact. CA-RIV-12999 has been previously determined eligible for listing in the NRHP under Criterion a, and because resources listed or formally determined eligible for listing in the NRHP are automatically listed in the CRHR, this resource has also been determined eligible for listing in the CRHR (under Criterion 1), and SRI acknowledges the site's eligibility.

SRI 38

SRI 38 is a historical-period site consisting of a cluster of agricultural features including a concrete foundation, a well, a concrete well foundation, and a standpipe that may correspond to a historical-period structure plotted on the 1972 Myoma, California, 7.5-minute USGS topographic quadrangle map. The features associated with the site exhibit poor to fair integrity. The previously recorded associated buildings no longer exist in context with the site, but some features, such as the water stand, are intact.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, the site is unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4).

In sum, SRI 38 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

SRI 82

SRI 82 is a historical-period agricultural site associated with a single concrete water standpipe. This well feature is approximately 10.5 feet (3.2 m) tall and 3.5 feet (1.1 m) in diameter. The site retains good integrity; the cement feature appears to be completely intact.

Based on the available information, the site does not appear to have achieved any historical significance via association with events or persons (Criteria 1 and 2). Furthermore, it does not exhibit distinctive characteristics of a type, period, or manner of construction; represent the work of a master; or possess high artistic values (Criterion 3). Finally, sites such as this are ubiquitous throughout historical-period agricultural settings and, as such, are unlikely to yield additional information that might be used to address any of the research themes identified in Chapter 5 (Criterion 4).

In sum, SRI 82 does not meet the standards for eligibility under Criteria 1–4. Therefore, the site is recommended not eligible for listing in the CRHR.

Management Recommendations and Conclusions

The results of the fieldwork performed by SRI identified 8 prehistoric and 3 historical-period archaeological sites as well as 30 isolated resources within the overall Project area. One of the previously recorded sites (CA-RIV-8908) could not be relocated and likely has been destroyed. Of the 11 sites recording during the survey, the newly recorded SRI 15, is recommended eligible for listing in the CRHR. The previously recorded and revisited CA-RIV-12999 (Coachella Canal) is already listed in the CRHR because of its listing in the NRHP; though present within the Project area, the canal is buried beneath an unknown level of fill material. None of the isolated resources is recommended eligible for listing in the CRHR.

Public agencies should seek to avoid significant impacts to an archaeological resource whenever feasible. If avoidance of a significant archaeological resource is not feasible, mitigation measures are required to mitigate impacts from the Project (PRC 21083.2[c]). The lead agency (the City) is to ensure that any adopted measures to mitigate or avoid significant adverse impacts are fully enforceable through permit conditions, agreements, and/or other measures.

The following section presents the management recommendations for archaeologically and paleontologically sensitive components of the Project area.

SRI 15 Data Recovery

Prior to the implementation of mass grading or other activities related to the development of the Project area, given the subsurface component of SRI 15 and the potential for human remains, consultation with Tribal entities concerning the site should occur so that appropriate measures are taken to adequately and respectfully mitigate any adverse effects that the development may have on the site.

Because implementation of the project as proposed would significantly impact the site, if avoidance is not feasible, an archaeological data recovery plan shall be drafted and implemented for the site in a manner consistent with professional archaeological standards. Data recovery efforts will be led by a qualified principal archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology and monitored by Tribal representatives. This archaeological data recovery plan will include the professional qualifications required of key staff and will detail the excavation methods as well as the methods used to analyze recovered artifacts and samples. Implementation of the data recovery plan will reduce to an insignificant level any potential Project effects on SRI 15.

Archaeological Monitoring

Although all the land within the Project area has been heavily disturbed by agricultural activity, a considerable amount of prehistoric material was observed on the surface in the central portion of the Project area. Most of the excavation units (STPs and TPs) were culturally sterile, but a small number did exhibit buried cultural resources, most notably a buried thermal feature at SRI 15. Furthermore, the BSSM shows that the entirety of the Project area is sensitive for buried sites. Based on the soil-series descriptions, the Project area soils are approximately 1.5 m (5 feet) in thickness and have potential to contain buried archaeological resources. Also, it cannot be ruled out that early prehistoric sites could be present at greater depths in unknown buried soils. Therefore, SRI recommends that all sediment be monitored by a qualified archaeological monitor, in consultation with local Tribal entities.

Prior to the start of Project ground disturbance, including demolition and vegetation removal, a qualified principal archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology shall be retained to prepare and implement a written Cultural Resource Monitoring and Treatment Plan (CRMTP) subject to the approval of the City. Implementation of the CRMTP will reduce to an insignificant level potential Project effects on known archaeological resources as well as unanticipated archaeological resources that may be unearthed during construction, which would include potential prehistoric and historical-period discoveries. The CRMTP shall detail the pertinent historic context and anticipated research themes within which cultural resources in the Project area can be treated and evaluated. The CRMTP shall include the professional qualifications required of key staff, monitoring protocols relative to the varying archaeological sensitivity across the Project site, provisions for evaluating and treating unanticipated cultural materials discovered during ground-disturbing activities, situations under which monitoring may be reduced or discontinued, and reporting requirements. The CRMTP shall also include detailed steps to be taken during stop-work situations, assessment of preservation in place, or recovery of potential cultural deposits, as well as the process for evaluating resources for CRHR eligibility. The CRMTP shall also include a section describing the protocol to be followed in the event that unanticipated human remains are discovered during Project construction.

Paleontological Monitoring

Based on a paleontological sensitivity study, it can be assumed that the upper 5 feet (1.5 m) of the sediments underlying the Project area should be assigned a low paleontological resource sensitivity, and any deposits discovered at greater than 5 feet (1.5 m) in depth below grade should be assigned a high paleontological resource sensitivity. Therefore, the services of a qualified paleontologist shall be retained prior to earthmoving activities associated with sediments greater than 5 feet (1.5 m) below grade within the Project area, in order to develop a site-specific Paleontological Resource Mitigation and Treatment Plan. This plan shall specify the levels and types of mitigation efforts based on the types and depths of earthmoving activities and the geologic and paleontological sensitivity of the Project area. If artificial fill, significantly disturbed deposits, or younger deposits too recent to contain paleontological resources are encountered during construction, the Project paleontologist may reduce or curtail monitoring in the affected areas, after consultation with the Project proponent and the City. The plan shall also include a description of the professional qualifications required of key staff, communication protocols to be followed during construction, fossil-recovery protocols, sampling protocols for microfossils (if required), laboratory procedures, reporting requirements, and curation provisions for any collected fossil specimens. Furthermore, a paleontological monitor should be on-site at all times during the original cutting of previously undisturbed deposits of high paleontological resource potential, to inspect exposures for contained fossils. The paleontological monitor will work under the direction of a qualified professional paleontologist. If paleontological resources are discovered during construction, the monitor will have the authority to temporarily divert or direct ground-disturbing activities in the immediate vicinity around the resources until they are assessed for scientific significance and recovered (i.e., collected).

Human Remains

If human remains are identified during construction, all construction activities near the remains must cease immediately, and the area must be secured. The Riverside County Coroner's Office must be contacted immediately, in accordance with the California *Health and Safety Code* (HSC; Section 7050.5[b]). If the determination is made by the coroner that the remains are those of a Native American, HSC 7050.5(c) requires that the coroner contact the NAHC by telephone within 24 hours. The NAHC will then select a Most Likely Descendant and will coordinate with that individual regarding the treatment and final disposition (repatriation) of the human remains, according to the provisions of PRC 5097.98 and any other legal/regulatory requirements. Any encountered human remains will be treated with the proper dignity and respect.

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Native American Heritage Commission Sacred Lands File Search Results and Contact List

NATIVE AMERICAN HERITAGE COMMISSION

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August 30, 2021

Patrick Stanton
Statistical Research, Inc.

Via Email to: pstanton@sricrm.com

Re: Debonne Property Archaeological and Paleontological Assessment Project, Riverside County

Dear Mr. Stanton:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
8/30/2021

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Los Coyotes Band of Cahuilla and Cupeño Indians
Ray Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Debonne Property Archaeological and Paleontological Assessment Project, Riverside County.

Native American Heritage Commission
Native American Contact List
Riverside County
8/30/2021

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P. O. Box 391670 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramona-nsn.gov

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 Cahuilla
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Debonne Property Archaeological and Paleontological Assessment Project, Riverside County.

Native American–Coordination Notes

Name:	Jeff Grubbe
Organization:	Agua Caliente Band of Cahuilla Indians (ACBCI)
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	no email address provided by the Native American Heritage Commission (NAHC)
Date of follow-up phone call:	not applicable
Comments:	On April 21, 2022, SRI was informed that Mr. Grubbe was no longer Chairman for the ACBCI and that all future correspondence should be addressed to the new Chairman, Mr. Reid D. Milanovich. No attempt to follow up was made, because the Tribal Historic Preservation Office (THPO) provided a response on April 29, 2022.

Name:	Patricia Garcia-Plotkin
Organization:	ACBCI
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	not applicable
Comments:	On April 29, 2022, SRI received a letter discussing the Project from ACBCI THPO Operations Manager Ms. Lacy Padilla. Ms. Padilla indicated that the ACBCI THPO requests the following: (1) a copy of the records search with associated survey reports and site records from the information center; (2) copies of any cultural resource documentation (report and site records) generated in connection with this Project; (3) the presence of an approved ACBCI Native American Cultural Resource Monitor(s) during any ground-disturbing activities (including archaeological testing and surveys), with the ability to halt destructive construction activities should buried cultural deposits be encountered. In such a case, the monitor would notify a Qualified Archaeologist (per the Secretary of the Interior's Standards and Guidelines) to investigate the material and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Office and the ACBCI; and (4) to contact our office for a meeting. On June 1, 2022, Ms. Padilla contacted SRI via email to report that she met with Ms. Ann Brierty, THPO for the Morongo Band of Mission Indians, to discuss monitoring of the survey and testing components of the Project. Additionally, Ms. Padilla reached out to Director of Cultural Affairs for the Cabazon Band of Mission Indians Mr. Michael Mirelez, who had requested to be involved in the decision-making process for the project. Both the Morongo Band of Mission Indians and the ACBCI reaffirmed their request to have a monitor on-site to concurrently monitor the survey and testing efforts as well as further ground disturbance. On June 9, 2022, SRI reached out to Ms. Padilla to plan a pre-field meeting with SRI, the ACBCI, and Meridian Consultants; the meeting was planned for Thursday, June 16, 2022. During the meeting, SRI provided the ACBCI and the Morongo Band of Mission Indians with all the information relevant to the upcoming field portion of the Project and planned to begin work immediately after contracts between the Tribes and Pulte Homes could be executed.

On August 4, 2022, SRI notified the ACBCI of the potential discovery of cremated human remains at a site during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Ms. Padilla and Director of the ACBCI THPO Ms. Patricia Garcia-Plotkin of an agreement between the project landowner, Mr. Bernard Debonne, and the Coachella Valley Water District (CVWD) to place a substantial amount of material from a nearby CVWD project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Ms. Garcia-Plotkin asked that the activity cease and desist until she could confer with the City, the developer, and the CVWD. A conference call among Pulte Homes, Meridian Consultants, SRI, and the ACBCI took place on August 12, 2022, during which the ACBCI was made aware of the specifics of the stockpile. On August 15, 2022, a meeting among Pulte Homes, SRI, the ACBCI, and Sukuts Construction was conducted within the Project area to discuss the placement of the stockpile. During the meeting, it was agreed that an ACBCI monitor would be present to observe the stockpile, given the sensitive nature of the original location of the sediment.

Name: Amanda Vance
Organization: Augustine Band of Cahuilla Mission Indians
Affiliation: Cahuilla
Date of request letter: April 6, 2022
Date of follow-up email: April 11, 2022
Date of follow-up phone call: May 4, 2022
Comments: On May 4, 2022, at 11:11 a.m., SRI reached out to the Augustine Band of Cahuilla Indians by phone but was notified that inquiries should be made by email. The email address provided was different from the one provided by the NAHC. SRI sent another email to the new email address, seeking information. On May 6, 2022, SRI was notified by letter from Tribal Vice-Chairperson Ms. Victoria Martin that the Augustine Band of Cahuilla Indians are unaware of specific cultural resources that may be affected by the proposed Project but requested that they be notified should any discovery be made during development.

Name: Michael Mirelez
Organization: Cabazon Band of Mission Indians
Affiliation: Cahuilla
Date of request letter: April 6, 2022
Date of follow-up email: April 11, 2022
Date of follow-up phone call: May 4, 2022
Comments: On May 4, 2022, SRI reached out to the Cabazon Band of Mission Indians by phone and was directed to Cultural Resources Coordinator Mr. Michael Mirelez. Mr. Mirelez indicated that the email with the Project information that was sent did not reach him, because he is

taking over for the previous coordinator, and the email did not appear to have successfully transferred to his email address. Mr. Mirelez was previously employed as cultural resource coordinator for the Torres-Martinez Desert Cahuilla Indians. A second email was submitted to Mr. Mirelez with a copy of the initial outreach letter on May 4, 2022.

On May 9, 2022, Mr. Mirelez indicated that he was in discussion with the ACBCI to determine the best course of action moving forward with the Project. On May 12, 2022, SRI received a follow-up phone call from Mr. Mirelez to discuss the upcoming Project. Mr. Mirelez indicated that the Cabazon Band of Mission Indians does not have staff for monitoring, but he wanted to make sure that a Tribal Monitor from the ACBCI or the Morongo Band of Mission Indians would be on-site to monitor the survey and ground disturbance. After assurances from SRI that we would work with these Tribes to ensure that a monitor was on-site, Mr. Mirelez also indicated that the Cabazon Band of Mission Indians would like to be informed of any discoveries and any time that activities are conducted on-site. Additionally, Mr. Mirelez would like to be present on the first day of fieldwork. Following the phone call, Mr. Mirelez sent an email to SRI summarizing the phone call.

On August 4, 2022, SRI notified Mr. Mirelez of the potential discovery of cremated human remains at a site discovered during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Mr. Mirelez of an agreement between the project landowner, Mr. Bernard Debonne, and the CVWD to place a substantial amount of material from a nearby CVWD project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Mr. Mirelez was kept apprised of the situation and was updated following the August 15, 2022, meeting among the ACBCI, Pulte Homes, and Sukuts Construction (see ACBCI notes, above).

Name:	Daniel Salgado
Organization:	Cahuilla Band of Indians
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4, 2022
Comments:	SRI attempted to notify Chairperson for the Cahuilla Band of Indians Mr. Daniel Salgado by letter, email, and telephone. Although the letter was received on April 6, 2022, SRI received no response. SRI then attempted to contact Mr. Salgado by email on April 11, 2022, but could not reach him. On May 4, 2022, at 11:42 a.m., SRI reached out to the Cahuilla Band of Indians by phone and was directed to their Cultural Department. The mailbox for the Cultural Department was full, and no message could be left.

Name:	Raymond Chapparosa
Organization:	Los Coyotes Band of Cahuilla and Cupeño Indians
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	no email address provided by the NAHC
Date of follow-up phone call:	May 4, 2022
Comments:	SRI attempted to notify Chairperson for the Los Coyotes Band of Cahuilla and Cupeño Indians Mr. Raymond Chapparosa by letter and telephone. Although the letter was received on April 6, 2022, SRI received no response. On May 4, 2022, at 11:45 a.m., SRI reached out to the Los Coyotes Band of Cahuilla and Cupeño Indians by phone. There was no response, but a message was left.

Name:	Robert Martin
Organization:	Morongo Band of Mission Indians
Affiliation:	Cahuilla and Serrano
Date of request letter:	April 6, 2022
Date of follow-up email:	no email address provided by the NAHC
Date of follow-up phone call:	May 4, 2022
Comments:	On May 4, 2022, at 11:51 a.m., SRI reached out to Mr. Martin by phone. There was no response, but a message was left.

Name:	Ann Brierty
Organization:	Morongo Band of Mission Indians
Affiliation:	Cahuilla and Serrano
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4, 2022
Comments:	On May 4, 2022, at 1:32 p.m., SRI reached out to Ms. Brierty by phone. There was no response, but a message was left. On May 11, 2022, SRI received a letter from Morongo Band of Mission Indians THPO Ms. Ann Brierty regarding the project. The letter requested the following: (1) a records search to be conducted at the appropriate CHRIS center with at least a 1.0-mile search radius from the Project boundary, with copies of the cultural resource documentation (reports and site records) generated through that search given to the Tribe so that these may be compared against the ACBCI records in order to begin productive consultation; (2) Tribal participation during the pedestrian survey and testing, with a copy of the current Phase I study or other cultural assessments (including the cultural resource inventory) furnished to the Morongo Band of Mission Indians; (3) shape files of the project area; (4) a geotechnical report; and (5) the currently proposed Project design and mass grading maps. Because both the Morongo Band of Mission Indians and the ACBCI had expressed interest in monitoring, on May 16, 2022, SRI reached out to Ms. Brierty to inquire as to whether both Tribes could come to an agreement and decide who would be providing monitors. Ms. Brierty requested additional information (shape files, records-search information, maps, etc.) to get a better understanding of the Project. On May 31, 2022, Ms. Brierty contacted SRI via email to report that she had met with ACBCI THPO Operations Manager Ms. Lacey Padilla to discuss monitoring. Both the Morongo Band of

Mission Indians and the ACBCI requested to have monitors on-site to concurrently monitor the survey and testing efforts as well as further ground disturbance. On June 9, 2022, SRI reached out to Ms. Brierty to plan a pre-field meeting among SRI, the ACBCI, and Meridian Consultants; the meeting occurred on June 16, 2022. During that meeting, SRI provided the ACBCI and the Morongo Band of Mission Indians all the information relevant to the upcoming field portion of the Project and planned to begin work immediately after contracts between the Tribes and Pulte Homes could be executed.

On August 4, 2022, SRI notified the Morongo Band of Mission Indians of the potential discovery of cremated human remains at a site discovered during the survey. On August 5, 2022, SRI met on-site with Ms. Padilla and Mr. Andreas Heredia from the ACBCI, Ms. Brierty and Ms. Laura Chatterton from the Morongo Band of Mission Indians, Mr. Mirelez from the Cabazon Band of Mission Indians, and Dr. Deborah Gray and Corporal Stephanie Anderson from the Riverside County Coroner's Office, to attempt to identify the potential remains.

On August 10, 2022, SRI notified Ms. Brierty and Ms. Chatterton of an agreement between the project landowner, Mr. Bernard Debonne, and the CVWD to place a substantial amount of material from a nearby CVWD project within the Project area. Placement of the stockpile would cover several newly discovered prehistoric resources. Ms. Brierty and Ms. Chatterton were kept apprised of the situation and were updated following the August 15, 2022, meeting among the ACBCI, Pulte Homes, and Sukuts Construction (see ACBCI notes, above).

Name:	Jill McCormick
Organization:	Quechan Tribe of the Fort Yuma Reservation
Affiliation:	Quechan
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	not applicable
Comments:	On April 12, 2022, SRI was notified by Ms. McCormick that the Quechan do not wish to comment on the project and are deferring to more local Tribes.

Name:	Manfred Scott
Organization:	Quechan Tribe of the Fort Yuma Reservation
Affiliation:	Quechan
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	not applicable
Comments:	No attempt to follow up was made, because the THPO provided a response on April 12, 2022.

Name:	Joseph Hamilton
Organization:	Ramona Band of Cahuilla
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone calls:	May 4 and 6, 2022

Comments:	On May 4, 2022, at 12:45 p.m., SRI reached out to the Ramon Band of Cahuilla by phone, but the mailbox was full, and no message could be left. On May 6, 2022, at 10:33 a.m., a second attempt was made, but like with the initial attempt, no message could be left, because the mailbox was full.
Name:	John Gomez
Organization:	Ramona Band of Cahuilla
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone calls:	May 4 and 6, 2022
Comments:	On May 4, 2022, at 12:45 p.m., SRI reached out to the Ramon Band of Cahuilla by phone, but the mailbox was full, and no message could be left. On May 6, 2022, at 10:33 a.m., a second attempt was made, but like with the initial attempt, no message could be left, because the mailbox was full.
Name:	Lovina Redner
Organization:	Santa Rosa Band of Cahuilla Indians
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4 and 6, 2022
Comments:	On May 4, 2022, at 12:47 p.m., SRI attempted to reach out to the Santa Rosa Band of Cahuilla Indians, but no one was available. There was no option for leaving a message. A second attempt was made on May 6, 2022, at 10:32 a.m., but no one was available.
Name:	Joseph Ontiveros
Organization:	Soboba Band of Luiseño Indians
Affiliation:	Cahuilla and Luiseño
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4, 2022
Comments:	On May 4, 2022, at 12:55 p.m., SRI reached out to the Soboba Band of Luiseño Indians and spoke with Cultural Resource Director Mr. Ontiveros. He indicated the Project area is very sensitive and that the Soboba Band of Luiseño Indians defers to the Cabazon Band of Mission Indians.
Name:	Isaiah Vivanco
Organization:	Soboba Band of Luiseño Indians
Affiliation:	Cahuilla and Luiseño
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	not applicable
Comments:	On May 4, 2022, at 12:55 p.m., SRI reached out to the Soboba Band of Luiseño Indians and spoke with Cultural Resource Director Mr. Ontiveros. He indicated the Project area is very sensitive and that the Soboba Band of Luiseño Indians defers to the Cabazon Band of Mission Indians.
Name:	Michael Mirelez

Organization:	Torres-Martinez Desert Cahuilla Indians
Affiliation:	Cahuilla
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4 and 6, 2022
Comments:	On May 4, 2022, at 1:01 p.m., SRI reached out to the Torres-Martinez Desert Cahuilla Indians by phone. The call was automatically rerouted to voicemail, but the mailbox was full, and no message could be left. A second attempted phone call was made on May 6, 2022, at 10:29 a.m., but was likewise rerouted to a full voicemail mailbox.

Name:	Anthony Madrigal
Organization:	Twenty-Nine Palms Band of Mission Indians
Affiliation:	Chemehuevi
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	May 4, 2022
Comments:	On May 4, 2022,1:36 p.m., SRI reached out to THPO Mr. Anthony Madrigal. Mr. Madrigal directed our query to Twenty-Nine Palms Band of Mission Indians Cultural Resources Coordinator Sarah Bliss. Ms. Bliss was immediately called (at 1:39 p.m.), but she was unavailable. No message was left, because her mailbox was full. On May 4, 2022, at 2:16 a.m., Ms. Bliss returned SRI's phone call requesting further information, and indicated that she would provide a response by May 6, 2022. May 9, 2022, SRI reached out to Ms. Bliss by phone to find out whether she had further information, but we were unable to reach her; no message was left, because her voicemail mailbox was full.

Name:	Darrell Mike
Organization:	Twenty-Nine Palms Band of Mission Indians
Affiliation:	Chemehuevi
Date of request letter:	April 6, 2022
Date of follow-up email:	April 11, 2022
Date of follow-up phone call:	
Comments:	SRI received an email notification on April 11, 2022, indicating that the email failed to deliver.

TRIBAL HISTORIC PRESERVATION OFFICE

VIA ELECTRONIC MAIL

pstanton@sricrm.com

MORONGO BAND OF MISSION INDIANS
A SOVEREIGN NATION

Patrick Stanton, Assistant Director
Statistical Research, Inc. – Redlands Office
617 Texas Street
Redlands, CA 92374

Re: City of Indio North Indio Specific Plan Environmental Impact Report

Dear Mr. Stanton:

The Morongo Band of Mission Indians (Tribe/MBMI) Tribal Historic Preservation Office is in receipt of your letter regarding the above referenced project. Thank you for reaching out to Tribe at an early stage. The Environmental Impact Report for the North Indio Specific Plan (Project) is located on land within the ancestral territory and traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians.

Tribal cultural resources are non-renewable resources and therefore of high importance to the Morongo Tribe and tribal participation (a.k.a. tribal monitors) is recommended during the future phases(s) of the Project. We look forward to working with the City of Indio and Statistical Research, Inc. to protect these irreplaceable resources out of respect for ancestors of the Morongo people who left them there, and for the people of today and for generations to come.

Projects within this area are highly sensitive for cultural resources regardless of the presence or absence of remaining surface artifacts and features. At the appropriate stage of any Project within the designated parcel(s) encompassed by the EIR, our office will request government-to-government consultation under Assembly Bill (AB) 52 (California Public Resources Code § 21080.3.1) with the City of Indio, the lead agency. At that time, the following will be requested from the lead agency to ensure meaningful consultation:

- A records search conducted at the appropriate California Historical Resources Information System (CHRIS) center with at least a 1.0-mile search radius from the project boundary. If this work has already been done, please furnish copies of the cultural resource documentation (reports and site records) generated through this search so that we can compare and review with our records to begin productive consultation.
- Tribal participation (a.k.a. tribal monitors) during the pedestrian survey and testing, if this fieldwork has not already taken place. In the event that archaeological crews have completed this work, our office requests a copy of the current Phase I study or other cultural assessments (including the cultural resources inventory).
- Shape files of the Projects area of effect (APE)
- Geotechnical Report

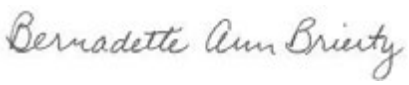
- Currently proposed Project design and Mass Grading Maps

This letter neither initiates nor concludes consultation. Upon the invitation for consultation from the lead agency and receipt of the requested documents, the MBMI THPO may further provide recommendations and/or mitigation measures.

Please keep in mind that MBMI requests that copies of all cultural data such as reports and confidential data (DPRs) and confidential portions of reports be sent to Tribal THPO.

The lead contact for this Project is Bernadette Ann Brierty, Tribal Historic Preservation Officer (THPO). Dr. Joan Schneider, Consulting Archaeologist will be assisting the Tribe in the review of this project. Should you have any questions, please do not hesitate to contact us at thpo@morongo-nsn.gov, ABrierty@morongo-nsn.gov, or (951) 663-2842. The Tribe looks forward to meaningful government-to-government consultation with the City of Indio.

Respectfully,



Bernadette Ann Brierty

Tribal Historic Preservation Officer

Morongo Band of Mission Indians

CC: Morongo THPO

12700 Pumarra Road – Banning, CA 92220 – (951) 755-5259 – Fax (951) 572-6004 – THPO@morongo-nsn.gov

AUGUSTINE BAND OF CAHUILLA INDIANS
PO Box 846 84-481 Avenue 54 Coachella CA 92236
Telephone: (760) 398-4722
Fax (760) 369-7161
Tribal Chairperson: Amanda Vance
Tribal Vice-Chairperson: Victoria Martin
Tribal Secretary: Geramy Martin

Date: May 6, 2022

RE: Cultural Resources Study City of Indio N. Indio Specific Plan Environmental Impact Report Indio, Riverside County, California

Dear: Patrick Stanton
Assistant Director

Thank you for the opportunity to offer input concerning the development of the above-identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Unfortunately, increased development and lack of sensitivity to cultural resources have resulted in many significant cultural resources being destroyed or substantially altered and impacted. Your invitation to consult on this project is greatly appreciated.

At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please contact our office immediately for further evaluation.

Very truly yours,

Victoria Martin

Victoria Martin, Tribal Vice-Chairperson
Augustine Band of Cahuilla Indians

Patrick Stanton

From: Quechan Historic Preservation <historicpreservation@quechantribe.com>
Sent: Tuesday, April 12, 2022 5:44 AM
To: Patrick Stanton
Subject: RE: Cultural Resources Study, City of Indio N. Indio Specific Plan Environmental Impact Report

This email is to inform you that we do not wish to comment on this project. We defer to the more local Tribes and support their determinations on this matter.

From: Patrick Stanton [mailto:pstanton@sricrm.com]
Sent: Monday, April 11, 2022 1:28 PM
To: historicpreservation@quechantribe.com
Subject: Cultural Resources Study, City of Indio N. Indio Specific Plan Environmental Impact Report

Dear Ms. McCormick

Statistical Research, Inc. (SRI), is conducting a cultural resources study in support of the Environmental Impact Report being prepared by the City of Indio for the proposed N. Indio Specific Plan Project in Indio, Riverside County, California. As part of its information-gathering process to identify cultural resources within the project area, SRI requested a Sacred Lands File search from the California Native American Heritage Commission (NAHC). The NAHC named you as someone with cultural and traditional affiliations with the project area and who might have knowledge of cultural resources on the property that you wish to share.

I mailed you a certified letter on April 6, 2022 with background information on the project and inviting you to provide additional information on cultural or tribal resources that could be affected by the project. With the COVID-19 pandemic affecting everyone's normal work routines, I am also sending the letter to you attached to this email. If you have any questions, I can be reached by e-mail at pstanton@sricrm.com or by telephone at (909) 754-8274.

Thank you,

Patrick Stanton, M.A., RPA
Principal Investigator
Assistant Office Director, Redlands Office
Statistical Research, Inc.
617 Texas St.
Redlands, CA. 92374
office 909-335-1896

Statistical Research, Inc., is a certified woman-owned small business that has provided Cultural Resource Management and Historic Preservation services since 1983.

This communication is confidential and is intended only for the use of the individual or entity named above. If you have received this communication in error, please immediately destroy it and notify the sender by reply e-mail or by telephone (909) 335-1896 (call collect)

Virus-free. www.avast.com

Patrick Stanton

From: Mirelez, Michael <mmirelez@cabazonindians-nsn.gov>
Sent: Thursday, May 12, 2022 4:11 PM
To: Patrick Stanton
Subject: Re: Cultural Resources Study, City of Indio N. Indio Specific Plan Environmental Impact Report Monitoring

Mr. Stanton –

Per our informal phone conversation The Cabazon Band of Cahuilla Indians appreciates your concern and consideration for its Cultural Resources. The information provided to us on said project has been reviewed The Band does have knowledge of cultural resources having been discovered within close vicinity of your project It is an extreme concern of the Tribe that when working in and around traditional use areas such as surveys, construction / excavation phases the possibility of encountering cultural resources intensifies.
For this reason the Cabazon Band of Mission Indians requests that approved Native American Monitor(s) be present during any future ground disturbing proceedings, including surveys and archaeological testing, associated with this project. Cabazon also requests to be informed of all cultural discoveries so that the Band can have a voice in the handlings of such sacred artifacts and areas to insure the protection and preservation of the Bands cultural resources.

As agreed upon, please inform me when the first day of the phase 1 testing is to begin so that I may be present on behalf of the Cabazon Band of Cahuilla Indians.

Look forward to working with you sir, please feel free to reach out to me with any questions you may have.
Respectfully,
Michael Mirelez
Director of Cultural Affairs
Cabazon Band of Mission Indians
84-245 Indio Springs Parkway
Indio Ca. 92203-3499
Office: 760.238.5770
Cell:760.984.9371
Email:mmirelez@cabazonindians-nsn.gov

[signature_2326189366]

From: Patrick Stanton <pstanton@sricrm.com>
Date: Wednesday, May 11, 2022 at 8:56 AM
To: "Mirelez, Michael" <mmirelez@cabazonindians-nsn.gov>
Subject: Cultural Resources Study, City of Indio N. Indio Specific Plan Environmental Impact Report Monitoring

Good morning,

I just wanted to let you know that I received word from Ann Brierty, THPO for the Morongo Band of Mission Indians, that they would like to provide monitors for the project. I don't know how far along your discussions with ACBCI are, but I told her that I would inform you of her interest. I also encouraged her to reach out to you and Lacy Padilla at ACBCI. If you would like to reach out to her too, her email is abrierty@morongo-nsn.gov<mailto:abrierty@morongo-nsn.gov>.

Incidentally, how have the discussions gone? Has there been a decision at all?

Thanks for your help on all this. Have a good day.

Patrick Stanton, M.A., RPA
Principal Investigator
Assistant Office Director, Redlands Office Statistical Research, Inc.
617 Texas St.
Redlands, CA. 92374
office 909-335-1896

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AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-002-2022-003

April 29, 2022

[VIA EMAIL TO:pstanton@sricrm.com]
Statistical Research, Inc.
Mr. Patrick Stanton
21 W. Stuart Avenue
Redlands, California 92374

Re: N. Indio Specific Plan Environmental Impact Report

Dear Mr. Patrick Stanton,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the N. Indio Specific Plan project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*A copy of the records search with associated survey reports and site records from the information center.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

*Please contact our office for a meeting.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6956. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

Lacy Padilla
Archaeologist
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

Radiocarbon-Analysis Report from Beta Analytic, Inc.

Beta Analytic, Inc.
4985 SW 74th Court
Miami, FL 33155 USA
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2017-Accredited Testing Laboratory

October 10, 2022

Mr. James Clark
Statistical Research, Incorporated
617 Texas St
Redlands, CA 92374
United States

RE: Radiocarbon Dating Results

Dear Mr. Clark,

Enclosed is the radiocarbon dating result for one sample recently sent to us. As usual, specifics of the analysis are listed on the report with the result and calibration data is provided where applicable. The Conventional Radiocarbon Age has been corrected for total fractionation effects and where applicable, calibration was performed using 2020 calibration databases (cited on the graph pages).

The web directory containing the table of results and PDF download also contains pictures, a cvs spreadsheet download option and a quality assurance report containing expected vs. measured values for 3-5 working standards analyzed simultaneously with your samples.

The reported result is accredited to ISO/IEC 17025:2017 Testing Accreditation PJLA #59423 standards and all pretreatments and chemistry were performed here in our laboratories and counted in our own accelerators here in Miami. Since Beta is not a teaching laboratory, only graduates trained to strict protocols of the ISO/IEC 17025:2017 Testing Accreditation PJLA #59423 program participated in the analysis.

As always Conventional Radiocarbon Ages and sigmas are rounded to the nearest 10 years per the conventions of the 1977 International Radiocarbon Conference. When counting statistics produce sigmas lower than +/- 30 years, a conservative +/- 30 BP is cited for the result unless otherwise requested. The reported d13C was measured separately in an IRMS (isotope ratio mass spectrometer). It is NOT the AMS d13C which would include fractionation effects from natural, chemistry and AMS induced sources.

When interpreting the result, please consider any communications you may have had with us regarding the sample. As always, your inquiries are most welcome. If you have any questions or would like further details of the analysis, please do not hesitate to contact us.

The cost of analysis was previously invoiced. As always, if you have any questions or would like to discuss the results, don't hesitate to contact us.

Sincerely,

Ronald E. Hatfield President

Beta Analytic, Inc.
4985 SW 74th Court
Miami, FL 33155 USA
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2017-Accredited Testing Laboratory

REPORT OF RADIOCARBON DATING ANALYSES

James Clark — Report Date: October 10, 2022

Statistical Research, Incorporated — Material Received: October 05, 2022

Laboratory Number	Sample Code Number	Conventional Radiocarbon Age (BP) or Percent Modern Carbon (pMC) & Stable Isotopes	
Beta - 641649	**3000-03007B24D**	**210 +/- 30 BP**	IRMS δ13C: -25.5 o/oo
(51.6%)	**1729 - 1808 cal AD**	**(221 - 142 cal BP)**	
(29.5%)	**1642 - 1688 cal AD**	**(308 - 262 cal BP)**	
(14.3%)	**1924 - Post AD 1950**	**(26 - Post BP 0)**	

Submitter Material: Charcoal
Pretreatment: (charred material) acid/alkali/acid
Analyzed Material: Charred material
Analysis Service: AMS-Standard delivery
Percent Modern Carbon: 97.42 +/- 0.36 pMC
Fraction Modern Carbon: 0.9742 +/- 0.0036
D14C: -25.80 +/- 3.64 o/oo
Δ14C: -34.25 +/- 3.64 o/oo (1950:2022)
Measured Radiocarbon Age: (without d13C correction): 220 +/- 30 BP
Calibration: BetaCal4.20: HPD method: INTCAL20

Results are ISO/IEC-17025:2017 accredited. No sub-contracting or student labor was used in the analyses. All work was done at Beta in 4 in-house NEC accelerator mass spectrometers and 4 Thermo IRMSs. The "Conventional Radiocarbon Age" was calculated using the Libby half-life (5568 years), is corrected for total isotopic fraction and was used for calendar calibration where applicable. The Age is rounded to the nearest 10 years and is reported as radiocarbon years before present (BP), "present" = AD 1950. Results greater than the modern reference are reported as percent modern carbon (pMC). The modern reference standard was 95% the 14C signature of NIST SRM-4990C (oxalic acid). Quoted errors are 1 sigma counting statistics. Calculated sigmas less than 30 BP on the Conventional Radiocarbon Age are conservatively rounded up to 30. d13C values are on the material itself (not the AMS d13C). d13C and d15N values are relative to VPDB. References for calendar calibrations are cited at the bottom of calibration graph pages.

BetaCal 4.20

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL20)

(Variables: d13C = -25.5 o/oo)

Laboratory number **Beta-641649**

Conventional radiocarbon age **210 ± 30 BP**

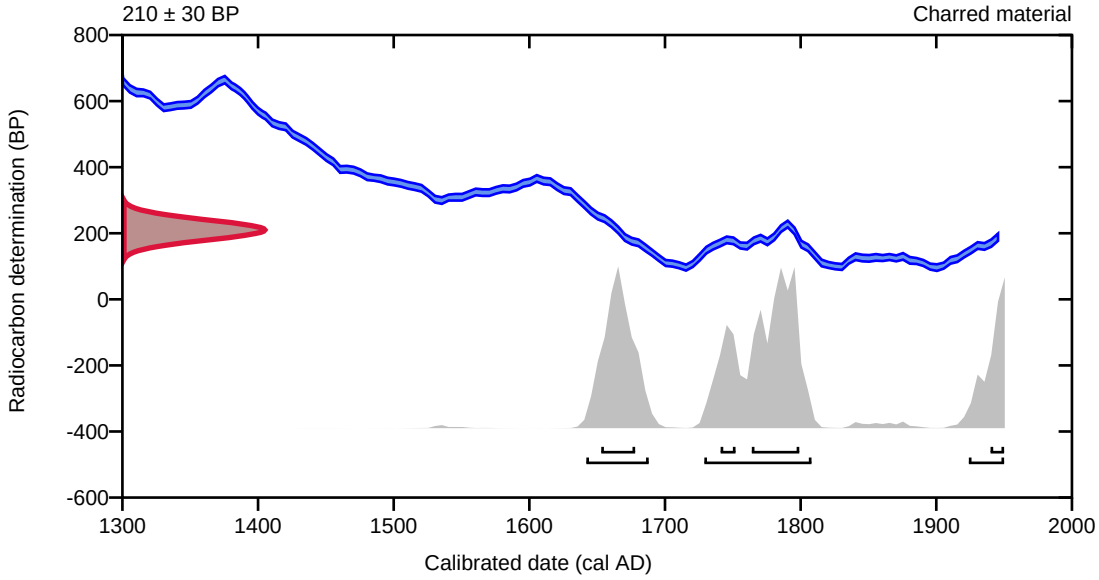
95.4% probability

(51.6%)	1729 - 1808 cal AD	(221 - 142 cal BP)
(29.5%)	1642 - 1688 cal AD	(308 - 262 cal BP)
(14.3%)	1924 - Post cal AD 1950	(26 - Post cal BP 0)

68.2% probability

(31.4%)	1764 - 1799 cal AD	(186 - 151 cal BP)
(21.6%)	1653 - 1678 cal AD	(297 - 272 cal BP)
(8.2%)	1940 - Post cal AD 1950	(10 - Post cal BP 0)
(7%)	1741 - 1752 cal AD	(209 - 198 cal BP)

3000-03007B24D



Database used

INTCAL20

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL20

Reimer, et al., 2020, Radiocarbon 62(4):725-757.

Beta Analytic Radiocarbon Dating Laboratory
4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • Email: beta@radiocarbon.com

Beta Analytic, Inc.
4985 SW 74th Court
Miami, FL 33155 USA
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2017-Accredited Testing Laboratory

Quality Assurance Report

This report provides the results of reference materials used to validate radiocarbon analyses prior to reporting. Known-value reference materials were analyzed quasi-simultaneously with the unknowns. Results are reported as expected values vs measured values. Reported values are calculated relative to NISTSRM-1990C and corrected for isotopic fractionation. Results are reported using the direct analytical measure percent modern carbon (pMC) with one relative standard deviation. Agreement between expected and measured values is taken as being within 2 sigma agreement (error x 2) to account for total laboratory error.

Report Date: October 10, 2022
Submitter: Dr. Donn R. Grenda

QA MEASUREMENTS

Reference 1	
Expected Value:	129.41 +/- 0.06 pMC
Measured Value:	129.26 +/- 0.35 pMC
Agreement:	Accepted
Reference 2	
Expected Value:	0.44 +/- 0.04 pMC
Measured Value:	0.44 +/- 0.03 pMC
Agreement:	Accepted
Reference 3	
Expected Value:	96.69 +/- 0.50 pMC
Measured Value:	97.14 +/- 0.28 pMC
Agreement:	Accepted

COMMENT: All measurements passed acceptance tests.

Validation:

Date: October 10, 2022

Site and Isolated Resource Records

The Coachella Canal, a historical-period irrigation canal (SRI 783), is a branch of the All-American Canal and was determined eligible for listing in the National Register of Historic Places at the local and state levels in 2004, under Criterion a (Stanton and Becker 2016). The canal enters the southeastern corner of the Project area from the south, where it crosses 40th Avenue before making an immediate 90° turn to the east and then exiting the Project area by crossing Madison Street. Based on aerial imagery observed on Google Earth (2006, 2009), the portion of the Coachella Canal within the Project area was covered during the widening of Madison Avenue sometime between April 27, 2006, and May 24, 2009, and is no longer visible in the Project area. Because this segment of the canal is hidden beneath a layer of fill, its condition is unknown.

References Cited

Google Earth

2006 Indio, California (33°45´31.10´´ N and 116°15´06.66´´ W). Aerial image, 27 April. Available online, https://earth.google.com/web/, accessed October 13, 2022.

2009 Indio, California (33°45´31.10´´ N and 116°15´06.66´´ W). Aerial image, 24 May 24. Available online, https://earth.google.com/web/, accessed October 13, 2022.

Stanton, Patrick B., and Kenneth M. Becker

2016 *Phase I Cultural Resource Survey and Evaluation for Excess Land Disposal Project along Coachella Canal, Indio, Riverside County, California.* Technical Report 16-20. Statistical Research, Redlands, California.

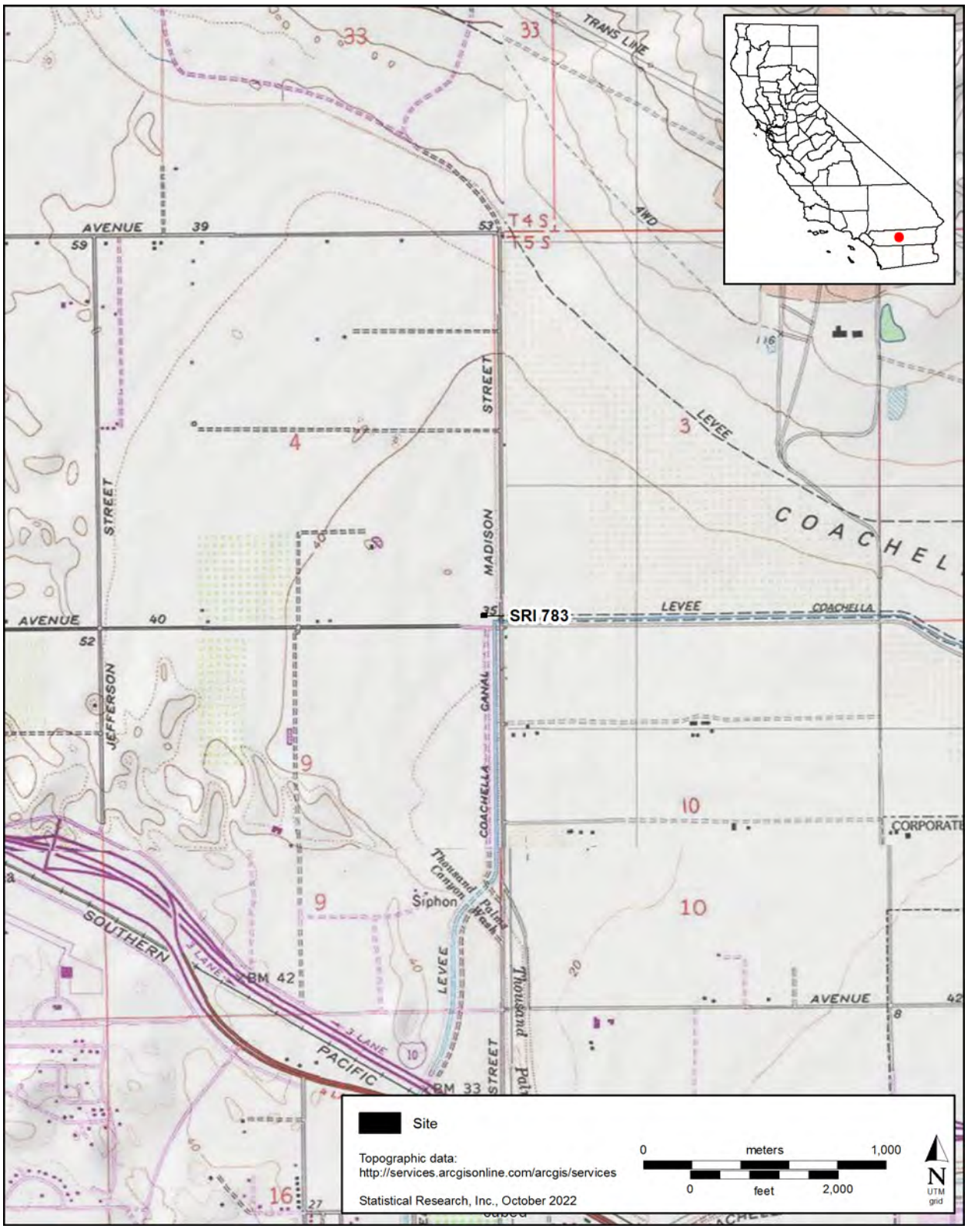
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-33-005705 (update)
HRI #
Trinomial CA-RIV-12999 (update)

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder)

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



The site was previously recorded as an 18-by-7-m (59.1-by-23.0-foot) artifact scatter composed of 11 ceramic sherds, 4 lithic flakes, and 6 fire-affected clay fragments (Ballester 2008). The original site description placed the site to the east of an agricultural field and atop a crescent-shaped dune in the southeastern corner of the Project area. Ballester (2008) noted that the dune on which CA-RIV-8908 was situated had been previously disturbed, possibly from construction of the Coachella Canal or nearby roads or from agricultural activity (Tang et al. 2008:13). The location of the site in the records-search data, however, was farther west than had been described in the site record.

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel examined both the location plotted by the California Historical Resources Information Center's Eastern Information Center and the location described in the site record. Using both aerial imagery and the previous site description, a small section of the Project area was intensively surveyed in 5-m (16.4-foot) transects to relocate the site, but no surface artifacts were encountered in either location. The surface of the Project area in that location, however, exhibited extensive mechanical disturbance, which suggests that the site may have been buried or destroyed completely.

To test for subsurface components, two shovel-test probes (STPs 732 and 737) were excavated in the location provided in the site record. STP 732 was placed atop the sand dune, and STP 737 was placed at the base of the dune. Both STPs tested negative for cultural material. In STP 732, green hydro-mulch was found between 40 and 80 cm (between 15.7 and 31.5 inches) below surface, whereas in STP 737, a broken pipe was found between 20 and 40 cm (between 7.9 and 15.7 inches) below surface, and wires were found at 78 cm (30.7 inches) below surface. These modern disturbances suggest that components of the dune are of modern construction.

References Cited

Ballester, Daniel

2008 Site Record for CA-RIV-8908. On file, California Historical Resources Information Center, Eastern Information Center, University of California, Riverside.

Tang, Bai "Tom", Clarence Bodmer, Lisa Hunt, and Laura Shaker

2008 *Historical/Archaeological Resources Survey Report: Madison Hills Plaza Project, a Portion of Assessor's Parcel No. 691-110-011, City of Indio, Riverside County, California*. CRM TECH, Colton, California. Prepared for Desert Elite, Inc., La Quinta, California.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 12 ***Resource Name or #** (Assigned by recorder): SRI 2

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip _____

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569042.662094 mE/ 3736044.62451 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel surveyed the 377-acre property. This site was identified as a small prehistoric artifact scatter composed of three undecorated brown ware ceramic sherds (2 body sherds and 1 rim sherd) and one quartzite core flake covering a 9-by-22-m area. A single shovel-test pit was placed within the borders of the site but was negative for cultural material. Charcoal flecks, likely from a natural origin, were found throughout the shovel-test pit from the surface to 60 cm (23.6 inches) below surface. The surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AP3. Ceramic scatter

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #): Overview of the site, view to the north (DSCF1537). 8/7/2022

***P6. Date Constructed/Age and Source:**
☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**
private

***P8. Recorded by** (Name, affiliation, and address):
Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):
intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 21.5 m **(**north–south**) × b. Width:** 8.6 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ☐ Medium ■ Low Explain: Due to the history of agricultural disturbance in the area, it is unlikely that the surface artifacts are in situ. There was no subsurface component to the site.

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ■ None ☐ Unknown Method of Determination: shovel-test pit

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**

No features were found in association with this site.

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

one quartzite core flake fragment, two brown ware ceramic body sherds, and one brownware ceramic rim sherd

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 60 cm below surface. It is unlikely that the artifacts are in situ.

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

Because the site is highly disturbed, it is unlikely to reveal more data for further research. The site is prehistoric and postdates the last high stand of ancient Lake Cahuilla, suggesting that this small site represents part of a small camp along the lake's edge possibly occupied between 1700 and 1800 A.D.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):
Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PHOTOGRAPH RECORD

Primary # _____
HRI # _____
Trinomial _____

Page 5 **of** 12 **Project Name:** Desert Retreat Specific Plan Project **Year:** 2022

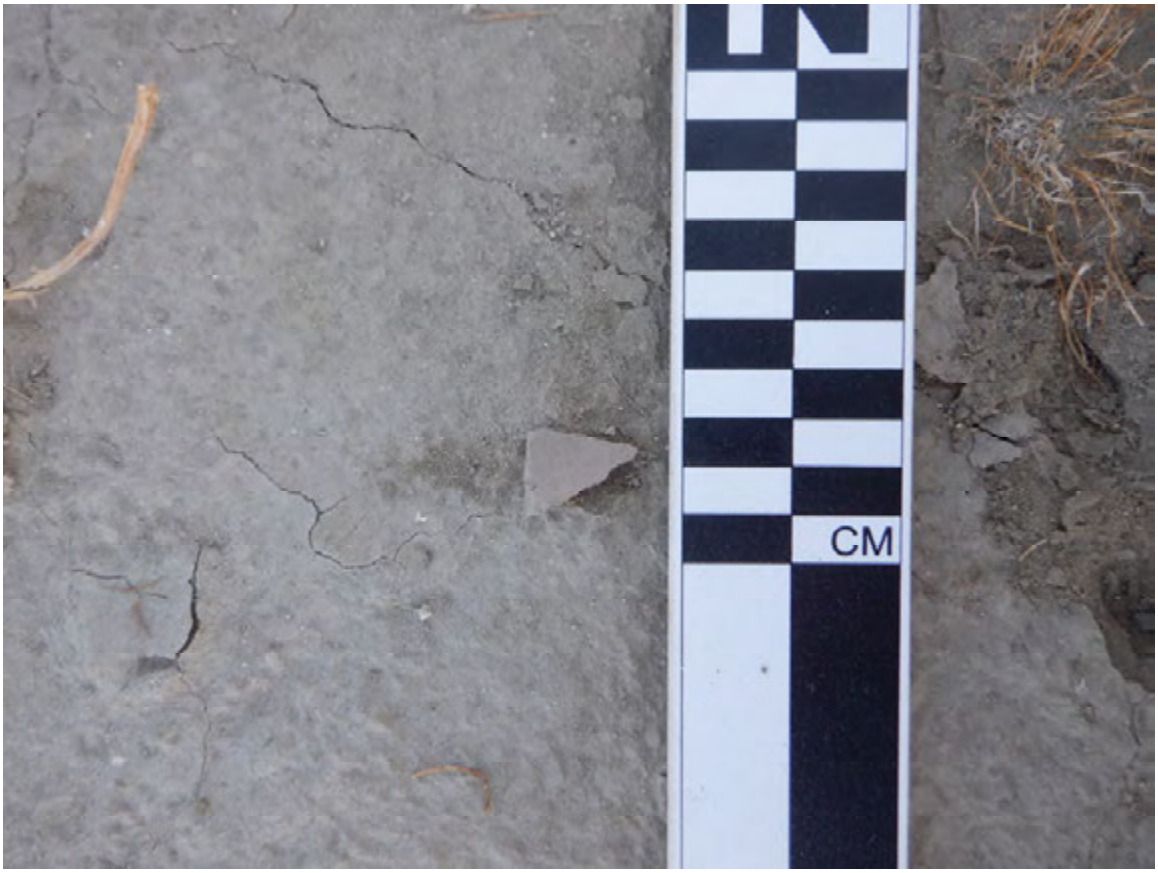
Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	07	2022	5:55 p.m.	Site overview.	north	DSCF1537
08	07	2022	5:55 p.m.	Quartzite core flake.	from above	DSCF1546
08	07	2022	5:55 p.m.	Brown ware ceramic body sherd.	from above	DSCF1544
08	07	2022	5:55 p.m.	Brown ware ceramic body sherd.	from above	DSCF1549
08	07	2022	5:55 p.m.	Brown ware ceramic rim sherd.	from above	DSCF1541

SRI 2 overview, view to the north (DSCF1537).

Quartzite core flake (DSCF1546).



Brown ware body sherd (DSCF1544).

Brown ware body sherd (DSCF1549).

Brown ware ceramic rim sherd (DSCF1541).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 2

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Locational Data (distance/bearing to datum)	Sketch/ Photo	Collected ?
				L	W	TH			
03007B1E8	L	F	quartzite flake	1.5	1.0	0.5		photo	no
03007B12E	C	F	brown ware body sherd					photo	no
03007B12E	C	F	brown ware body sherd					photo	no
03007B12F	C	F	brown ware rim sherd					photo	no

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

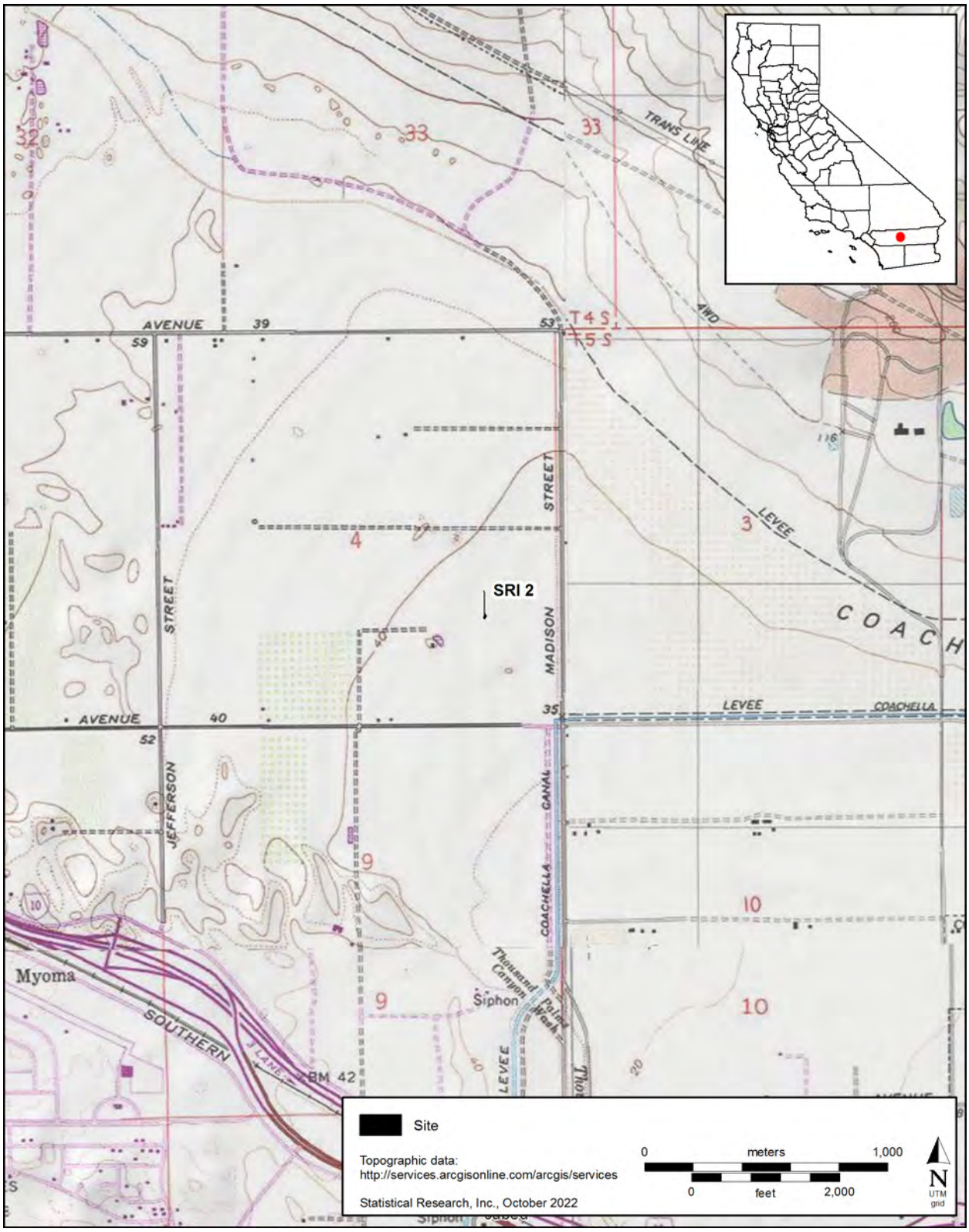
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or #:** (Assigned by recorder) SRI 2

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



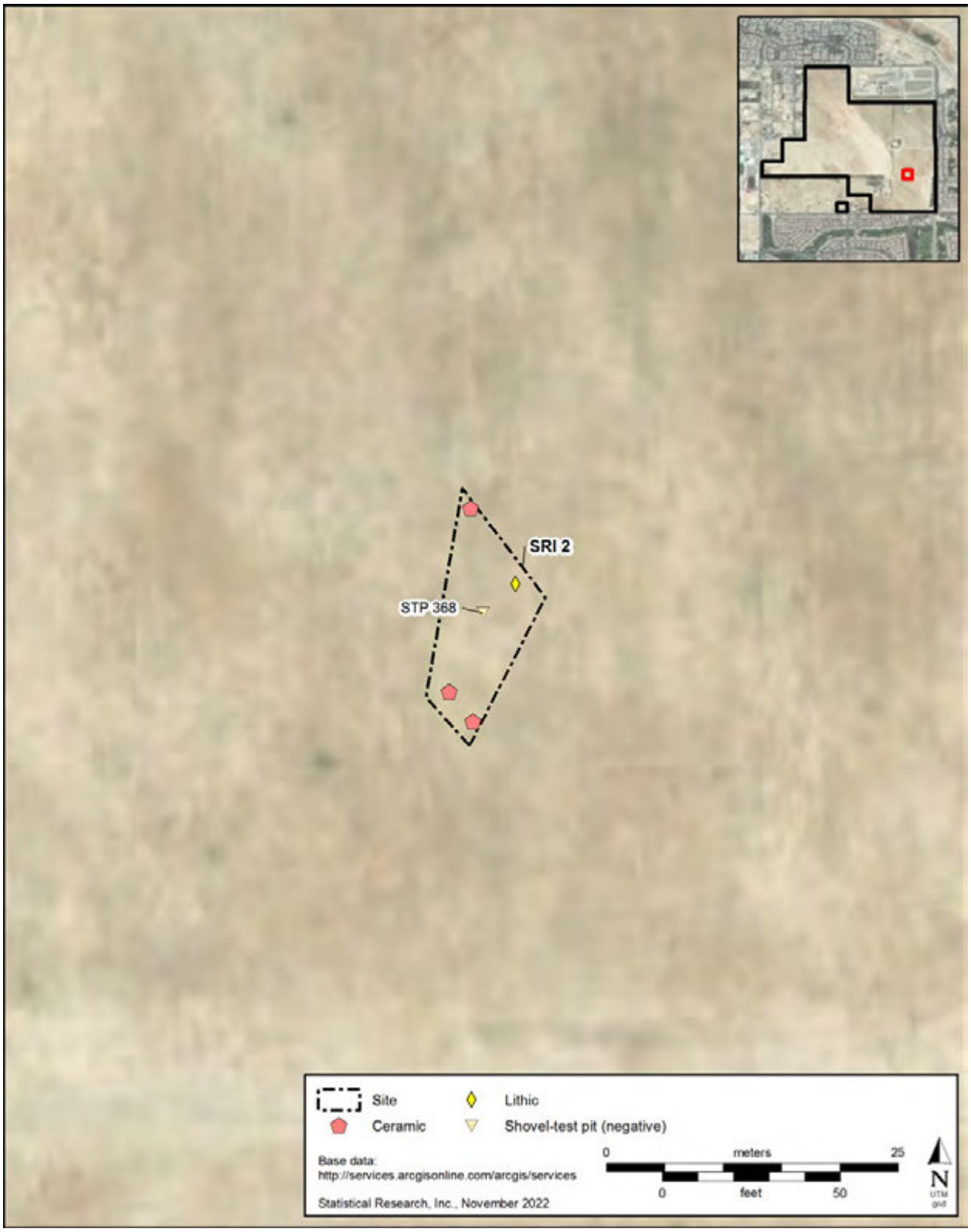
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 12 **of** 12 ***Resource Name or #:** (Assigned by recorder) SRI 2

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 12 ***Resource Name or #** (Assigned by recorder): SRI 11

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 15N , 568969.420668 mE/ 3736051.387127 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, SRI personnel identified this small prehistoric ceramic scatter composed of 9 undecorated brown ware sherds (8 body sherds and 1 rim sherd) covering a 16-by-22-m (52.5-by-72.2-foot) area. A single shovel-test pit (STP 363) was placed within the borders of the site but was negative for cultural material. Charcoal flecks, likely from a natural origin, were found throughout STP 363 from the surface to 60 cm (23.6 inches) below surface. The surface of the site has been heavily disturbed by agricultural activities, which have significantly reduced the site's integrity.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP3. Ceramic scatter

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Overview of the site, view to the north (DSCF1667). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
■ Artifact Record ■ Photograph Record ■ Other (List): sketch map

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 15 m (north–south) × **b. Width:** 28 m (east–west)

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: GPS point plotted

Method of Determination (Check any that apply): ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain:

Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination: shovel-test-pit excavation

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map):

no features present

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features):

8 brown ware body sherds and 1 brown ware rim sherd

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm below surface. It is unlikely that the artifacts are in situ.

***A8. Nearest Water** (Type, distance, and direction):

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

Because the site is highly disturbed, it is unlikely to reveal more data for further research. The site is prehistoric and postdates the last high stand of ancient Lake Cahuilla, suggesting that this small site represents part of a small camp along the lake's edge possibly occupied between 1700 and 1800 A.D.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):
Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PHOTOGRAPH RECORD

Primary # _____
HRI # _____
Trinomial _____

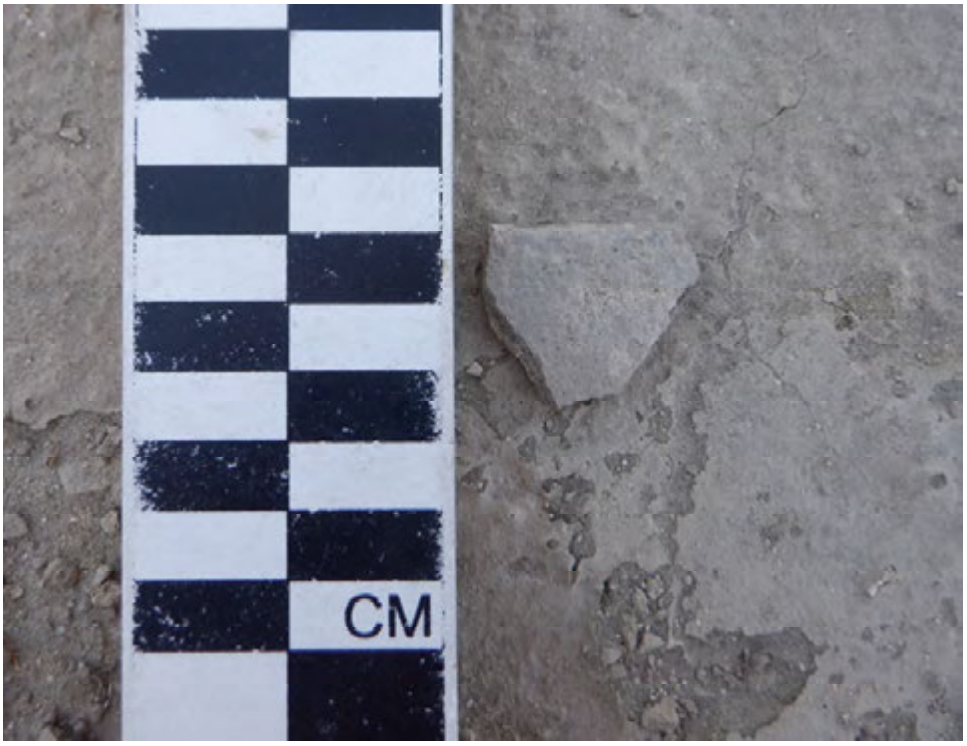
Page 4 **of** 12 **Project Name:** Desert Retreat Specific Plan Project **Year:** 2022

Camera Format: digital Lens Size: N/A

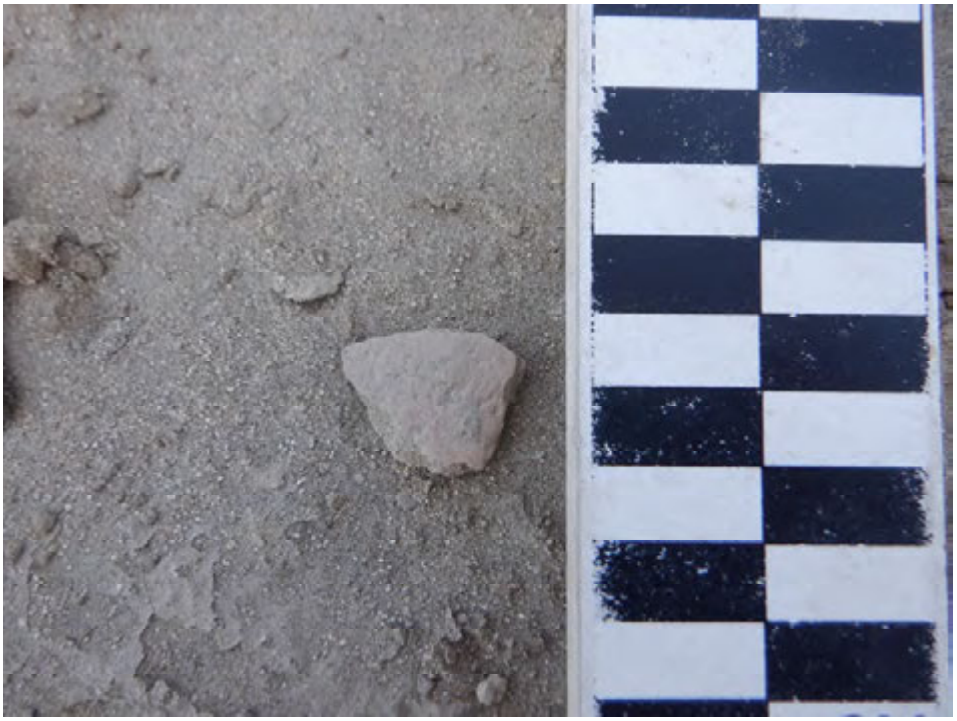
Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	07	2022	5:58 p.m.	Overview of the site, view to the north.	north	DSCF1667
08	07	2022	5:58 p.m.	Ceramic rim sherd, brown ware.	from above	DSCF1672
08	07	2022	5:58 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1675
08	07	2022	5:58 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1677
08	07	2022	5:58 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1679
08	07	2022	5:59 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1681
08	07	2022	5:59 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1683
08	07	2022	5:59 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1685
08	07	2022	5:59 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1687
08	07	2022	5:59 p.m.	Ceramic body sherd, brown ware.	from above	DSCF1687

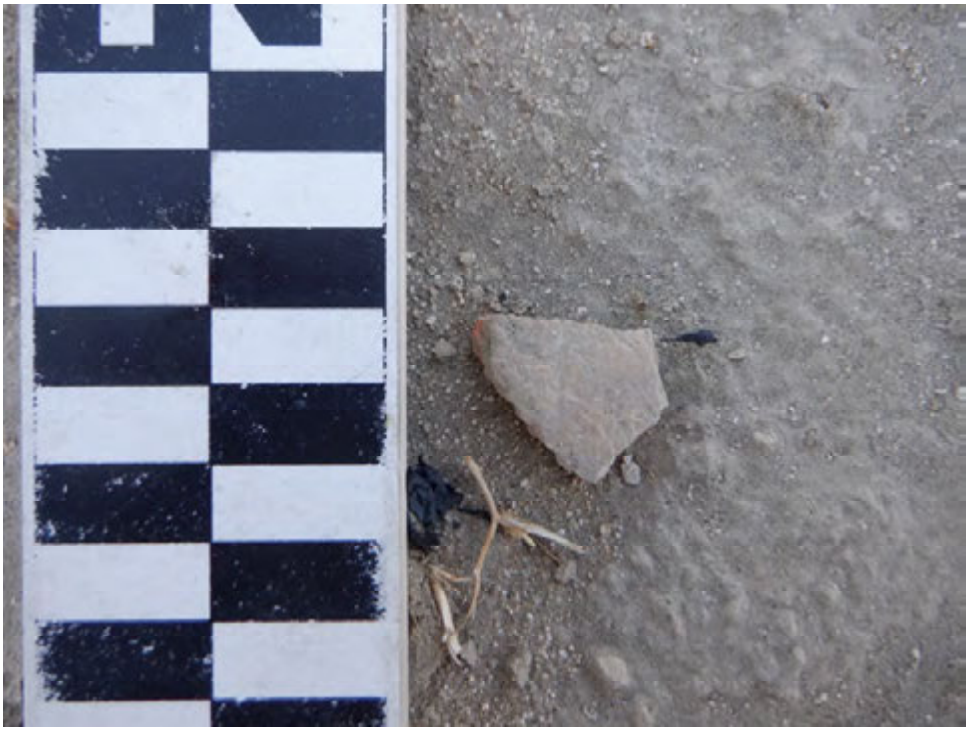
SRI 11 overview, view to the north (DSCF1667).



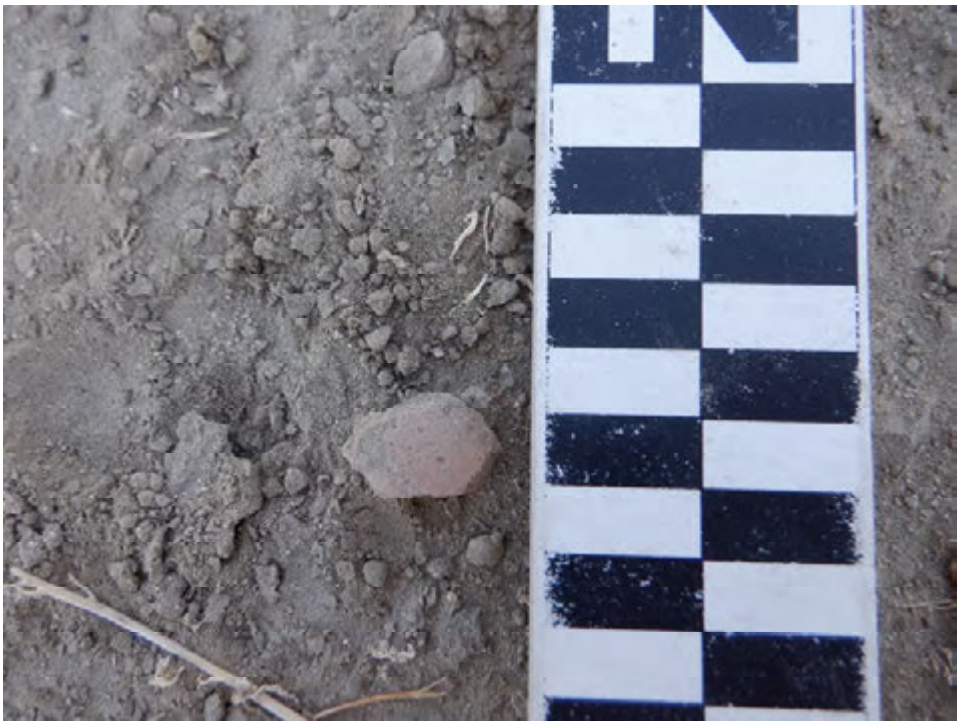
Ceramic rim sherd, brown ware (DSCF1672).



Ceramic body sherd, brown ware (DSCF1675).

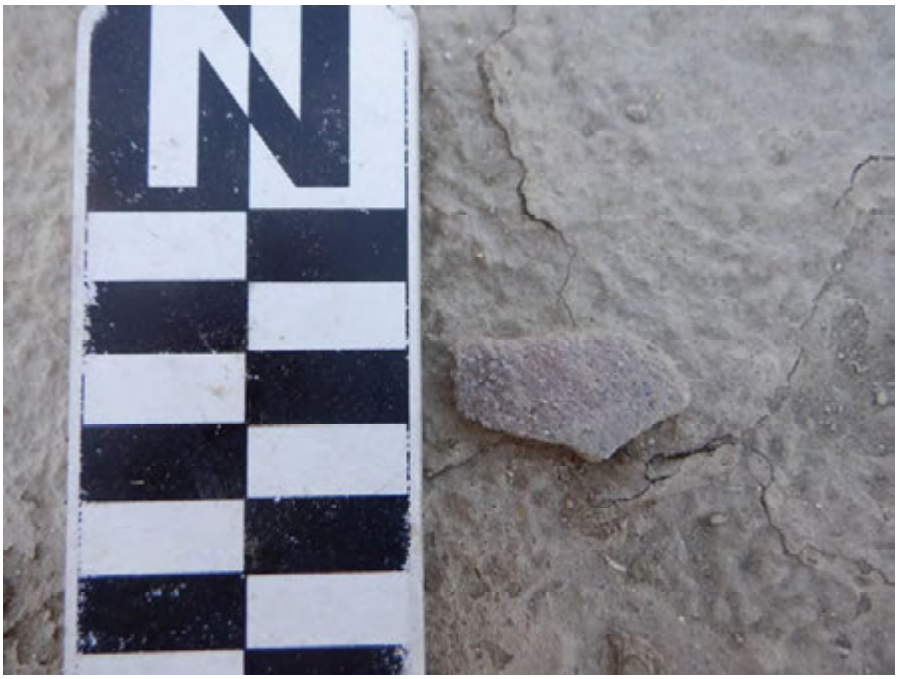


Ceramic body sherd, brown ware (DSCF1677).

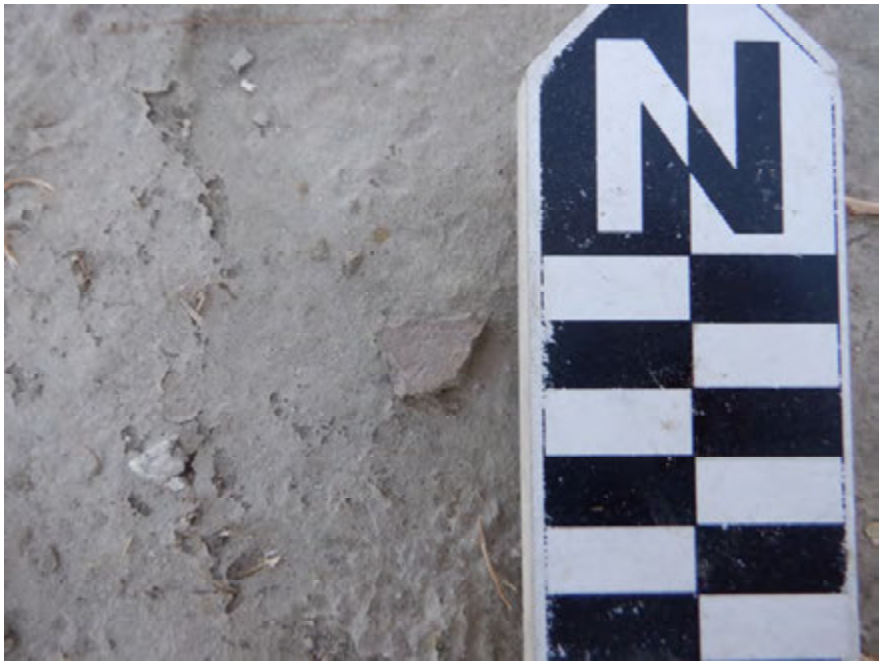


Ceramic body sherd, brown ware (DSCF1679).

Ceramic body sherd, brown ware (DSCF1681).

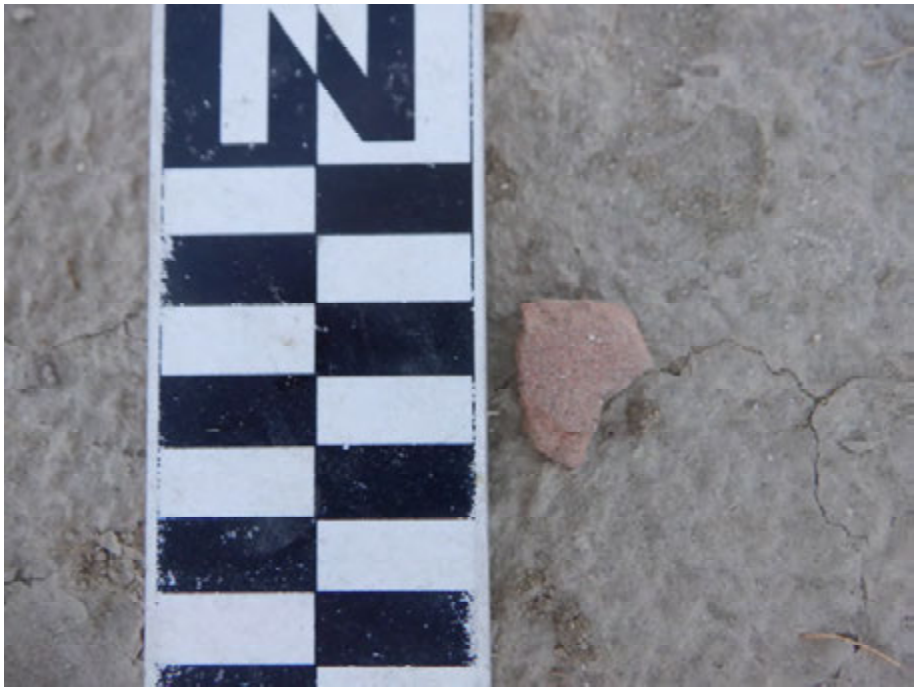


Ceramic body sherd, brown ware (DSCF1683).



Ceramic body sherd, brown ware (DSCF1685).

Ceramic body sherd, brown ware (DSCF1687).



Ceramic body sherd, brown ware (DSCF1689).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 11

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Locational Data (distance/bearing to datum)	Sketch/ Photo	Collected ?
				L	W	TH			
03007B11B	C	F	brown ware ceramic rim sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no
03007B11A	C	F	brown ware ceramic body sherd					photo	no

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

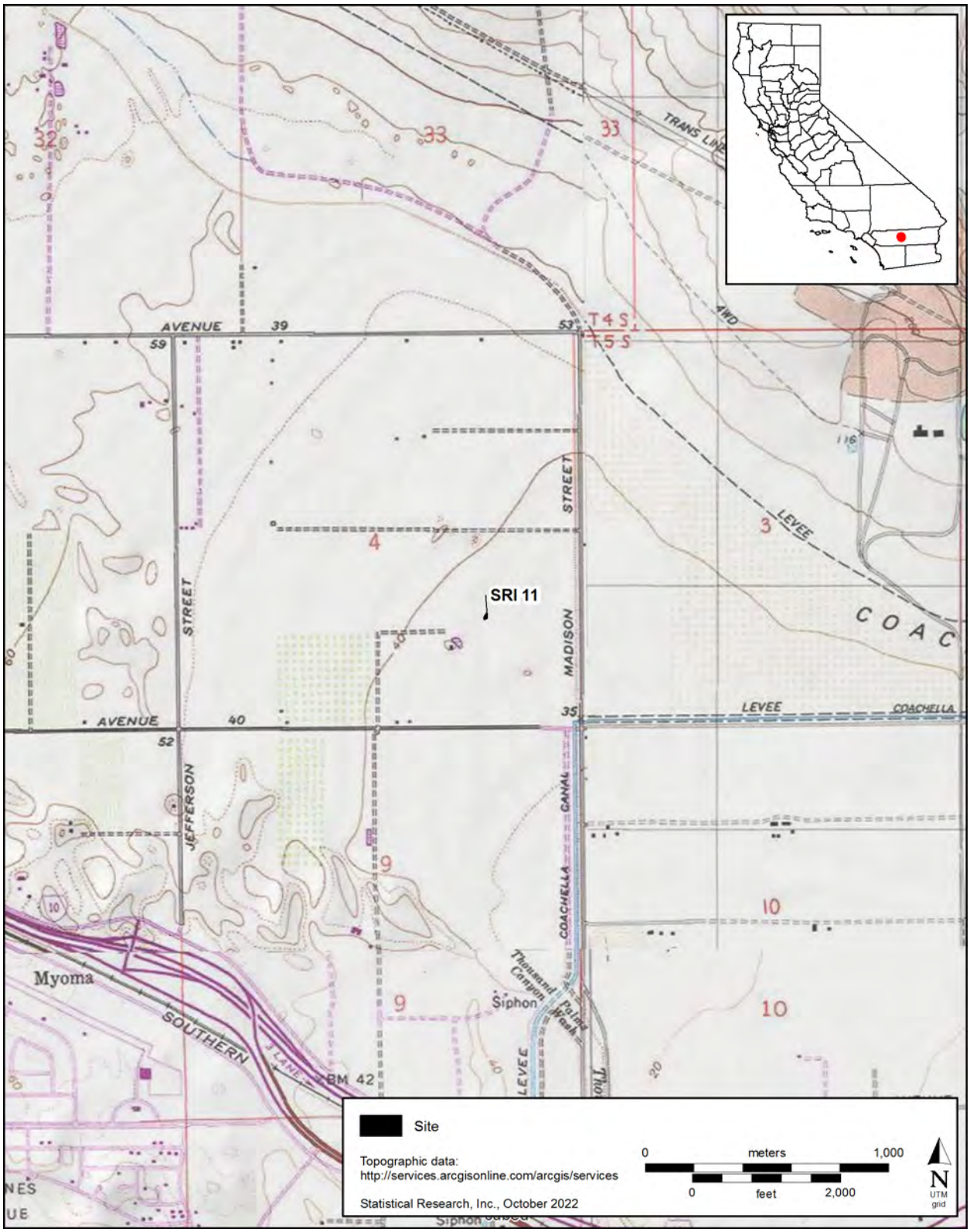
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 11 **of** 12 ***Resource Name or #:** (Assigned by recorder) SRI 11

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



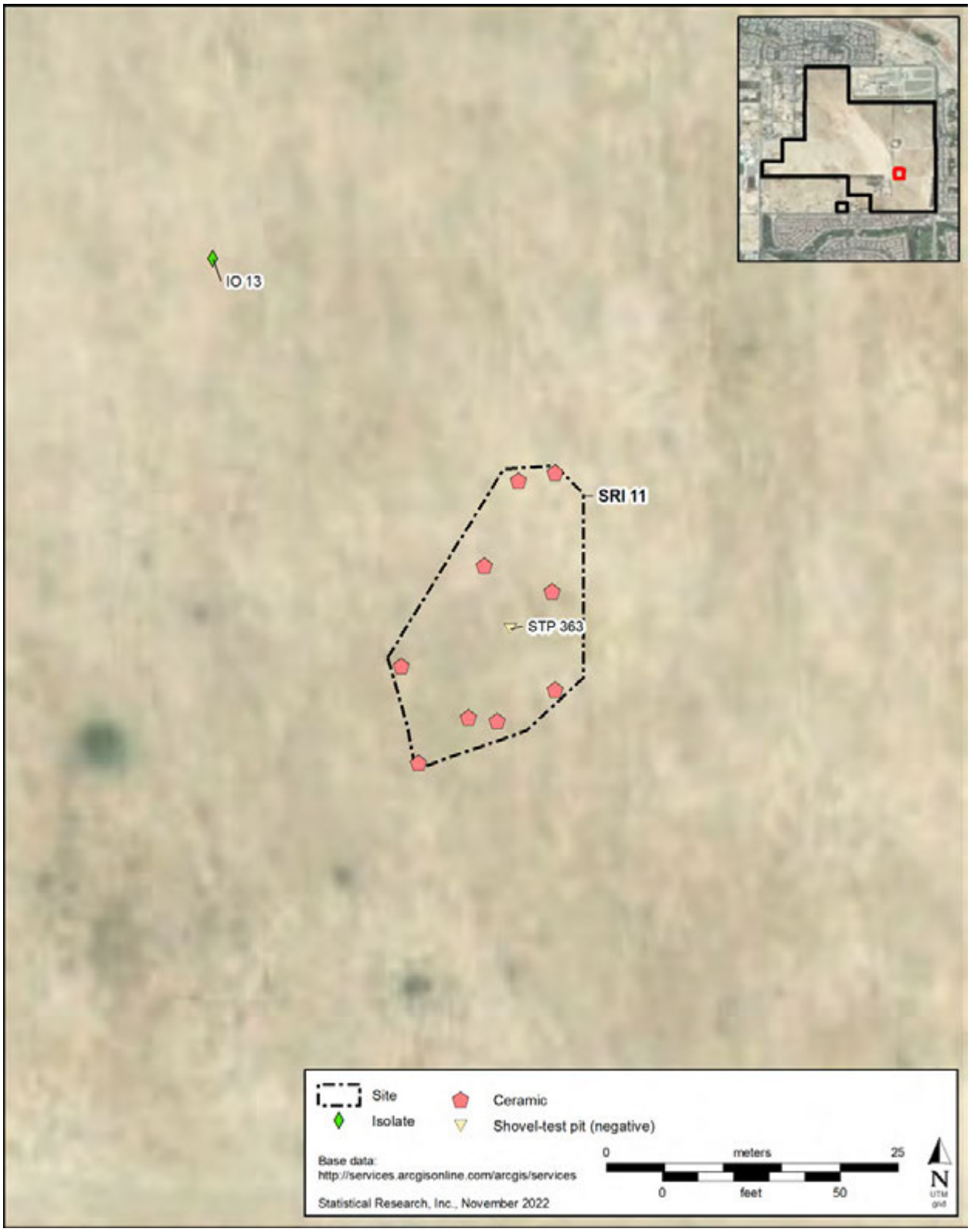
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 12 **of** 12 ***Resource Name or #:** (Assigned by recorder) SRI 11

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 15 ***Resource Name or #** (Assigned by recorder): SRI 15

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568739.726554 mE/ 3736465.420003 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc. (SRI), personnel identified this large prehistoric site during survey. The site contains an array of artifacts in 2 distinct artifact concentrations likely including an estimated 500+ (381 recorded) ceramic body and rim sherds (see OUs, below), 2 complete manos and 1 mano fragment, 2 slab metates, 4 ground stone fragments, 1 spire-lopped *Olivella* shell bead, 1 shell disc bead, faunal bone, 11 marine-shell fragments, 1 quartzite biface flake, 1 rhyolite core flake, 2 chert core flakes, 3 quartz core flakes, a quartzite flake-core fragment, 3 pieces of quartzite shatter, 1 rhyolite Cottonwood projectile point, and 10 pieces of FAR. Three pieces of pottery were identified as incised brown ware, 1 was painted with diagonal lines, and 4 were cordage-pressed brown ware. Though scattered throughout the site, artifact concentrations were notably greater in depressions between sand dunes and plant growth. No features were observed on the surface, but a single thermal feature (Feature 681) was recorded at approximately 40 cm (15.7 inches) below surface in Shovel-Test Pit (STP) 626 and Test Pit (TP) 676.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP3. Ceramic scatter
AP15. Habitation debris

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Overview of the site, view to the southwest (DSCF1728). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
■ Artifact Record ■ Photograph Record ■ Other (List): sketch map

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 161.1 m (north–south) × **b. Width:** 111.9 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain:

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination: STPs and TPs were dug within the site boundaries, and cultural material was found between 40 and 60 cm (15.7 and 19.7 inches) below surface.

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

During the survey, several burned bone fragments were found on the surface of the site. Because these bone fragments were found in association with artifacts, such as shell beads, that are often associated with mortuary features and because the bone could not be positively identified by SRI personnel, the Riverside County Coroner's Office was contacted. On August 5, 2022, the Riverside County Coroner's Office dispatched forensic anthropologist Dr. Deborah Gray and Corporal Stephanie Anderson to examine the bone. Dr. Gray identified several calcined bone fragments but concluded that the remains were too fragmented for positive identification as human. She did, however, indicate that the fragments were consistent with a large mammal. Furthermore, she noted that the treatment of the remains (i.e., cremated with differential burning) was consistent with a prehistoric cremation and that several types of broken pottery, fire-affected rock, and *Olivella* shell beads were found in association with the remains.

Dr. Gray indicated that without a positive identification as to whether the remains were human, the Native American Heritage Commission (NAHC) would not act to name a Most Likely Descendant, but if additional remains were found that could be identified as human, she would notify the NAHC.

Although no positively identified human remains were encountered, on August 12, 2022, at the request Ms. Ann Brierty, Tribal Historic Preservation Officer for the Morongo Band of Mission Indians, Dr. Gray reached out to the NAHC to notify them of the discovery of a potential prehistoric cremation.

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**

One thermal feature was excavated at approximately 40–50 cm (15.7–19.7 inches) below surface. The feature was intact and undisturbed by agricultural activities. Charcoal within the feature was sent for radiocarbon dating and returned a date of approximately 210 cal B.P. (±30), or 1729–1808 cal A.D.

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

Three-hundred eighty-one (of 500+ estimated) ceramic sherds composed of body and rim sherds, 2 complete manos, 4 ground stone fragments, 1 spire-lopped *Olivella* shell bead 1 shell disc bead, faunal bone, 11 marine-shell fragments, 2 quartzite flakes, 1 rhyolite core flake, 3 chert core flakes, 3 quartz core flakes, a quartzite flake core, 1 rhyolite Cottonwood projectile point, and 10 pieces of fire-affected rock were recorded at the site. Three pieces of pottery were incised brown ware, one was painted with diagonal lines, and four were cordage-pressed brown ware body sherds.

***A6. Were Specimens Collected?** ☐ No ■ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ■ Fair ☐ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm (15.7 inches) below surface. It is unlikely that the surface artifacts are in situ. The presence of a subsurface feature suggests that the site retains integrity below the plow zone.

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander

(*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Radiocarbon dating was conducted on a piece of charcoal from the thermal feature and returned a date of approximately 210 cal B.P. (±30), or 1729–1808 cal A.D.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

This site is interpreted as a large Late Prehistoric camp near the shores of the ancient Lake Cahuilla high stand.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):

Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022

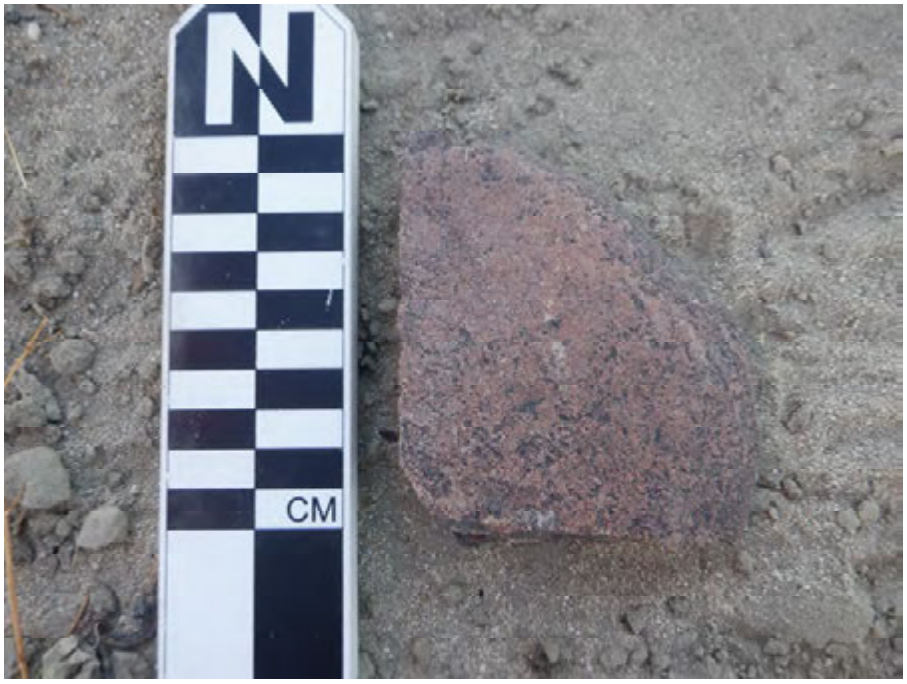
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	07	2022	6:01 p.m.	Site overview from the eastern boundary.	southwest	DSCF1728
08	07	2022	6:01 p.m.	Site overview from the northern boundary.	southeast	DSCF1729
08	07	2022	6:01 p.m.	Site overview from the western boundary.	east	DSCF1734
08	07	2022	1:54 p.m.	Granite metate (Artifact No. 03007B1C0)	from above	DSCF2184
08	07	2022	1:54 p.m.	*Olivella* shell bead (Artifact No. 03007B1E2)	from above	DSCF2218
08	07	2022	1:54 p.m.	Disc bead, shell (Artifact No. 03007B1E3)	from above	DSCF2222
09	09	2022	1:03 p.m.	Cottonwood projectile point (Artifact No. 03007B28A)	from above	DSCF2652
09	16	2022	2:37 p.m.	Bifacial mano, tapered (Artifact No. 03007B237)	from above	DSCF2669

Site overview from the eastern boundary (DSCF1728).

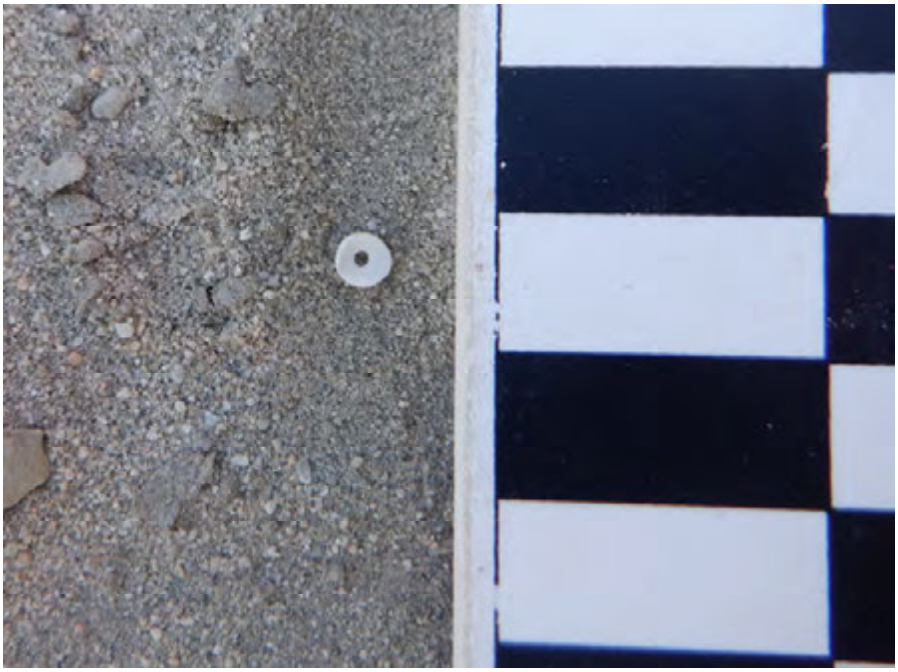
Site overview from the northern boundary (DSCF1729).

Site overview from the western boundary (DSCF1737).



Granite metate (Artifact No. 03007B1C0; DSCF2184).

Olivella shell bead (Artifact No. 03007B1E2; DSCF2218).



Disc bead, shell (Artifact No. 03007B1E3; DSCF2222).

Cottonwood projectile point (Artifact No. 03007B28A; DSCF2652).

Bifacial mano, tapered (Artifact No. 03007B237; DSCF2669).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 15

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo?	Collected?
				L	W	TH		
03007B1D6	F	F	marine-shell fragments				no	no
03007B1C0	L	F	metate, granite	23.5	12.0	4.0	yes, photo	no
03007B1CC	L	F	white chert flake				no	no
03007B1C1	L	F	metate, granite	10.0	9.0	2.0	no	no
03007B1C2	L	F	ground stone fragment, granite	7.0	6.0	2.5	no	no
03007B1C3	L	F	mano fragment, granite	9.8	6.4	4.8	no	no
03007B295	L	F	chert core flake				no	no
03007B296	F	F	marine-shell fragment				no	no
03007B1CD	L	F	quartz core flake				no	no
03007B1CE	L	F	quartz core flake				no	no
03007B297	F	F	large mammal bone				no	no
03007B1CF	L	F	rhyolite core flake				no	no
03007B1D4	L	F	fire-affected rock, granite				no	no
03007B298	F	F	large mammal bone				no	no
03007B1D0	L	F	quartz flake core				no	no
03007B1C4	L	F	bifacial-mano fragment				no	no
03007B17C	C	F	cordage-impressed brown ware body sherds (n = 2)				no	no
03007B17D	C	F	cordage-impressed, brown ware body sherds, refitting (n = 2)				no	no
03007B1E2	F	C	*Olivella* shell bead				yes, photo	no
03007B299	F	F	mammal bone				no	no
03007B1D5	L	F	fire-affected rock, granite				no	no
03007B1E3	F	C	disc bead, marine shell				yes	no
03007B17E	C	F	incised gray ware ceramic body sherds (n = 2)				no	no
03007B17F	C	F	incised gray ware ceramic body sherds (n = 2)				no	no
03007B11D	C	F	buff ware body sherds (n = 2)				no	no
03007B11E	C	F	buff ware body sherds (n = 17)				no	no
03007B11F	C	F	brown ware body sherds (n = 2)				no	no

Type Key (list abbreviations used):		**Condition Key:**	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

ARTIFACT RECORD

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo?	Collected?
				L	W	TH		
03007B120	C	F	brown ware body sherd				no	no
03007B121	C	F	brown ware body sherds (n = 7)				no	no
03007B122	C	F	brown ware body sherds (n = 3)				no	no
03007B123	C	F	gray ware body sherds (n = 7)				no	no
03007B124	C	F	gray ware body sherd				no	no
03007B125	C	F	gray ware body sherds (n = 2)				no	no
03007B126	C	F	brown ware body sherds (n = 6)				no	no
03007B127	C	F	brown ware body sherds (n = 2)				no	no
03007B128	C	F	buff ware body sherds (n = 5)				no	no
03007B129	C	F	plain ware body sherds (n = 2)				no	no
03007B12A	C	F	buff ware body sherd				no	no
03007B12B	C	F	brown ware body sherds (n = 2)				no	no
03007B12C	C	F	buff ware body sherd				no	no
03007B12D	C	F	brown ware body sherds (n = 2)				no	no
03007B1C5	L	F	quartz core flakes (n = 2)				no	no
03007B1C6	L	F	fire-affected rock, granite				no	no
03007B180	C	F	brown ware body sherds (n = 3)				no	no
03007B181	C	F	brown ware body sherd				no	no
03007B182	C	F	brown ware body sherd				no	no
03007B183	C	F	brown ware body sherd				no	no
03007B184	C	F	buff ware body sherd				no	no
03007B185	C	F	buff ware body sherd				no	no
03007B186	C	F	brown ware body sherds (n = 3)				no	no
03007B187	C	F	brown ware body sherd				no	no
03007B188	C	F	brown ware body sherd				no	no
03007B189	C	F	brown ware body sherds (n = 2)				no	no
03007B18A	C	F	gray ware body sherds (n = 3)				no	no
03007B18B	C	F	brown ware body sherd				no	no
03007B18C	C	F	gray ware body sherd				no	no
03007B18D	C	F	brown ware body sherd				no	no
03007B18E	C	F	brown ware body sherd				no	no
03007B18F	C	F	buff ware body sherd				no	no

Type Key (list abbreviations used):	Condition Key:
C Ceramic	F Fragmentary
F Faunal	C Complete
H Historics	U Unknown
L Lithic	Other:
O Other	

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 15

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo?	Collected?
				L	W	TH		
03007B190	C	F	brown ware body sherd				no	no
03007B191	C	F	buff ware body sherd				no	no
03007B192	C	F	buff ware body sherd				no	no
03007B193	C	F	gray ware body sherds (n = 15)				no	no
03007B194	C	F	gray ware body sherd				no	no
03007B195	C	F	gray ware body sherd				no	no
03007B196	C	F	buff ware body sherd				no	no
03007B197	C	F	brown ware body sherd				no	no
03007B198	C	F	brown ware body sherd				no	no
03007B199	C	F	brown ware body sherds (n = 4)				no	no
03007B19A	C	F	buff ware body sherd				no	no
03007B19B	C	F	brown ware body sherd				no	no
03007B19C	C	F	buff ware body sherd				no	no
03007B19D	C	F	buff ware body sherd				no	no
03007B19E	C	F	brown ware body sherd				no	no
03007B19F	C	F	brown ware body sherds (n = 5)				no	no
03007B1A0	C	F	buff ware body sherds (n = 3)				no	no
03007B1A1	C	F	buff ware body sherd				no	no
03007B1A2	C	F	gray ware body sherds (n = 3)				no	no
03007B1A3	C	F	brown ware body sherd				no	no
03007B1A4	C	F	brown ware body sherds (n = 2)				no	no
03007B1A5	C	F	buff ware body sherds (n = 3)				no	no
03007B1A6	C	F	brown ware body sherds (n = 3)				no	no
03007B1A7	C	F	brown ware body sherd				no	no
03007B1A8	C	F	brown ware body sherds (n = 7)				no	no
03007B1E4	F	F	marine shell				no	no
03007B1A9	C	F	gray ware body sherds (n = 3)				no	no
03007B1AA	C	F	brown ware body sherd				no	no
03007B1AB	C	F	brown ware body sherd				no	no
03007B1AC	C	F	gray ware body sherds (n = 3)				no	no
03007B1AD	C	F	brown ware body sherd				no	no
03007B1AE	C	F	brown ware body sherd				no	no

Type Key (list abbreviations used):		**Condition Key:**	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

ARTIFACT RECORD

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo?	Collected?
				L	W	TH		
03007B1AF	C	F	brown ware body sherd				no	no
03007B1B0	C	F	buff ware body sherd				no	no
03007B1B1	C	F	brown ware body sherd				no	no
03007B1B2	C	F	brown ware body sherd				no	no
03007B1B3	C	F	brown ware body sherd				no	no
03007B1B4	C	F	buff ware body sherds (n = 2)				no	no
03007B1B5	C	F	brown ware body sherd				no	no
03007B1B6	C	F	brown ware body sherd				no	no
03007B1B7	C	F	brown ware body sherd				no	no
03007B1B8	C	F	brown ware body sherd				no	no
03007B1B9	C	F	brown ware body sherds (n = 2)				no	no
03007B1BA	C	F	gray ware body sherd				no	no
03007B1BB	C	F	brown ware body sherds (n = 3)				no	no
03007B1D1	L	F	quartz core flake				no	no
03007B1BC	C	F	brown ware body sherd				no	no
03007B1BD	C	F	gray ware body sherd				no	no
03007B1BE	C	F	brown ware body sherd				no	no
03007B232	C	F	brown ware body sherd				no	no
03007B28A	L	F	cottonwood projectile point, rhyolite	2.5	1.8	0.7	yes	no
03007B239	L	F	unmodified obsidian gravel				no	no
03007B245	F	F	heat-affected mammal long bone				no	no
03007B237	L	C	bifacial mano, granite	13.8	10.3	3.6	yes	no
03007B24E	F	F	mammal bone				no	no
03007B234	C	F	brown ware rim sherd				no	yes
03007B233	C	F	gray ware body sherd				no	yes
03007B2B3	C	F	brown ware body sherds (n = 3)				no	yes
03007B2C5	L	F	quartzite biface flake				no	yes

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

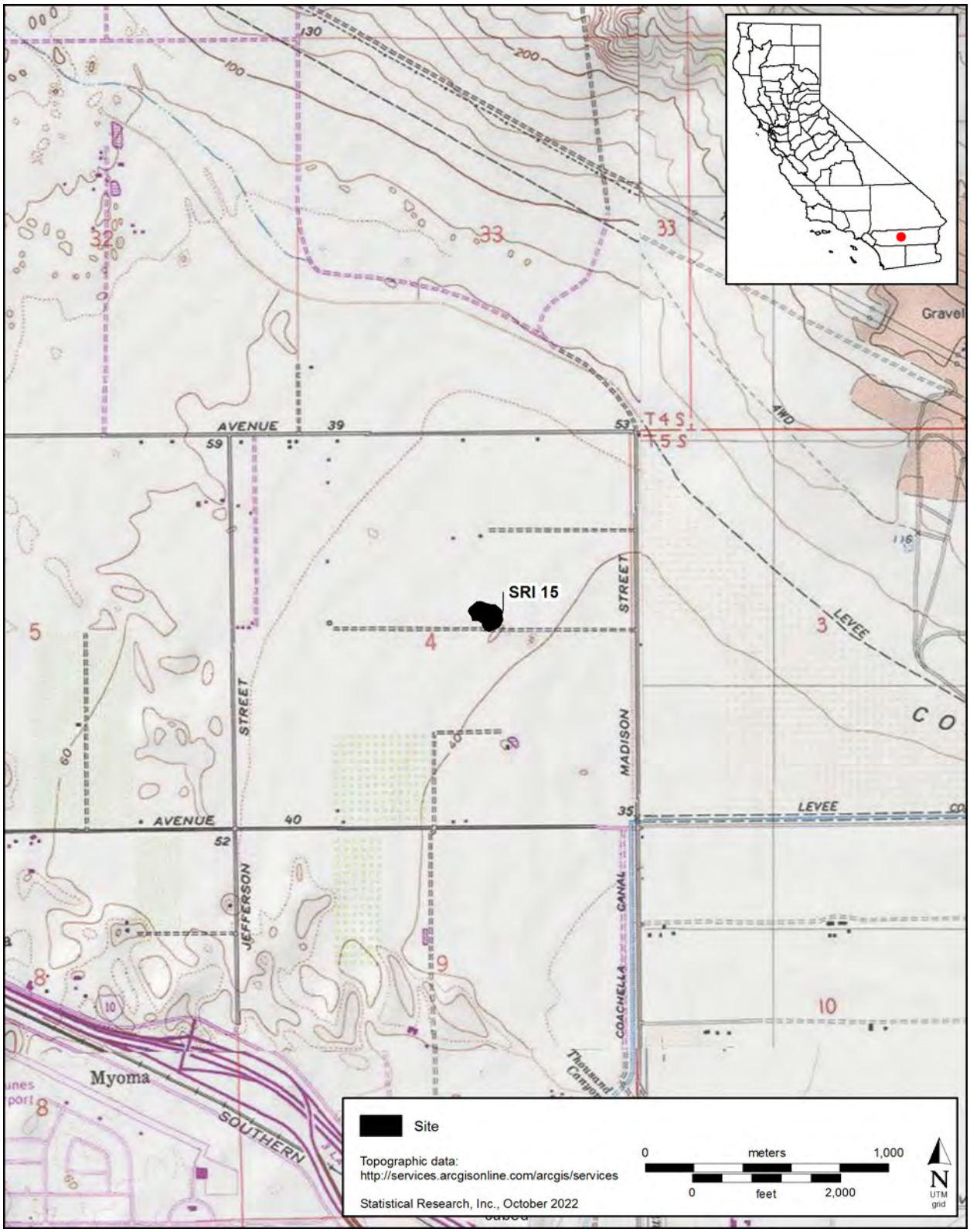
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or #:** (Assigned by recorder) SRI 15

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



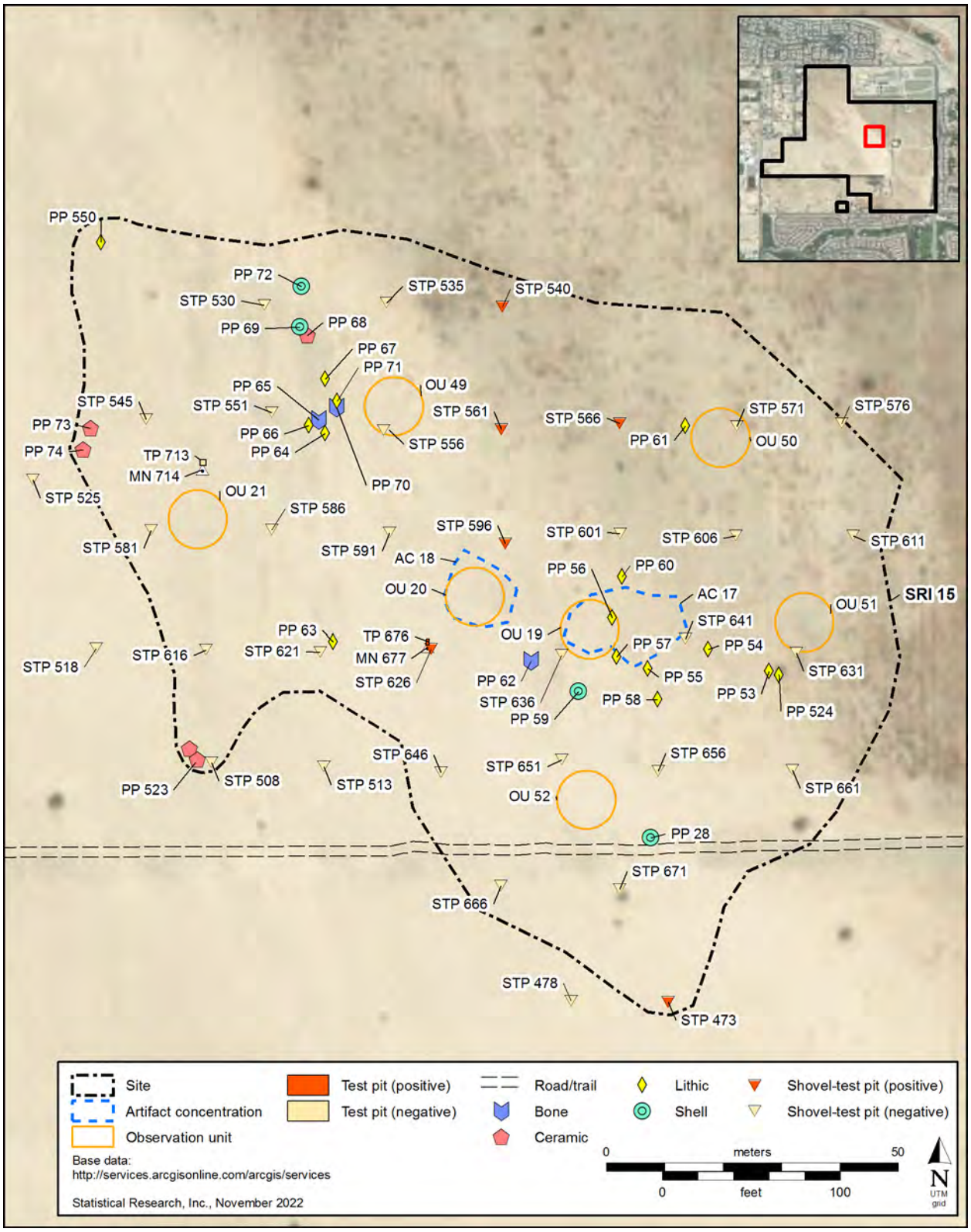
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 15 **of** 15 ***Resource Name or #:** (Assigned by recorder) SRI 15

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 8 ***Resource Name or #** (Assigned by recorder): SRI 38

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** NW ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568115.361632 mE/ 3737121.50564 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

SRI 38 is a historical-period site with agricultural features, including a concrete foundation (Feature 35), a concrete well foundation (Feature 37), a well (Feature 36), and a standpipe (Feature 34) that may correspond to a historical-period structure plotted on the 1972 Myoma, California, 7.5-minute USGS topographic quadrangle map. The concrete well foundation measures 27.5 feet (7.6 m) long and 15.5 feet (4.7 m) wide. The well, which includes an adjacent cement pad, measures 4 feet (1.2 m) long and 10.5 feet (3.2 m) wide. The standpipe measures approximately 5 feet (1.5 m) long and 6 feet (1.8 m) wide.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AH2. Foundations/structure pads
AH5. Wells/ cisterns

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Overview of the site, view to the southwest (DSCF1860). 8/7/2022

***P6. Date Constructed/Age and Source:**

■ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/11/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

ARCHAEOLOGICAL SITE RECORD

 ***Resource Name or #** (Assigned by recorder): SRI 38

***A1. Dimensions: a. Length:** 29.7 m **(**north–south**) × b. Width:** 14.5 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ☐ Artifacts ■ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ■ High ☐ Medium ☐ Low Explain:

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ☐ Disturbances ■ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination:

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**

The four site features are a concrete foundation (Feature 35), a concrete well foundation (Feature 37), a well (Feature 36), and a standpipe (Feature 34) that may correspond to a historical-period structure.

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

There were no artifacts associated with the features or the site.

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ■ Fair ☐ Poor (Describe disturbances.)

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:**

110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ■ 1848-1880 ■ 1880-1914 ■ 1914-1945 ■ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

The features are the remains of previous agricultural structures for supplying water to the surrounding farmland.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):

Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/28/2022

Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Toward	Accession No.
08	11	2022	1:56 p.m.	Site overview.	southwest	DSCF1860
08	11	2022	1:57 p.m.	Standpipe with metal ladder.	from below	DSCF1956
08	11	2022	1:57 p.m.	Well feature.	from above	DSCF1958
08	11	2022	1:57 p.m.	Concrete-pad overview.	east	DSCF1962

Site overview, view to the southwest (DSCF1860).

Standpipe with metal ladder (DSCF1956).

Well feature (DSCF1958).

Concrete-pad overview (DSCF1962).

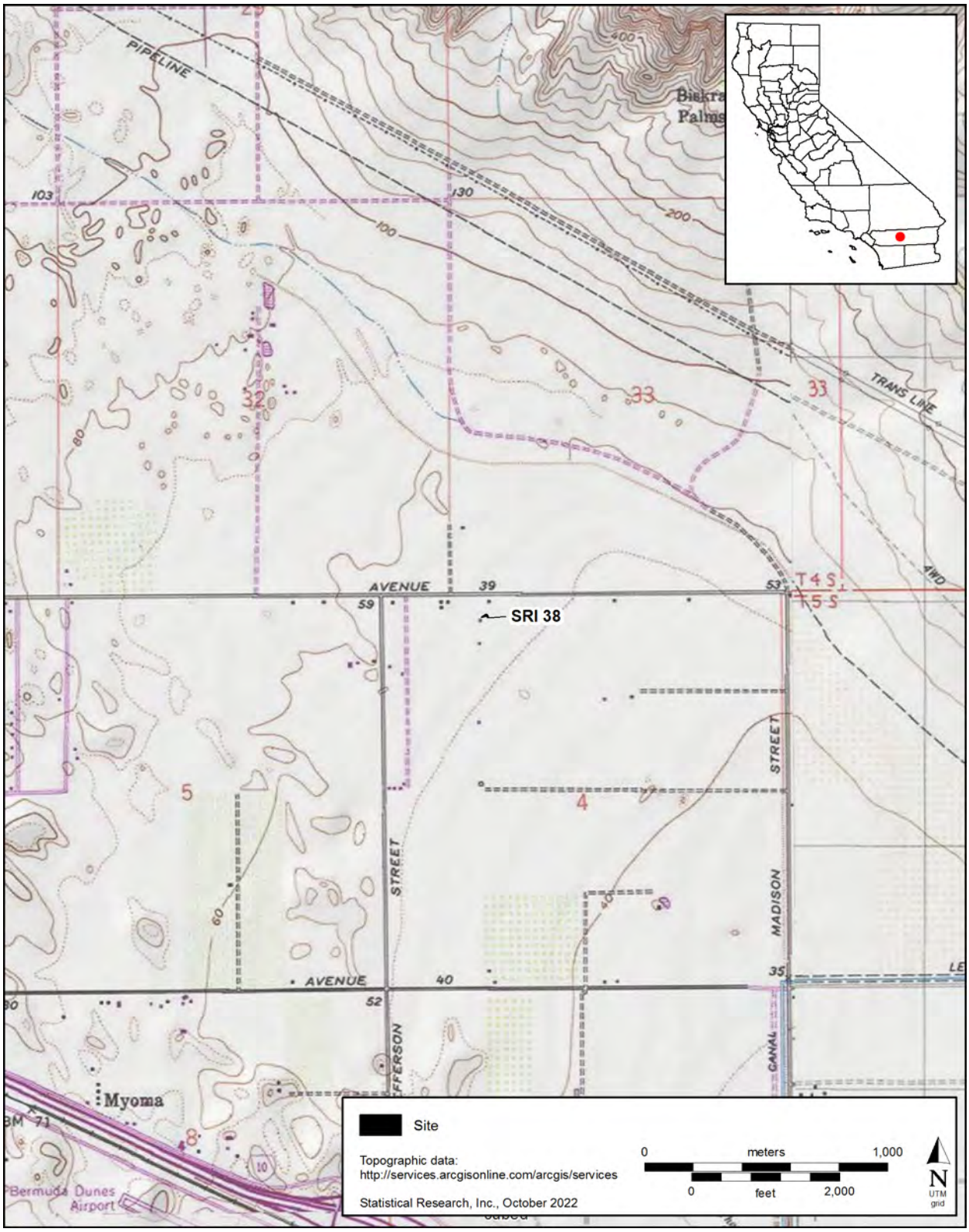
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 7 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 38

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



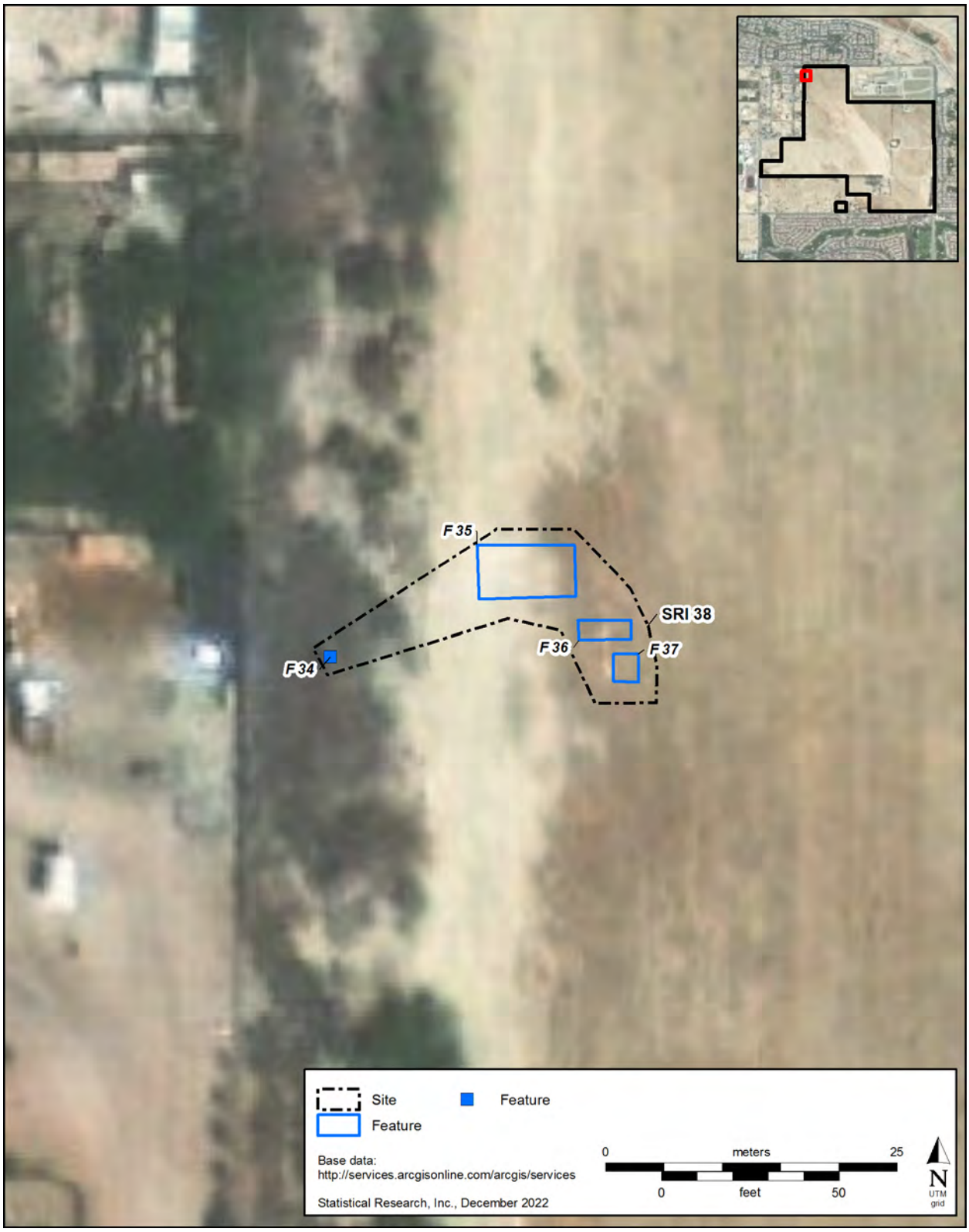
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 8 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 38

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 8 ***Resource Name or #** (Assigned by recorder): SRI 42

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568577.882138 mE/ 3736334.797702 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel identified this small prehistoric ceramic scatter during survey. Artifacts within the site boundaries included five similar ceramic body sherds (composed of orange paste with fine sand temper) and one marine shell. A single shovel-test pit (STP 104) was placed within the boundaries of the site but was negative for cultural material.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP3. Ceramics scatter

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Overview of the site, view to the west (DSCF1935). 08/11/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/11/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
■ Artifact Record ■ Photograph Record ■ Other (List): sketch map

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 18.8 m **(**north–south**) × b. Width:** 11.2 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain:

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ■ None ☐ Unknown Method of Determination: One STP was dug to test the subsurface component of the site.

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**

none

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

five brown ware ceramic body sherds and one marine shell

***A6. Were Specimens Collected?** ☐ No ■ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm (15.7 inches) below surface. It is unlikely that the artifacts are in situ. Furthermore, the Coachella Valley Water District stockpile was placed atop this site.

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

likely a heavily disturbed Late Prehistoric campsite related to the larger campsites to the north and east

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):
Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

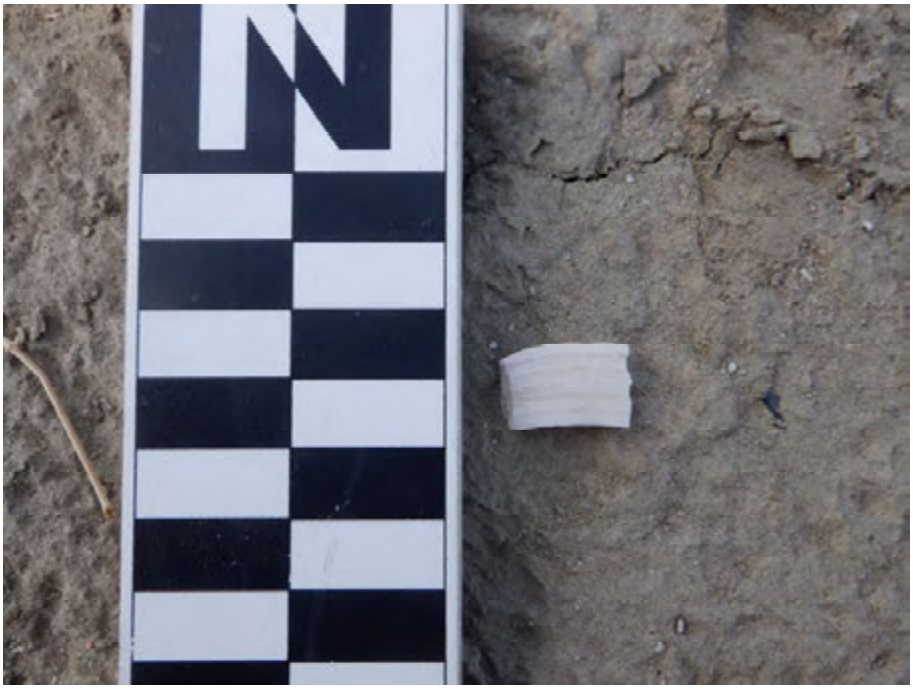
Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	11	2022	1:56 p.m.	Site overview.	west	DSCF1935
08	11	2022	1:56 p.m.	Ceramic scatter.	from above	DSCF1939
08	11	2022	1:56 p.m.	Marine-bivalve shell.	from above	DSCF1937

Site overview, view to the west (DSCF1935).

Ceramic scatter, view from above (DSCF1939).



Marine-bivalve shell, view from above (DSCF1937).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 42

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo	Collected?
				L	W	TH		
03007B156	C	F	brown ware ceramic body sherds (n = 4)				no	yes
03007B157	C	F	brown ware ceramic body sherd				no	yes
03007B1DA	F	F	marine-bivalve shell				yes	yes

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

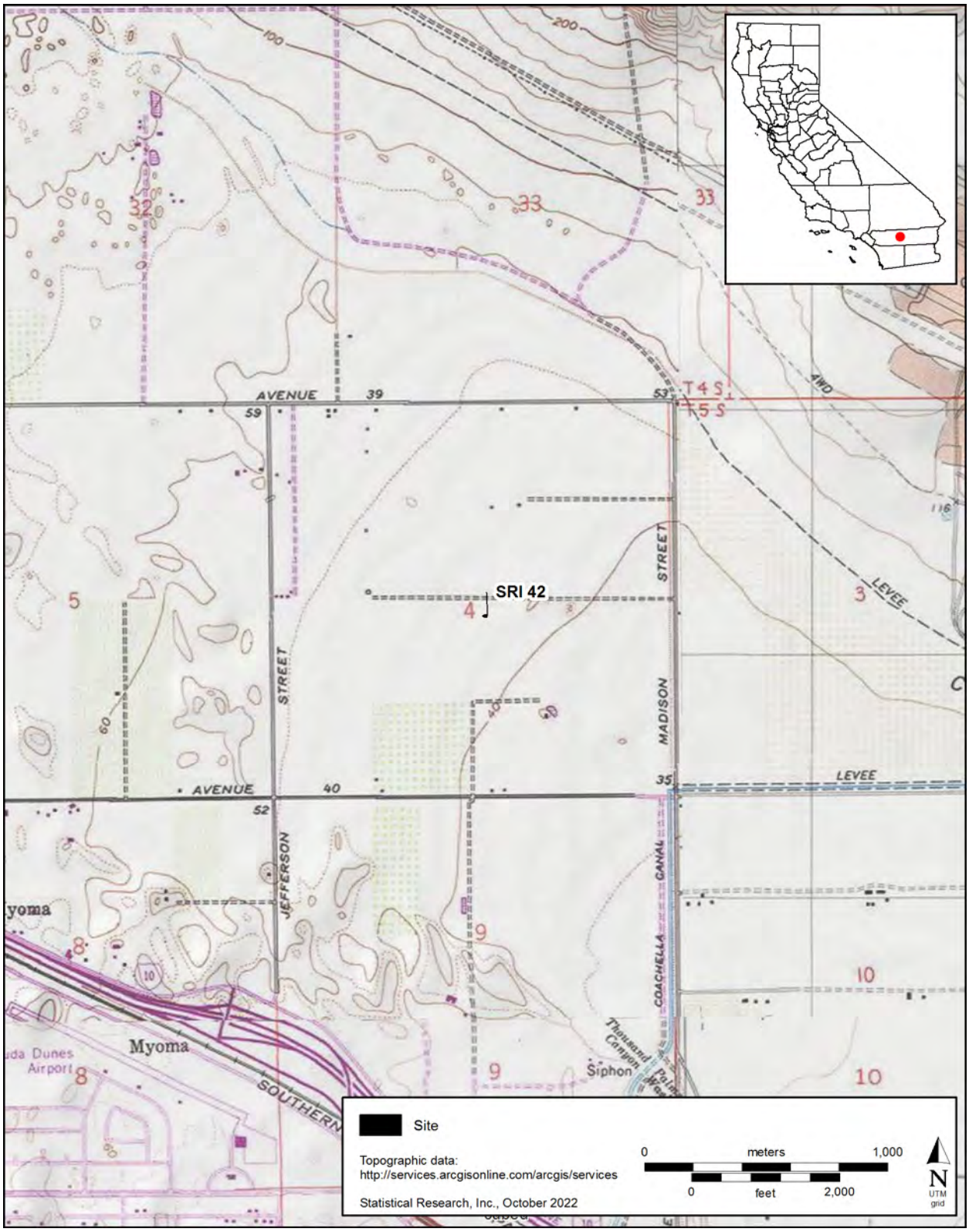
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 7 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 42

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



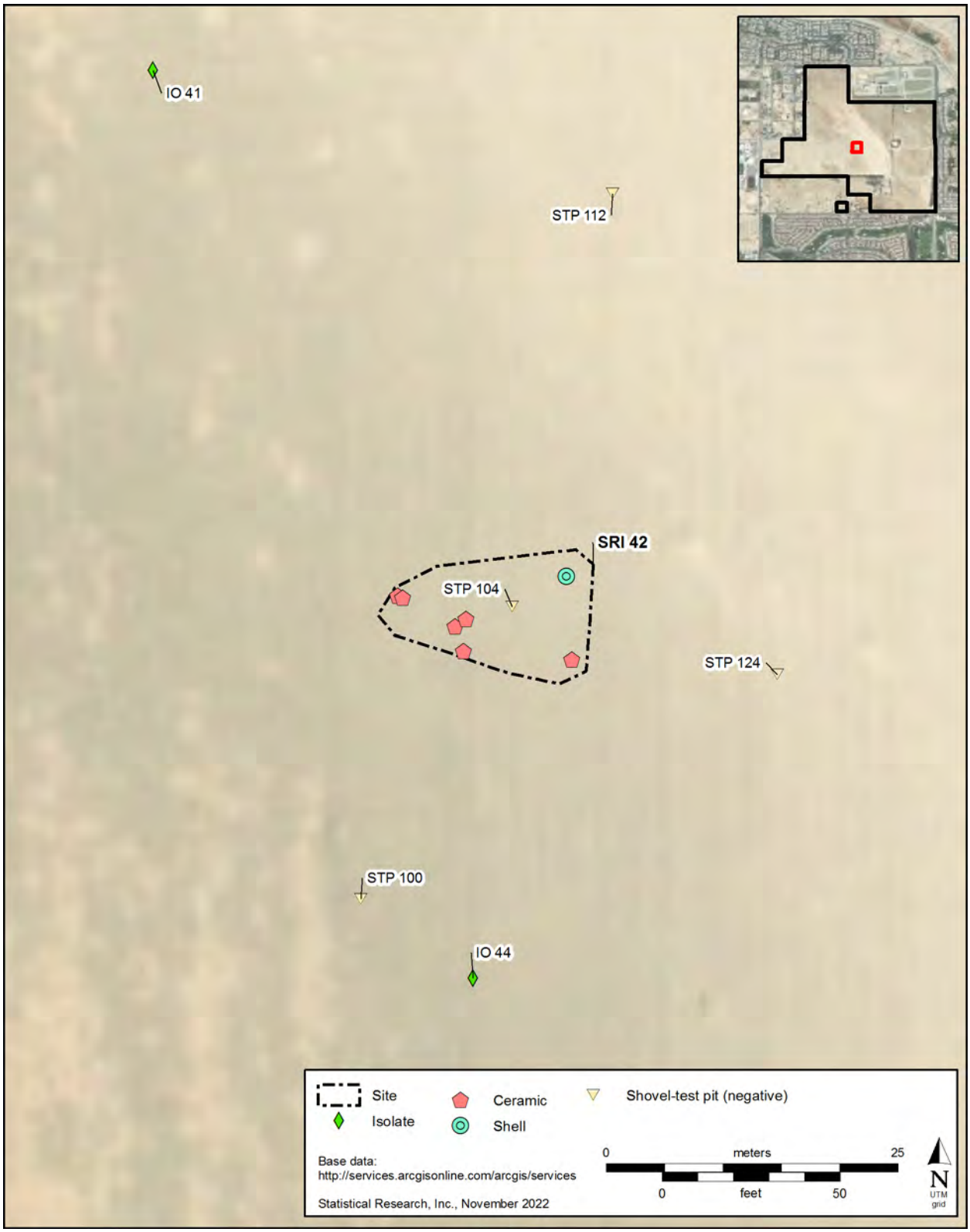
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 8 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 42

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

 ***Resource Name or #** (Assigned by recorder): SRI 82

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568883.4467 mE/ 3736421.078 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel recorded SRI-82, a historical-period agricultural site associated with a single concrete water standpipe (Feature 23). This well feature is approximately 10.5 feet (3.2 m) tall and 3.5 feet (1.1 m) in diameter.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AH6. Water-conveyance system

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Concrete water standpipe feature, view to the south (DSCF1785). 8/7/2022

***P6. Date Constructed/Age and Source:**

■ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** _____

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Report prepared for Meridian Consultants. Statistical Research, Inc., Redlands, California.

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 3 m (north–south) × **b. Width:** 3 m (east–west)

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply): ☐ Artifacts ■ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ■ High ☐ Medium ☐ Low Explain:

Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ☐ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination: No subsurface testing was performed on historical-period sites within the Project boundaries.

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map):

concrete water standpipe

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features):

No artifacts or ecofacts were associated with the feature or the site.

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ■ Fair ☐ Poor (Describe disturbances.)

***A8. Nearest Water** (Type, distance, and direction):

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:**

110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture for since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ■ 1848-1880 ■ 1880-1914 ■ 1914-1945 ■ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

The feature is the remains of a previous agricultural structure for supplying water to the surrounding farmland.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):

Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/28/2022

Affiliation and Address: Statistical Research, Inc. 617 Texas St., Redlands, CA 92374

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PHOTOGRAPH RECORD

Primary # _____
HRI # _____
Trinomial _____

Page 4 **of** 6 **Project Name:** Desert Retreat Specific Plan Project **Year:** 2022

Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	07	2022	6:05 p.m.	Overview of the site.	south	DSCF1785

Overview of the site, showing the concrete water standpipe, view to the south (DSCF1785).

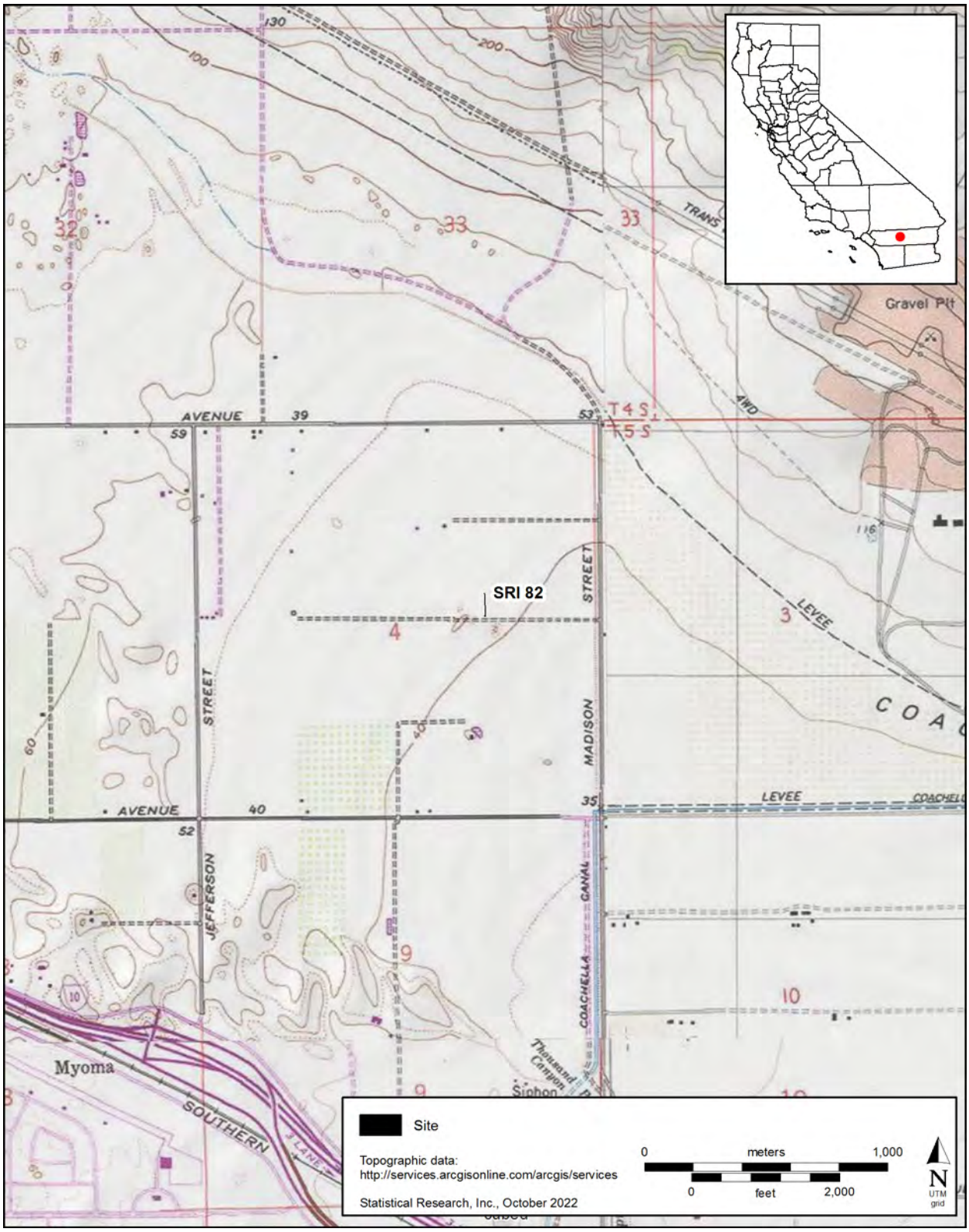
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

***Resource Name or #:** (Assigned by recorder) SRI 82

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



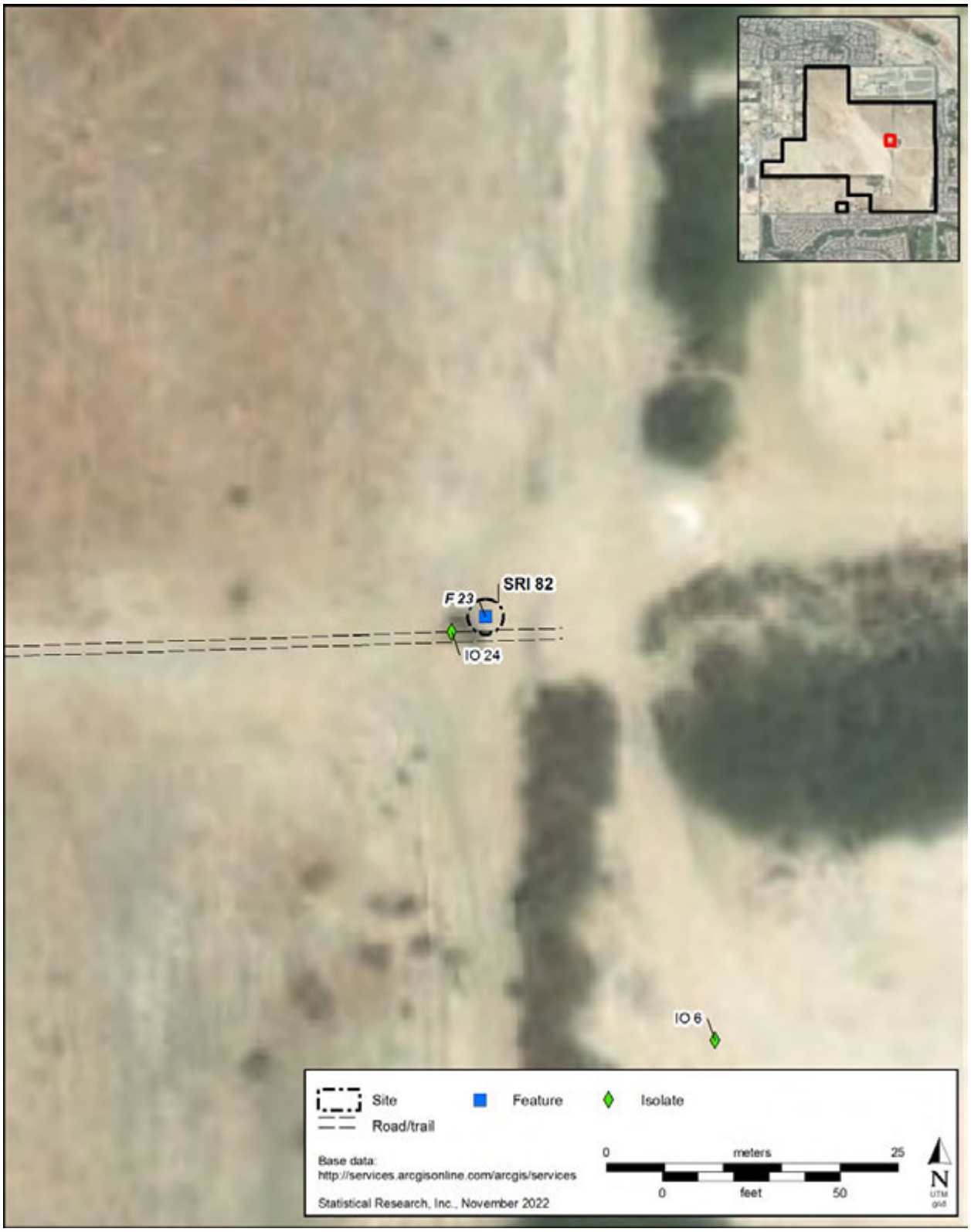
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 6 **of** 6 ***Resource Name or #:** (Assigned by recorder) SRI 82

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 8 ***Resource Name or #** (Assigned by recorder): SRI 239

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568849.011667 mE/ 3736132.389383 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, this site was identified by Statistical Research, Inc., personnel, during monitoring of the destruction and backfill of a subterranean indigent bunker by heavy machinery operated by Sukuts Construction personnel. The site is 7 m (23 feet) west of a large series of sand dunes and modern berms. During monitoring, 26 ceramic body sherds, 1 rim sherd, 1 rhyolite core flake, and 1 marine-shell fragment were discovered. Three shovel-test pits were placed to test for a subsurface component, but all three were negative for cultural material.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AP3. Ceramic scatter

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):
Grading over the site surface, view to the northeast (DSCF2602). 9/9/2022

***P6. Date Constructed/Age and Source:**
☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**
private

***P8. Recorded by** (Name, affiliation, and address):
Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):
intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):
Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli

2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
■ Artifact Record ■ Photograph Record ■ Other (List): sketch map

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 80.9 m **(**east–west**) × b. Width:** 44.8 m **(**north–south**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ☐ Medium ■ Low Explain: This site was found after ground disturbance had occurred in the area, possibly changing the boundaries of the site.

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination: The site did not have a subsurface component as tested by three shovel-test pits.

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**

none

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

26 ceramic body sherds, 1 rim sherd, 1 rhyolite core flake, and 1 marine-shell fragment

***A6. Were Specimens Collected?** ☐ No ■ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm (15.7 inches) below surface. It is unlikely that the artifacts are in situ. Furthermore, the entire site surface was graded in preparation for the Coachella Valley Water District stockpile placement atop the site.

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

likely a heavily disturbed Late Prehistoric campsite related to the larger campsites to the north and west

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):
Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
09	09	2022	1:03 p.m.	Grading over the site surface.	northeast	DSCF2602

Grading over the site surface, view to the northeast (DSCF2602).

ARTIFACT RECORD

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo	Collected ?
				L	W	TH		
03007B229	C	F	brown ware body sherds (n = 4)				no	yes
03007B229	C	F	buff ware body sherds (n = 20)				no	yes
03007B229	C	F	gray ware body sherds (n = 2)				no	yes
03007B238	L	C	core flake, quartzite				no	yes

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

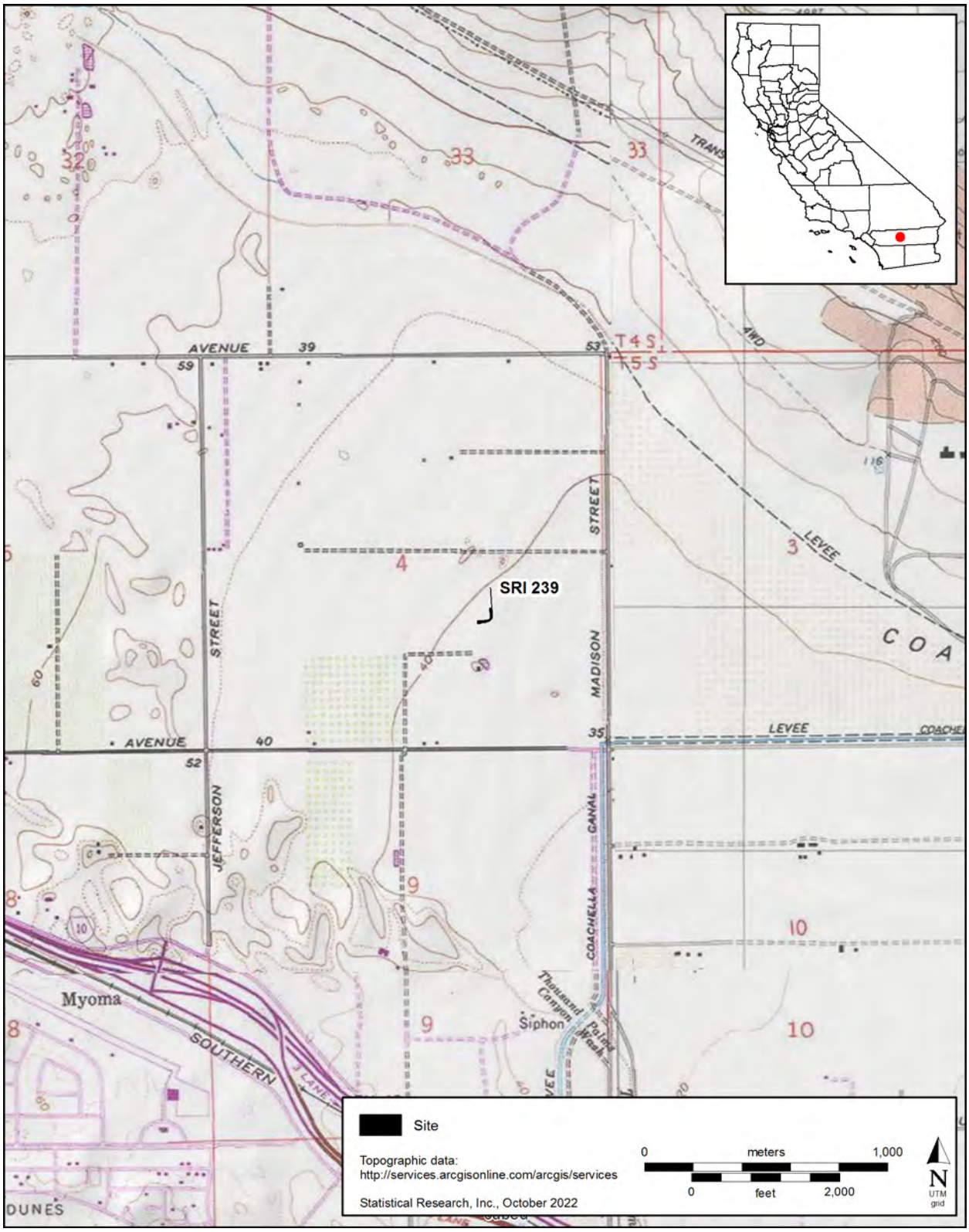
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or #:** (Assigned by recorder) SRI 239

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



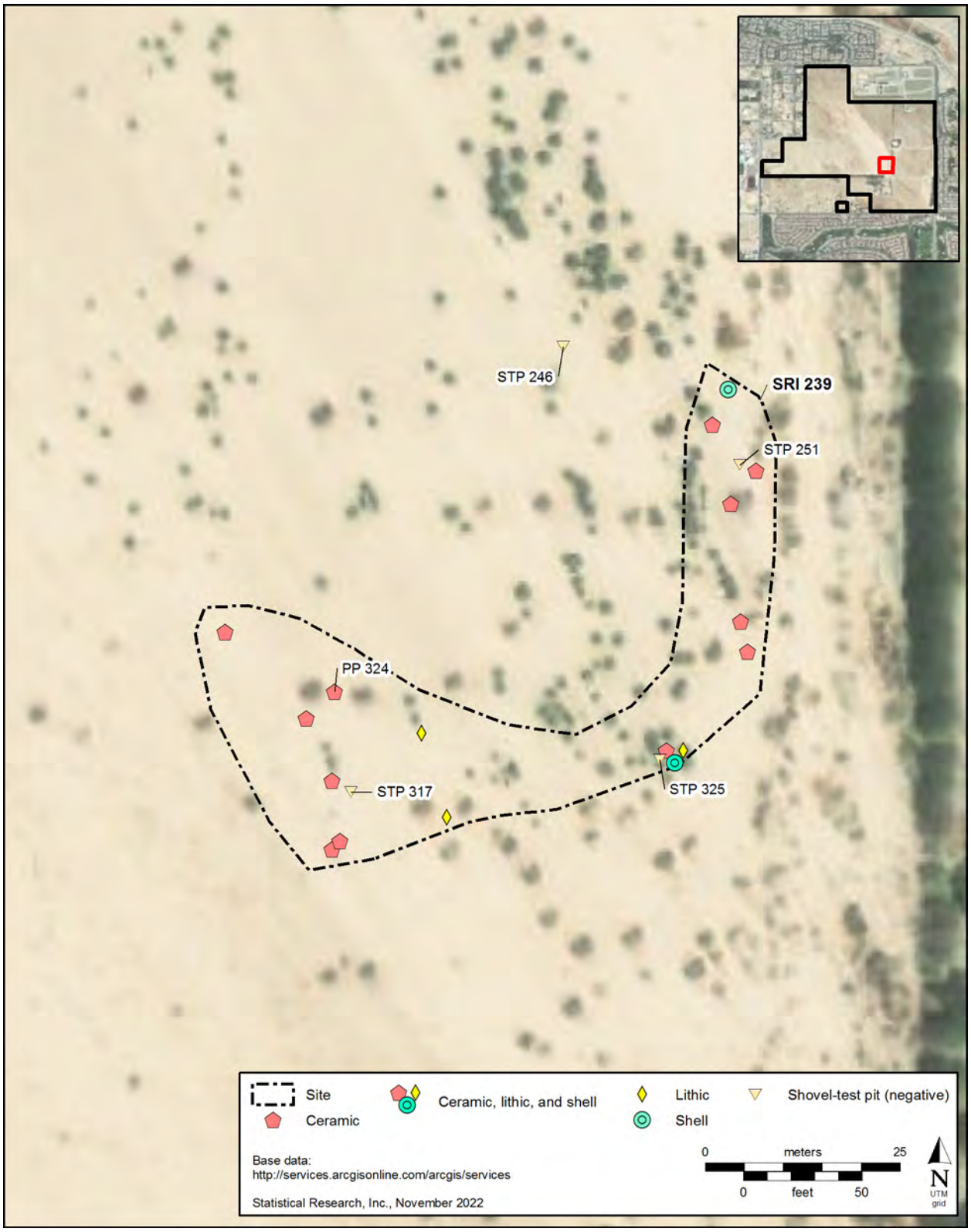
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 8 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 239

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013)

NOTE: Include bar scale and north arrow.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

 ***Resource Name or #** (Assigned by recorder): SRI 769

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569212.251013 mE/ 3735689.543067 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel identified this small prehistoric site during the process of relocating CA-RIV-8908 The site consists of a 29-by-23-m (95.1-by-75.5-foot) ceramic scatter composed of two ceramic body sherds, one ceramic rim sherd, and a piece of burnt clay.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP3. Ceramic scatter

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):

Overview of the site, view to the south (DSCF2722). 9/16/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 26.7 m **(**north–south**) × b. Width:** 21.7 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain: Five shovel-test pits were excavated, but there was no evidence of a subsurface component to the site.

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ■ None ☐ Unknown Method of Determination: shovel-test-pit excavation

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:**
none

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**
two brown ware ceramic body sherds, one brown ware ceramic rim sherd, and a piece of burnt clay

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)
Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm (15.7 inches) below surface. It is unlikely that the artifacts are in situ.

***A8. Nearest Water** (Type, distance, and direction)**:**
Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.)**:**
The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:
The project area has been used for agriculture for since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**
Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):
SRI 769 is possibly the remains of a small ephemeral camp along the edge of ancient lake Cahuilla.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):
Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

Camera Format: digital Lens Size: N/A

Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
09	16	2022	2:37 p.m.	Overview of the site, view to the south.	south	DSCF2722

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 769

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact #	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo	Collected?
				L	W	TH		
03007B2B4	C	F	brown ware body sherd				no	no
03007B2B5	C	F	brown ware body sherd				no	no
03007B2AE	C	F	brown ware rim sherd				no	no
03007B2AF	O	F	burnt clay				no	no

Type Key (list abbreviations used):		Condition Key:	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

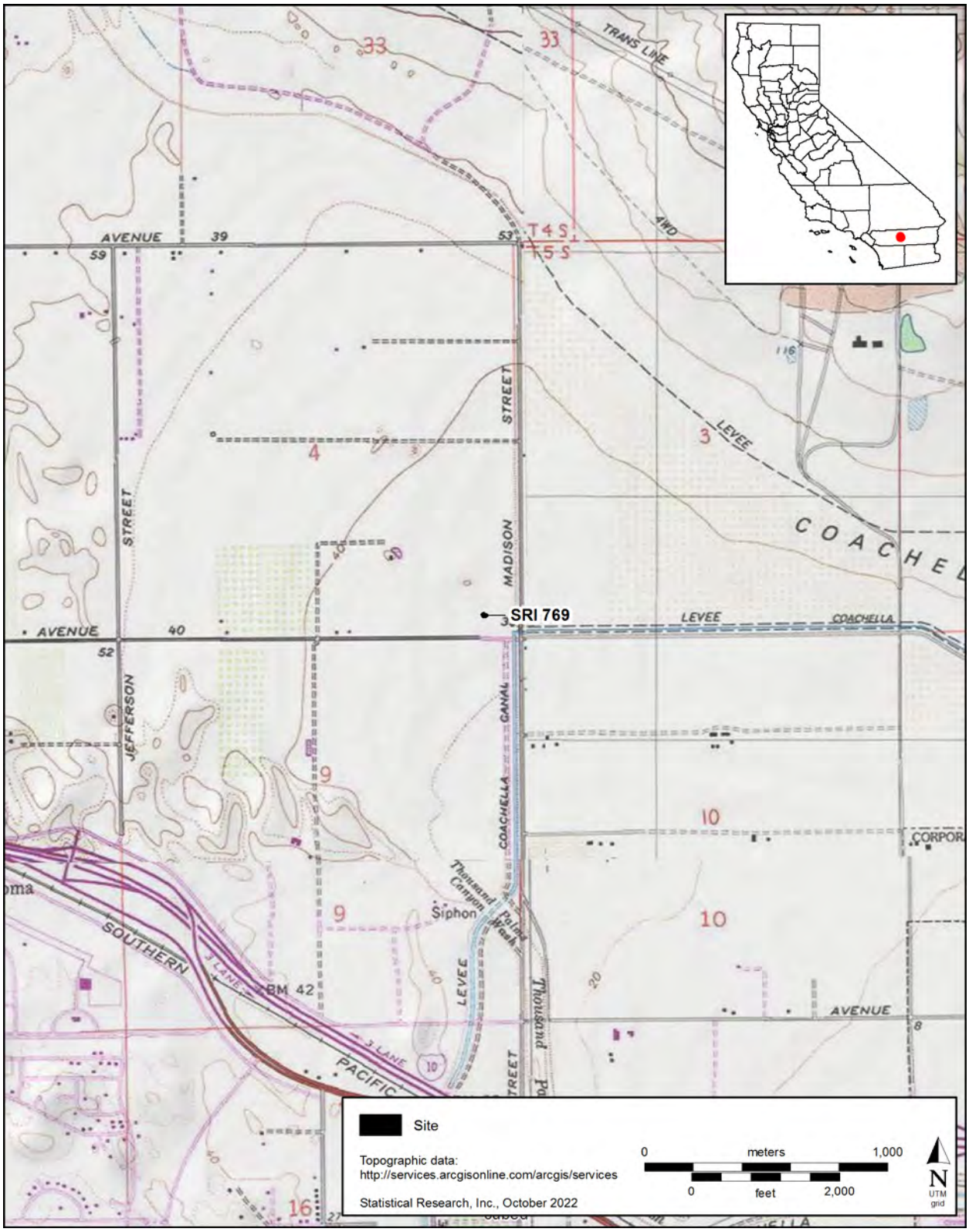
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 7 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 769

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



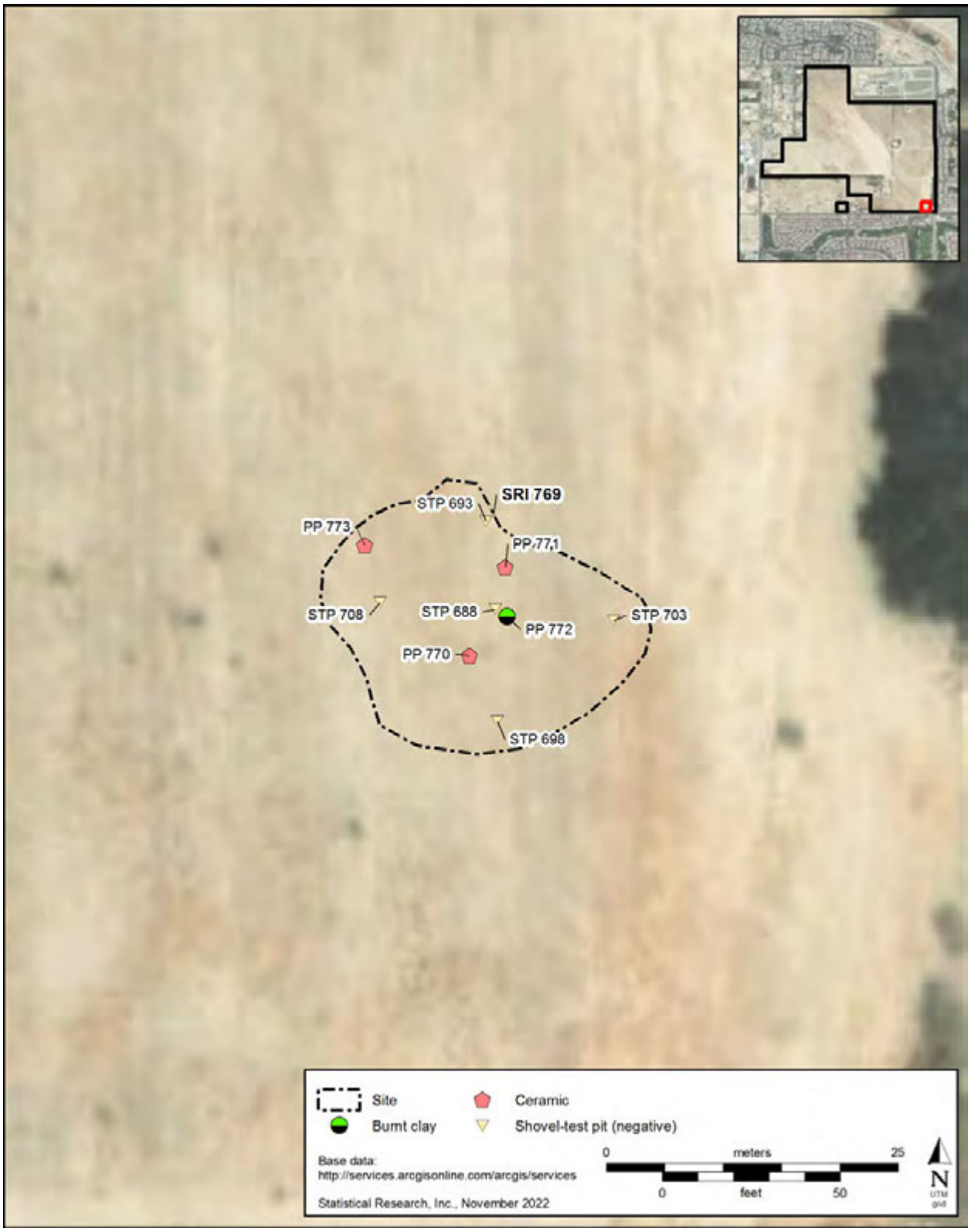
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 8 **of** 8 ***Resource Name or #:** (Assigned by recorder) SRI 769

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 12 ***Resource Name or #** (Assigned by recorder): SRI 776

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568730.366935 mE/ 3736285.397245 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

In 2022, as part of a survey and testing project for the Desert Retreat Specific Plan project, Statistical Research, Inc., personnel identified this large prehistoric site during survey. In total, 293 artifacts were recorded within the site boundaries: 3 pieces of nondiagnostic historical-period glass, 44 pieces of marine-mollusk shell, 1 burnt faunal-bone fragment, 2 weathered faunal-bone fragments, 1 small-mammal (rodent) bone, 2 pieces of lithic shatter, 1 hammerstone, 2 lithic manuports, a ground stone fragment, 2 pieces of FAR, 3 core flakes, a unifacial tool, 5 pieces of flattened stone, 214 ceramic body sherds, and 11 ceramic rim sherds. Of the ceramic sherds, 6 are painted, and 1 is incised gray ware. The site consists of 4 dense artifact loci (Loci A–D), as well as isolated artifacts scattered between loci. In total, 44 shovel-test pits were excavated within the site boundaries, 6 of which were positive for cultural materials (STPs 146, 241, 290, 295, 300, and 413) and 1 of which was possibly positive for cultural materials (STP 378).

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AP3. Ceramic Scatter
AP2. Lithic scatter

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.) _____

P5b. Description of Photo (view, date, accession #):
Overview of the site, Locus A, view to the southeast (DSCF1956). 08/11/2022

***P6. Date Constructed/Age and Source:**
☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**
Private

***P8. Recorded by** (Name, affiliation, and address):
Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):
intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California.* Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
■ Artifact Record ■ Photograph Record ■ Other (List): sketch map

***A1. Dimensions: a. Length:** 266 m **(**north–south**)** × **b. Width:** 161.3 m **(**east–west**)**

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: Global Positioning System (GPS) point-plotted

Method of Determination (Check any that apply)**:** ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ■ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain: There is a significant surface presence of this site but a minimal subsurface presence. Six of the 44 STPs were positive for cultural materials, some of which were within the till zone, and 1 STP was possibly positive.

Limitations (Check any that apply)**:** ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ■ Unknown Method of Determination:

***A3. Human Remains:** ☐ Present ☐ Absent ■ Possible ☐ Unknown (Explain):

***A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map)**:** none

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)**:**

nondiagnostic historical-period glass, marine-mollusk shell, burnt and weathered faunal-bone fragments, a small-mammal (rodent) bone, lithic shatter, a hammerstone, lithic manuports, a ground stone fragment, fire-affected rock, core flakes, a unifacial tool, pieces of flattened stone, ceramic body sherds, and ceramic rim sherds.

***A6. Were Specimens Collected?** ☐ No ■ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.)

Agricultural disturbance, such as tilling and plant growth, has disturbed the site to a depth of 40 cm below surface. It is unlikely that the artifacts are in situ. Furthermore, most of the site (Loci A, C, and D) was covered by the Coachella Valley Water District stockpile.

***A8. Nearest Water** (Type, distance, and direction)**:**

Coachella Canal, 800 m (2,624.7 feet) to the southeast; Whitewater River, 3.3 km (2.1 miles) to the south-southeast; Salton Sea, 33 km (20.5 miles) to the southeast

***A9. Elevation:** 110 m above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):

The project area is in the northwest of the Coachella Valley, between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. Currently, the area is dominated by sand flats, sand dunes aggrading around ram's horn (*Proboscidea louisianica*) plants; small shrubs, including burrobrush (*Hymenoclea Salsola)* and oleander (*Nerium oleander*); and tamarisk. A large berm runs north–south along the tamarisk tree line near the center of the property. Local fauna include bighorn sheep (*Ovis canadensis*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), and ravens (*Corvus corax*).

A11. Historical Information:

The project area has been used for agriculture since 1953 and possibly as early as the 1870s (Heath 1945).

***A12. Age:** ■ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known.**

Based on ceramic chronology, it is likely that the site dates to the Late Prehistoric period.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

This site is interpreted as a large Late Prehistoric camp near the shores of the ancient Lake Cahuilla high stand.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record):

Original Media/Negatives Kept at:

***A17. Form Prepared by:** Felicia V. De Peña **Date:** 10/27/2022

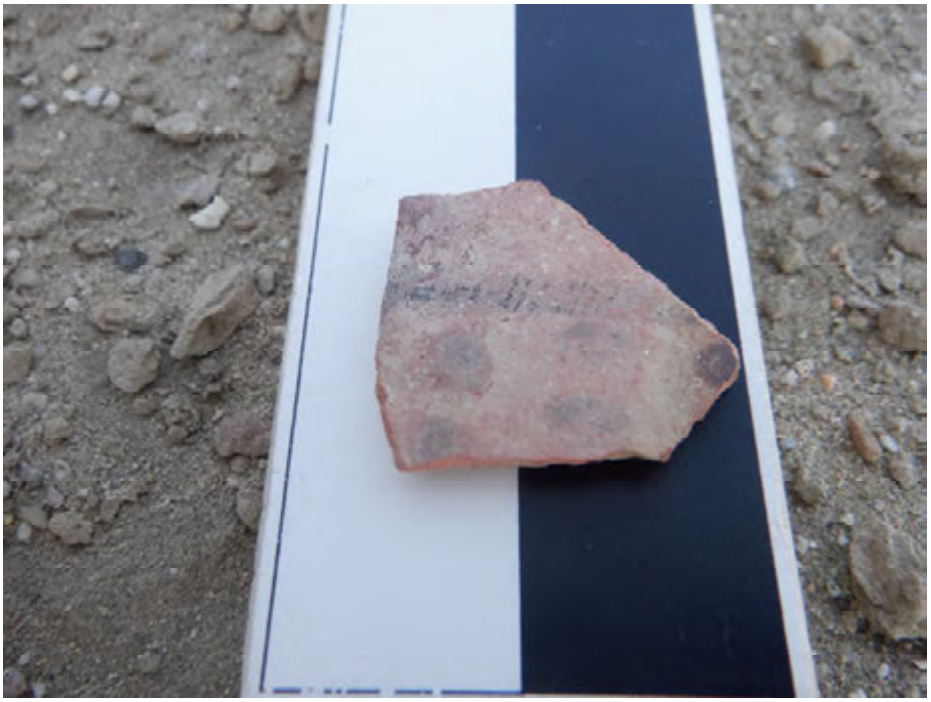
Affiliation and Address: Statistical Research, Inc., 617 Texas St., Redlands, CA 92374

Camera Format: digital Lens Size: N/A

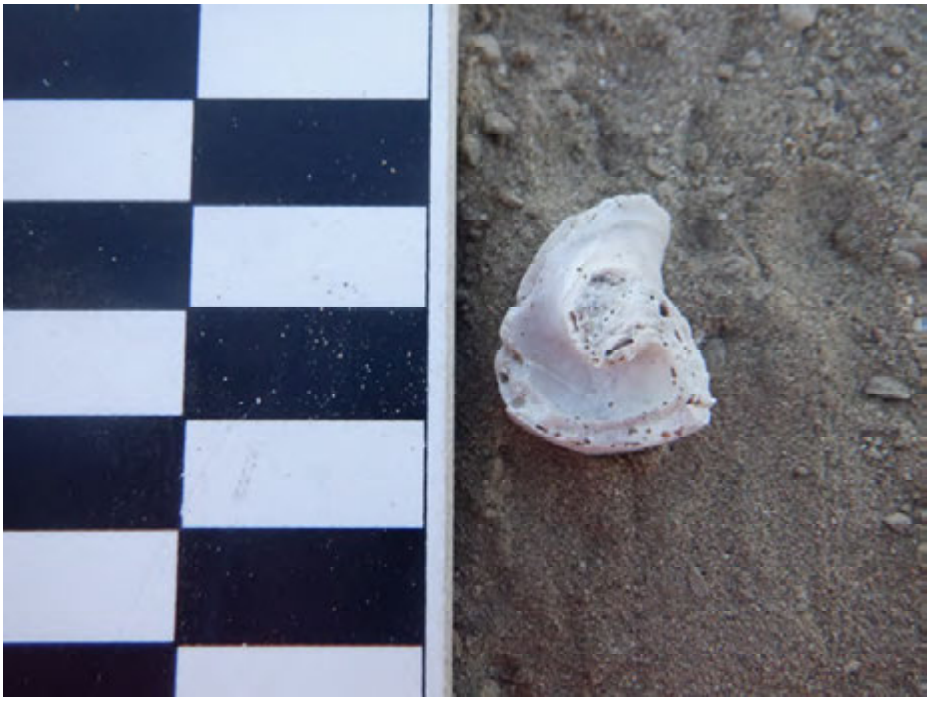
Film Type and Speed: digital **Negatives Kept At:** Statistical Research, Inc.

Mo.	Day	Year	Time	Subject/Description	View Direction	Accession No.
08	11	2022	**1:57 p.m.**	Overview of the site, Locus A, view to the southeast.	southeast	DSCF1956
08	11	2022	**1:57 p.m.**	Painted buff ware ceramic body sherd.	from above	DSCF1987
08	11	2022	**1:52 p.m.**	Conch-shell center, marine mollusk.	from above	DSCF2041
08	11	2022	**1:52 p.m.**	Gray ware rim sherd with incisions.	from above	DSCF2070

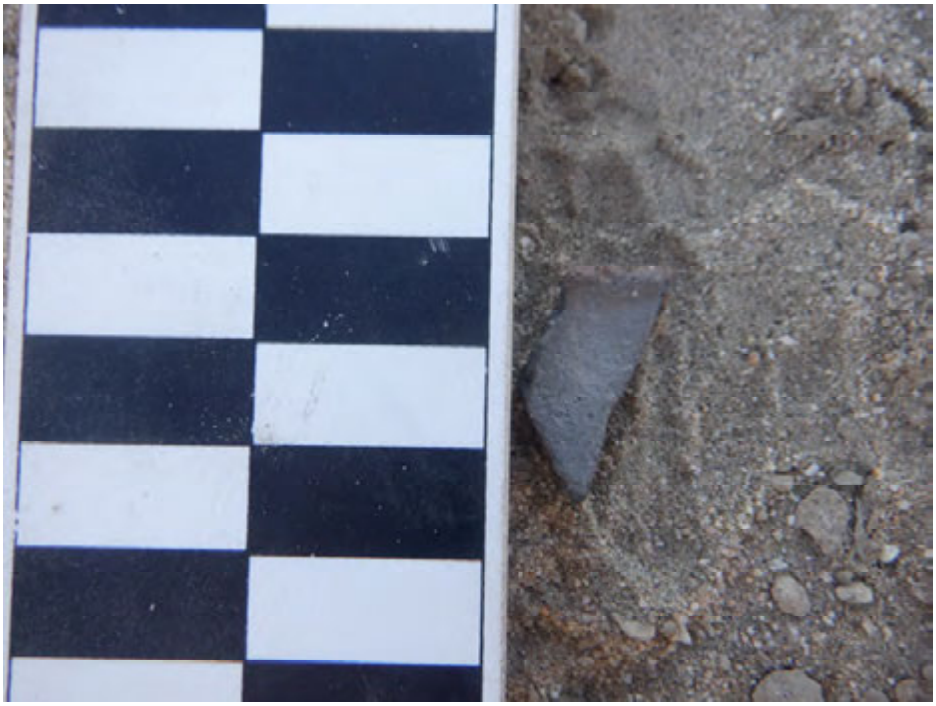
Overview of the site, Locus A, view to the southeast (DSCF1956).



Painted buff ware ceramic body sherd (DSCF1987).



Conch-shell center, marine mollusk (DSCF2041).



Gray ware rim sherd with incisions (DSCF2070).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
Trinomial _____

ARTIFACT RECORD

 Resource Name or #: (Assigned by recorder) SRI 776

Location Where Collected Specimens are Curated: Agua Caliente Band of Cahuilla Indians facility

Artifact No.	Type	Condition	Description (form, material, etc.)	Dimensions (cm)			Sketch/ Photo?	Collected?
				L	W	TH		
03007B133	C	F	brown ware body sherd (n = 9)				no	yes
03007B135	C	F	brown ware body sherd (n = 12)				no	yes
03007B136	C	F	brown ware body sherd				no	yes
03007B137	C	F	buff ware body sherd				no	yes
03007B138	C	F	brown ware rim sherd, 20-mm rim				no	yes
03007B139	C	F	gray ware body sherd (n = 2)				no	yes
03007B13A	C	F	brown ware body sherd				no	yes
03007B13B	C	F	gray ware body sherd (n = 2)				no	yes
03007B13C	C	F	buff ware rim sherd				no	yes
03007B13D	C	F	buff ware rim sherd, 14-mm rim				no	yes
03007B13E	C	F	brown ware body sherd				no	yes
03007B13F	C	F	brown ware body sherd				no	yes
03007B140	C	F	brown ware rim sherd 16-mm rim				no	yes
03007B141	C	F	brown ware body sherd (n = 2)				no	yes
03007B142	C	F	buff ware body sherd				no	yes
03007B143	C	F	buff ware rim sherd, 35-mm rim				no	yes
03007B144	C	F	brown ware body sherd				no	yes
03007B145	C	F	buff ware body sherd (n = 2)				no	yes
03007B146	C	F	gray ware body sherd				no	yes
03007B1C7	L	F	core flake, red chert				no	yes
03007B1C8	L	C	primary flake, quartzite				no	yes
03007B1C9	L	C	core flake, metavolcanic, gray				no	yes
03007B1D2	L	F	fire-affected rock				no	yes
03007B147	C	F	brown ware body sherd				no	no
03007B148	C	F	brown ware body sherd				no	no
03007B149	C	F	brown ware body sherd (n = 3)				no	no
03007B14A	C	F	buff ware body sherd				no	no
03007B14B	C	F	gray ware body sherd				no	no
03007B14C	C	F	gray ware body sherd				no	no
03007B14D	C	F	brown ware body sherd				no	no
03007B14E	C	F	gray ware body sherd, 11-mm rim				no	no
03007B14F	C	F	buff ware body sherd				no	no
03007B1D3	L	F	fire-affected rock				no	no
03007B1D7	F	F	burnt bone				no	no
03007B150	C	F	brown ware body sherd				no	yes
03007B151	C	F	brown ware body sherd				no	yes
03007B152	C	F	indeterminate ceramic sherd				no	yes
03007B1D8	F	F	faunal long bone				no	yes
03007B1D9	F	F	scalloped marine-mollusk shell				no	yes

Type Key (list abbreviations used):		**Condition Key:**	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

03007B153	C	F	brown ware body sherd				no	yes
03007B154	C	F	buff ware body sherd				no	yes
03007B15A	C	F	buff ware body sherd				no	yes
03007B15B	C	F	brown ware body sherd				no	yes
03007B15C	C	F	gray ware body sherd				no	yes
03007B15D	C	F	buff ware body sherd				no	yes
03007B15E	C	F	brown ware body sherd				no	yes
03007B15F	C	F	buff ware rim sherd, 15-mm rim				no	yes
03007B160	C	F	buff ware rim sherd				no	yes
03007B161	C	F	brown ware body sherd				no	yes
03007B162	C	F	buff ware body sherd (n = 4)				no	yes
03007B163	C	F	painted buff ware body sherd with black line, 4 dots				yes, photo	yes
03007B164	C	F	painted buff ware with black line				no	yes
03007B165	C	F	buff ware body sherd				no	yes
03007B166	C	F	brown ware body sherd				no	yes
03007B167	C	F	brown ware body sherd (n = 6)				no	yes
03007B168	C	F	painted buff ware with black dots				no	yes
03007B169	C	F	buff ware body sherd				no	yes
03007B16A	C	F	brown ware body sherd (n = 2)				no	yes
03007B16B	C	F	brown ware rim sherd, 15-mm rim				no	yes
03007B16C	C	F	gray ware rim sherd, 30-mm rim, incised interior				yes, photo	yes
03007B16D	C	F	brown ware body sherd				no	yes
03007B16E	C	F	brown ware rim sherd, 40-mm rim				no	yes
03007B16F	C	F	buff ware body sherd				no	yes
03007B170	C	F	brown ware rim sherd, 20-mm rim				no	yes
03007B171	C	F	buff ware body sherd				no	yes
03007B172	C	F	buff ware rim sherd, 30-mm rim, no curve				no	yes
03007B173	C	F	indeterminate ceramic body sherd				no	yes
03007B174	C	F	indeterminate ceramic body sherd				no	yes
03007B175	C	F	gray ware body sherd				no	yes
03007B176	C	F	gray ware body sherd				no	yes
03007B177	C	F	indeterminate ceramic body sherd				no	yes
03007B178	C	F	gray ware body sherd				no	yes
03007B179	C	F	buff ware body sherd				no	yes
03007B17A	C	F	brown ware body sherd				no	yes
03007B17B	C	F	indeterminate ceramic body sherd				no	yes
03007B1CA	L	F	shatter, metavolcanic, red				no	yes
03007B1DB	F	F	scalloped marine-shell fragment				no	yes
03007B1DC	F	F	marine shell, possibly worked				no	yes
03007B1DD	F	F	marine shell, Pismo				no	yes
03007B1DE	F	F	marine shell, possibly worked				no	yes

Type Key (list abbreviations used):		**Condition Key:**	
C	Ceramic	F	Fragmentary
F	Faunal	C	Complete
H	Historics	U	Unknown
L	Lithic	Other:	
O	Other		

ARTIFACT RECORD

03007B1DF	F	F	spiral marine shell				no	yes
03007B1E0	F	F	spiral conch-shell core				yes, photo	yes
03007B1E1	F	F	marine-mollusk shell				no	yes
03007B1CB	L	F	shatter, jasper, black				no	yes
03007B235	L	F	fragments removed from a larger granite stone still buried (n = 5)				no	yes
03007B261	C	F	indeterminate ceramic body sherd				no	yes
03007B262	C	F	indeterminate ceramic body sherd				no	yes
03007B264	C	F	indeterminate ceramic body sherd				no	yes
03007B22E	C	F	brown ware body sherd				no	yes
03007B22A	C	F	indeterminate ceramic body sherd				no	yes
03007B23C	F	F	burned toe-bone, ungulate				no	yes
03007B23E	F	F	weathered ungulate toe				no	yes
03007B22C	C	F	indeterminate ceramic body sherd (n = 3)				no	yes
03007B242	F	F	marine-mollusk shell (n = 2)				no	yes
03007B243	F	F	small rib bone, rodent				no	yes
03007B22D	C	F	indeterminate ceramic body sherd				no	yes
03007B241	F	F	unknown shell fragment (n = 3)				no	yes
03007B290	H	F	historical-period glass fragment (n = 2)				no	yes
03007B250	C	F	indeterminate ceramic body sherd				no	yes
03007B23F	F	F	unknown shell fragment (n = 10)				no	yes
03007B246	H	F	historical-period glass fragment				no	yes
03007B240	F	F	marine-shell fragments (n = 10)				no	yes
03007B27B	C	F	indeterminate ceramic body sherd				no	yes
03007B27C	C	F	indeterminate ceramic body sherd				no	yes
03007B27D	C	F	indeterminate ceramic body sherd				no	yes
03007B27E	C	F	indeterminate ceramic body sherd				no	yes
03007B280	C	F	indeterminate ceramic body sherd				no	yes
03007B236	L	F	ground stone end fragment, granite	6.8	5.5	1.7	no	yes
03007B28B	C	F	indeterminate ceramic body sherd (n = 30)				no	yes
03007B28C	F	F	marine-mollusk shell (n = 6)				no	yes
03007B247	L	F	manuport: large, tested cobble of igneous rock, gray				no	yes
03007B231	C	F	gray ware body sherd, incised				no	yes
03007B28F	C	F	indeterminate ceramic body sherd (n = 64)				no	yes
03007B251	L	F	unworked piece of petrified wood approximately 1.5 cm in diameter				no	yes
03007B244	F	F	weathered bone, long bone				no	yes
03007B2CC	L	F	uniface, metamorphic, gray	2.5	2.0	1.2	no	yes
03007B2E3	L	C	hammerstone, quartzite	5.5	4.3	4	no	yes

Type Key (list abbreviations used):	**Condition Key:**
C Ceramic	F Fragmentary
F Faunal	C Complete
H Historics	U Unknown
L Lithic	Other:
O Other	

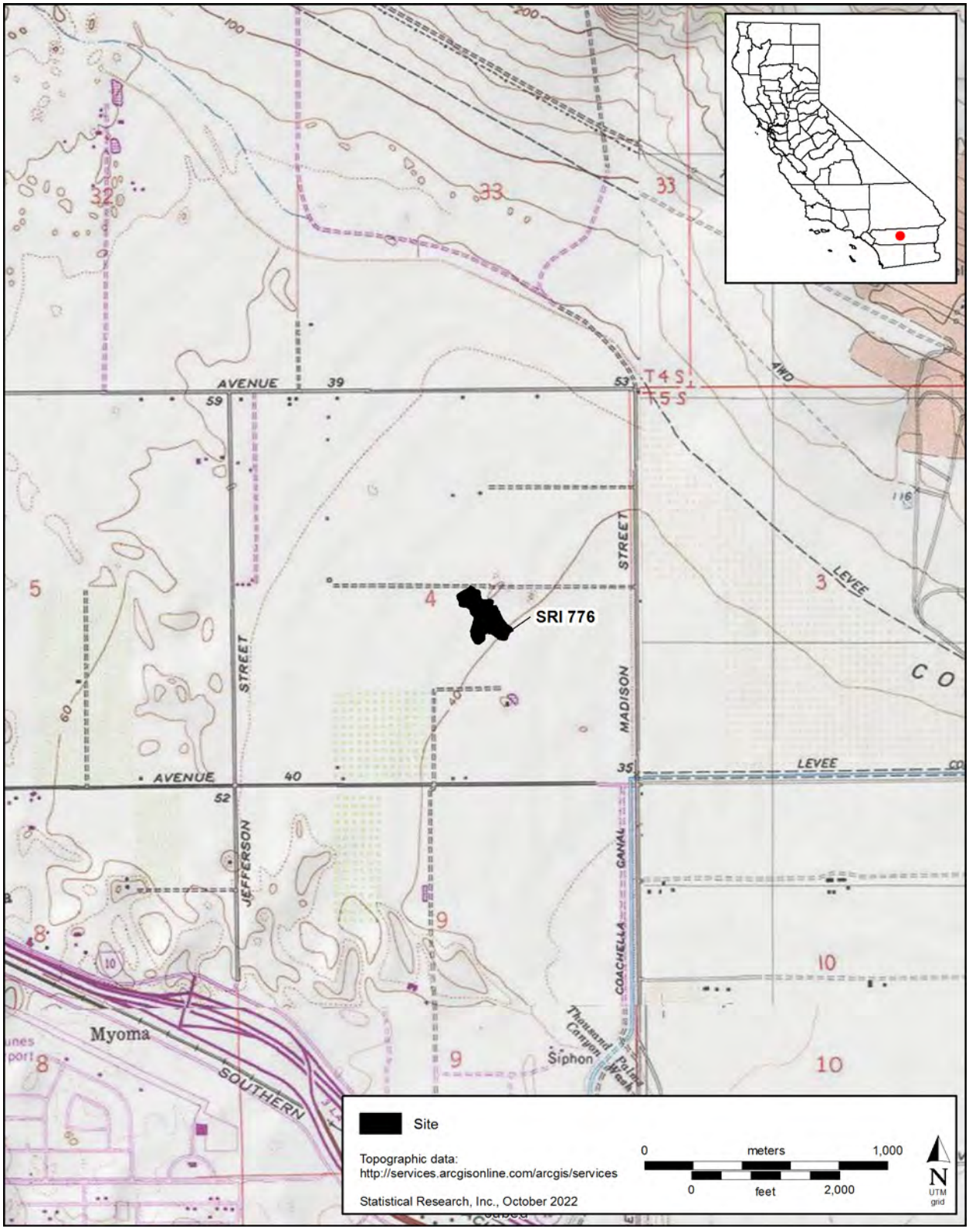
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

 ***Resource Name or #:** (Assigned by recorder) SRI 776

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



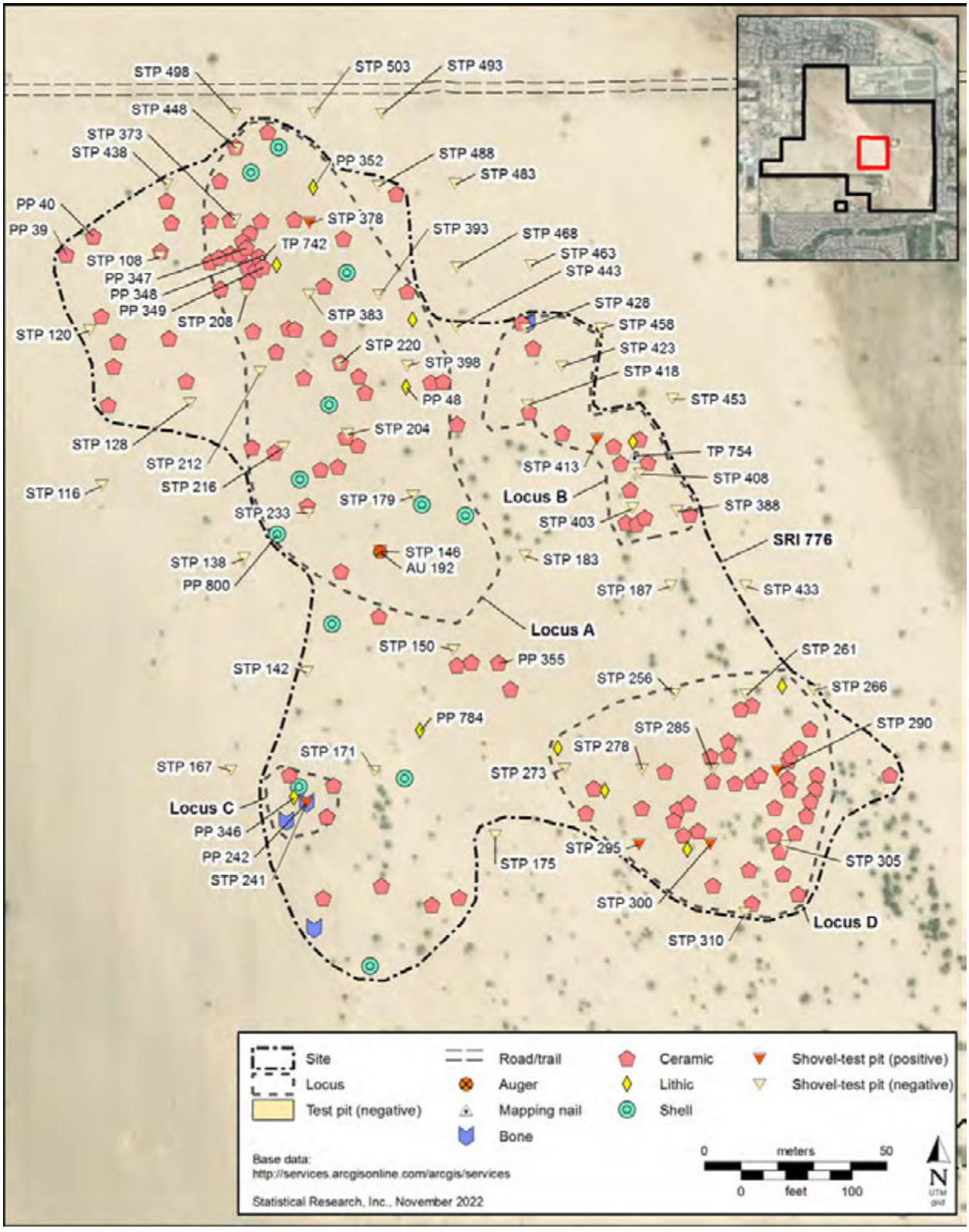
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # _____
HRI # _____
Trinomial _____

Page 12 **of** 12 ***Resource Name or #:** (Assigned by recorder) SRI 776

***Drawn by:** Statistical Research, Inc. ***Date of map:** October 2022



DPR 523K (Rev. 1/1995) (Word 9/2013) **NOTE: Include bar scale and north arrow.**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 1

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569244.834 mE/ 3736046.7755 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric core that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The core is metavolcanic, grey, and multidirectional and measures 4.8 by 4.7 by 3.5 cm.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 1, a metavolcanic core, close-up view from above (DSCF1534). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

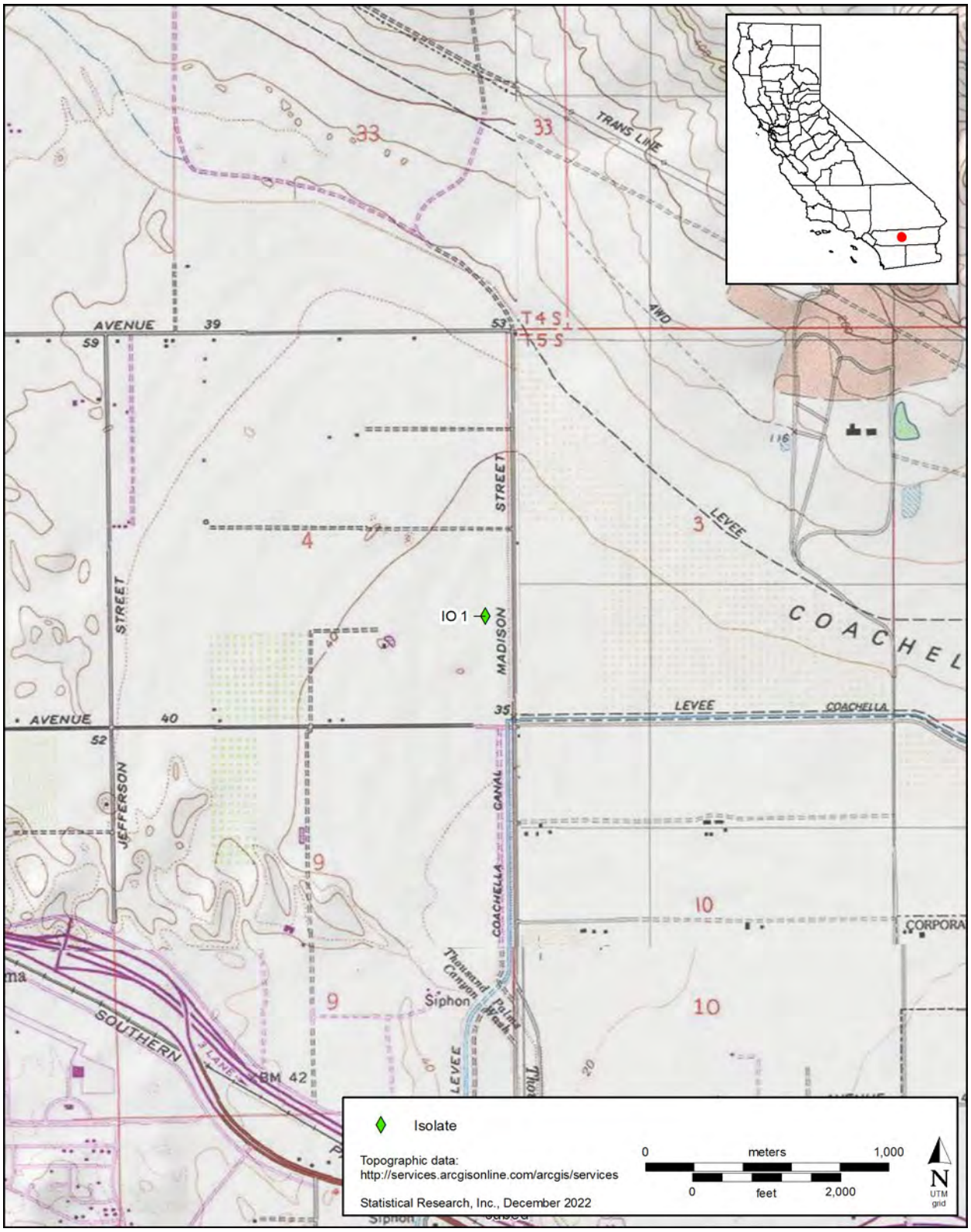
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 1

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 4

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address _____ private City Indio Zip 92203

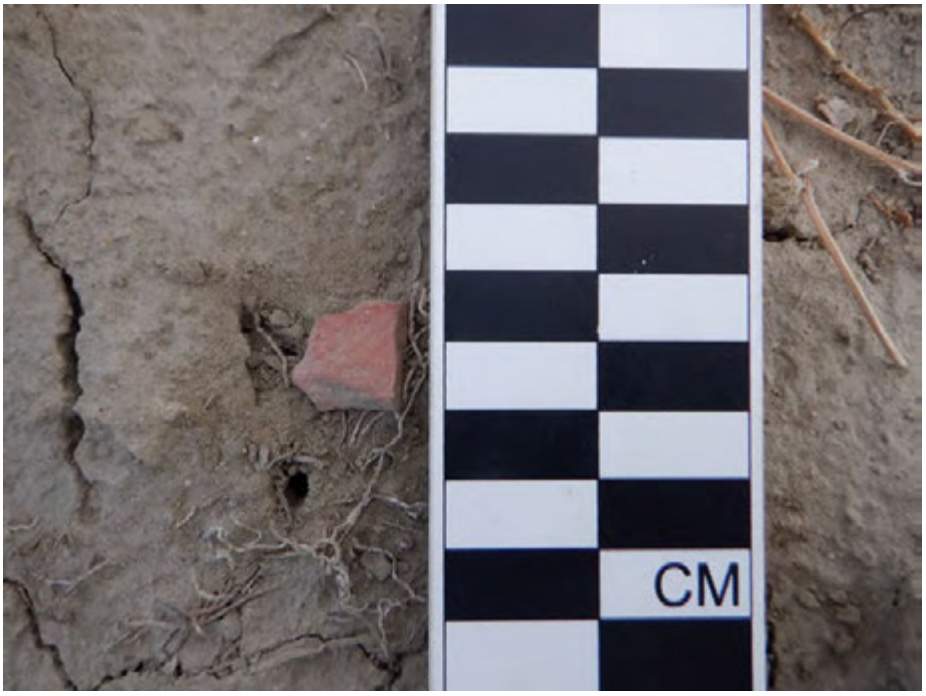
d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569143.9793 mE/ 3736217.4562 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small brown ware body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 4, a ceramic sherd, close-up view from above (DSCF1554). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

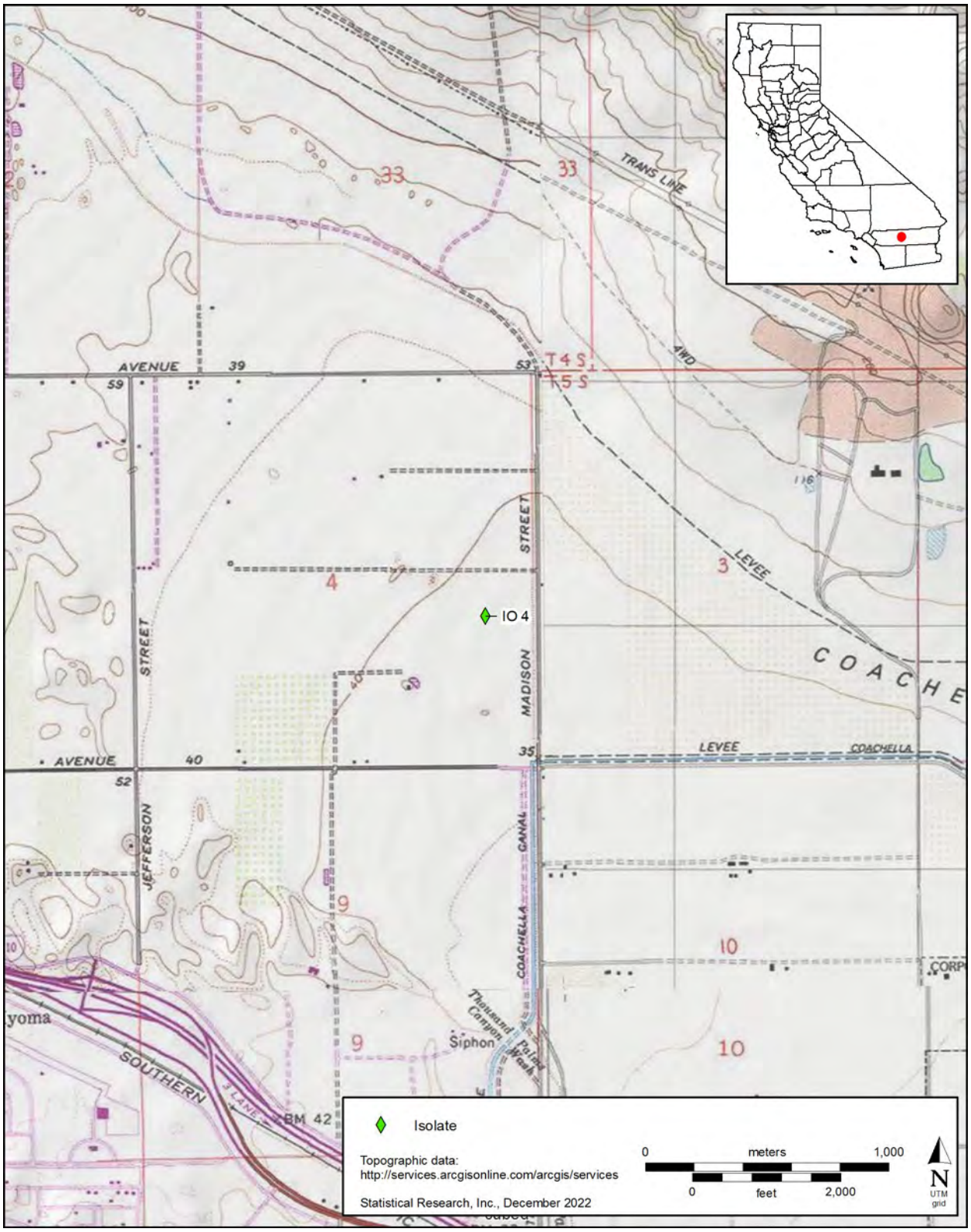
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 4

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 5

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address _____ private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569034.3813 mE/ 3736247.633 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small brown ware body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 5, a ceramic sherd, close-up view from above (DSCF1558). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

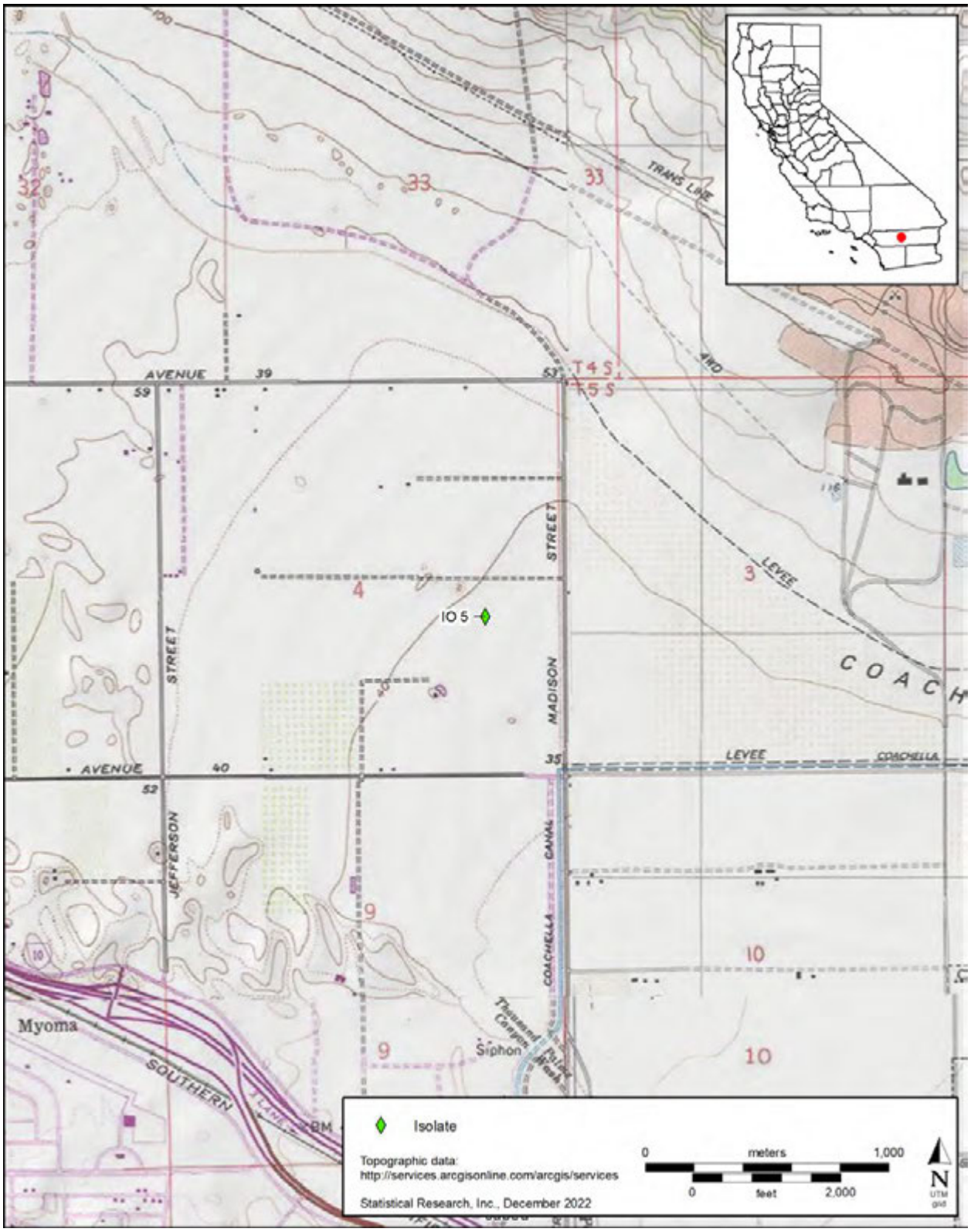
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 5

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 6

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address _____ private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568903.108 mE/ 3736384.8246 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small brown ware body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 6, a ceramic sherd, close-up view from above (DSCF1577). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

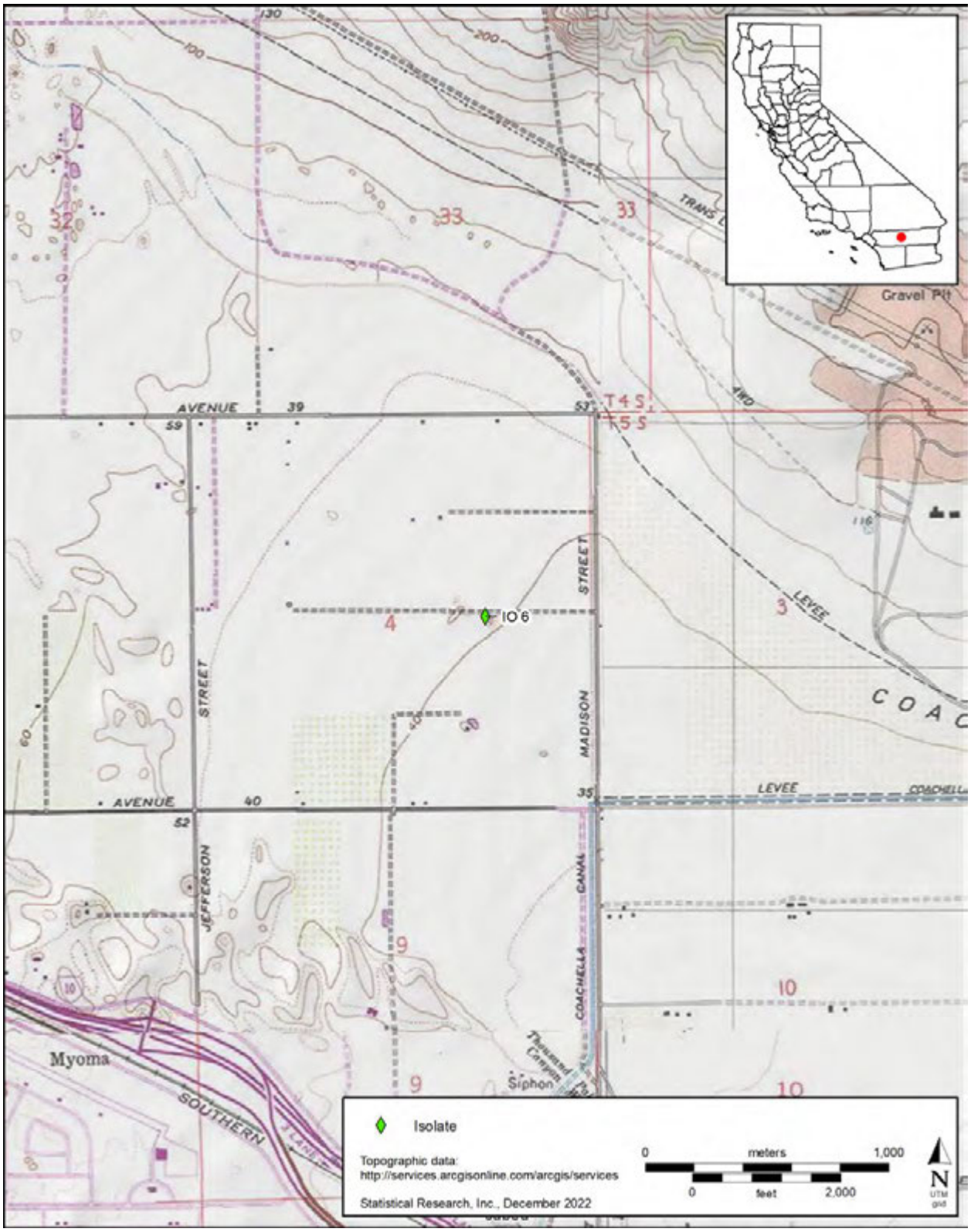
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 6

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 7

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

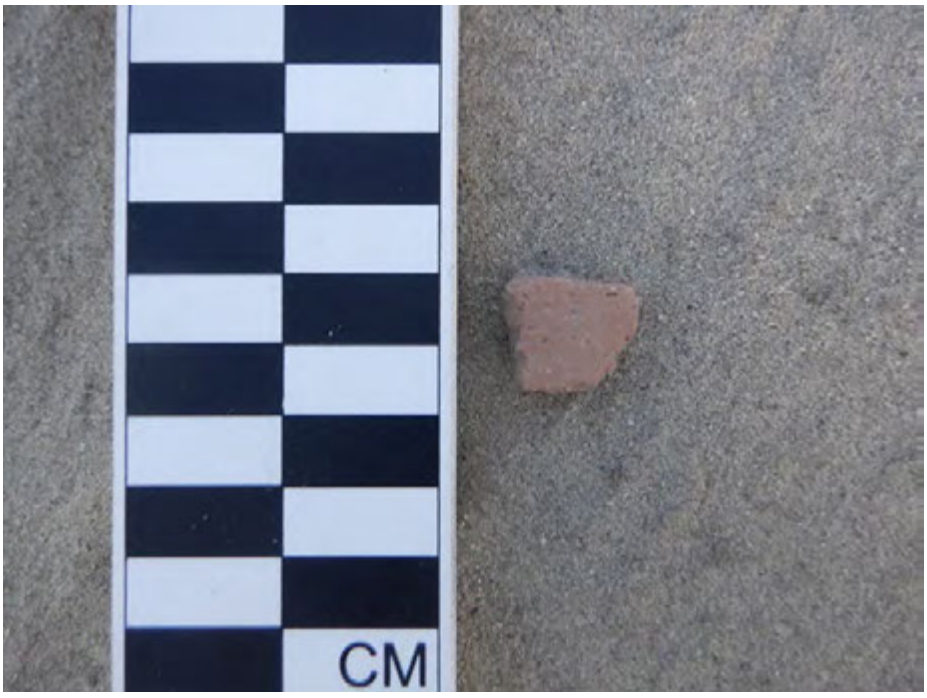
d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568929.3643 mE/ 3736381.081 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small brown ware body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 7, a ceramic sherd, close-up view from above (DSCF1584). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

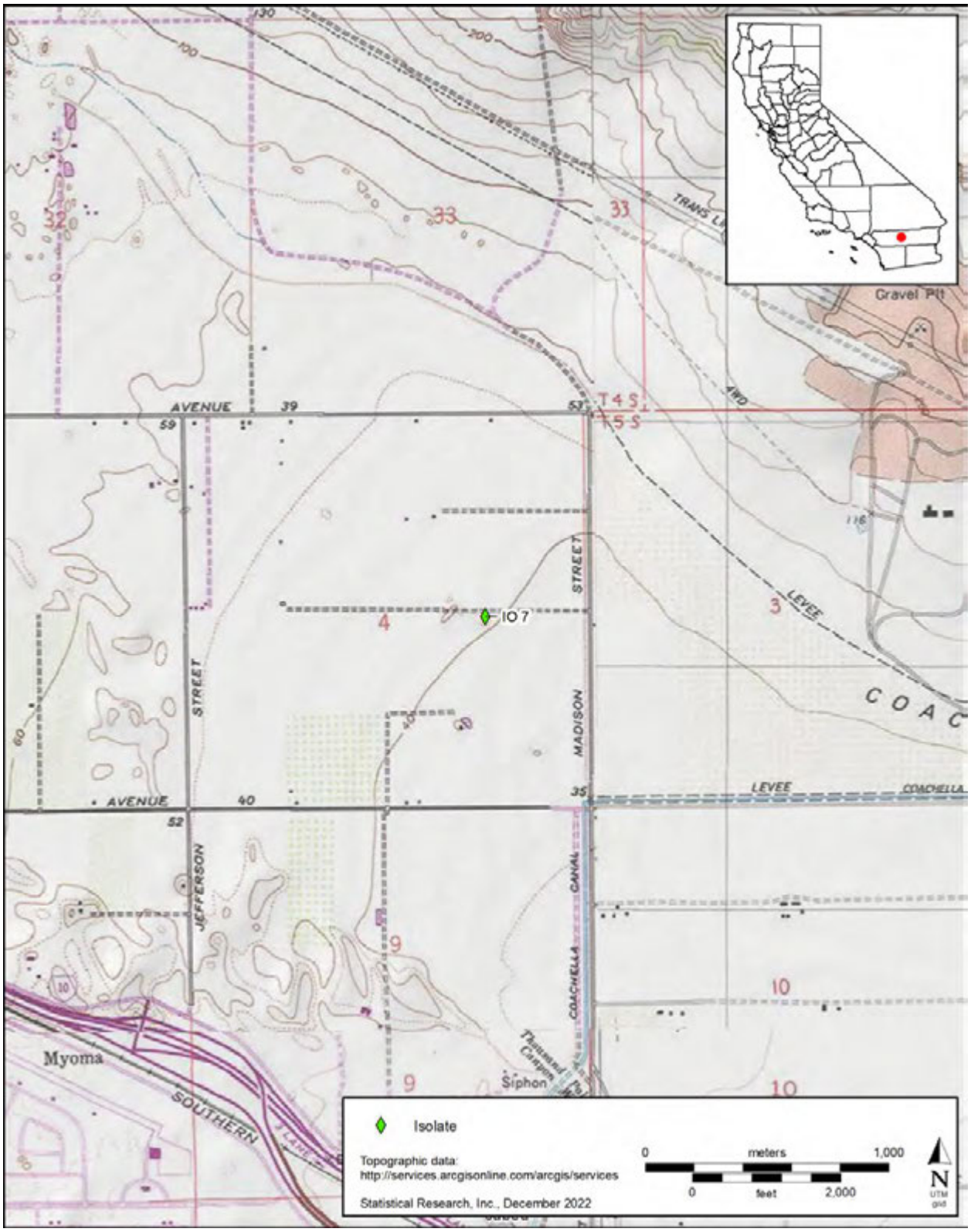
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 7

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 8

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** NE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568499.6165 mE/ 3736885.2794 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated historical-period glass bottle that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The bottle has a partial label that reads, "SAN . . .". The base markings read, "Santa Fe Vintage // 134B // Refilling // 4 // Prohibited", with an "LM" monogram in a circle (Latchford Marble 1939–1957), and the heel is embossed with "4/5 Pint".

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AH 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 8, a glass bottle, close-up view from above (DSCF1647). 08/07/2022

***P6. Date Constructed/Age and Source:**

☑ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

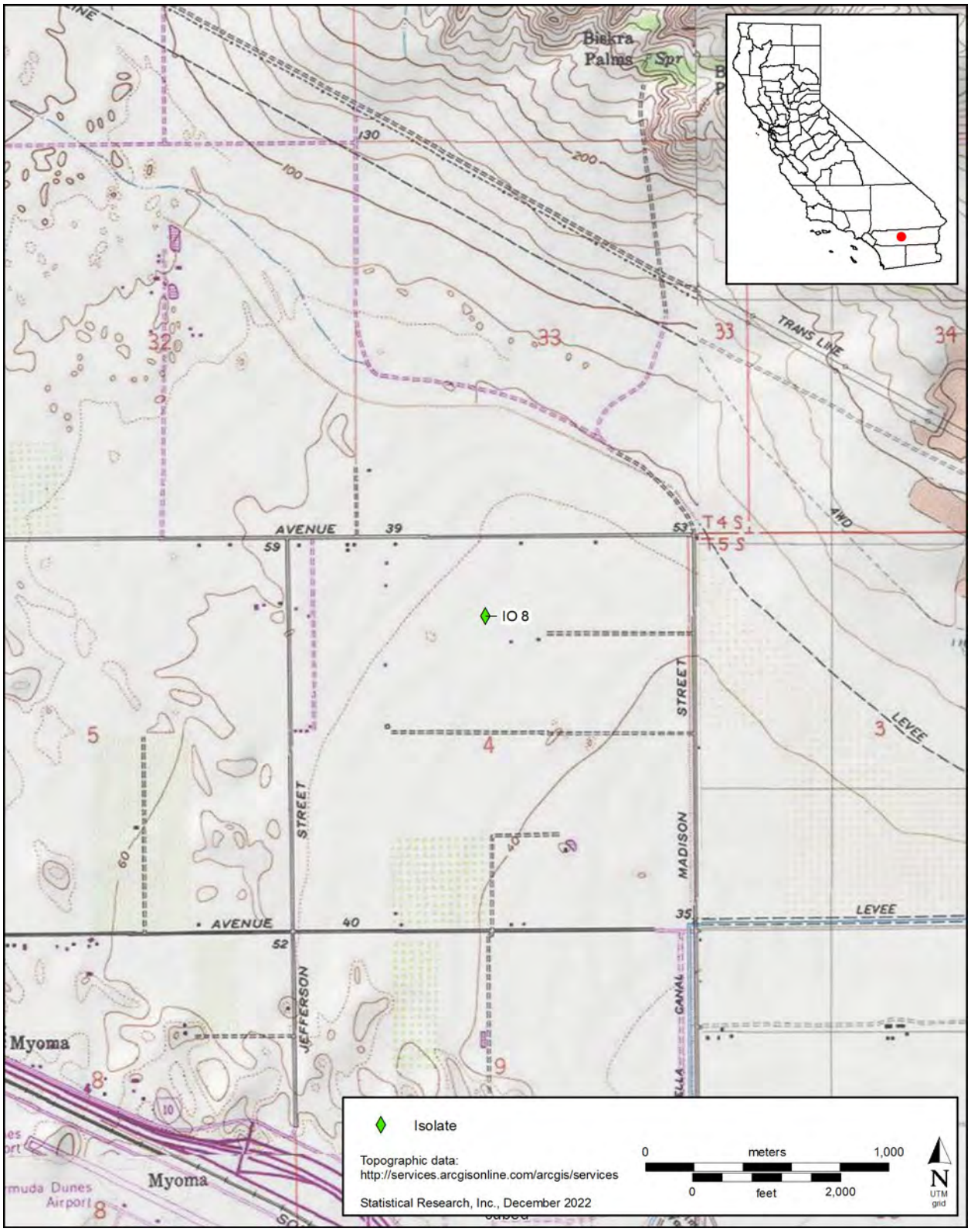
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 8

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 13

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address Private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568945.0515 mE/ 3736082.3734 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small brown ware body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 13, a ceramic sherd, close-up view from above (DSCF1693). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

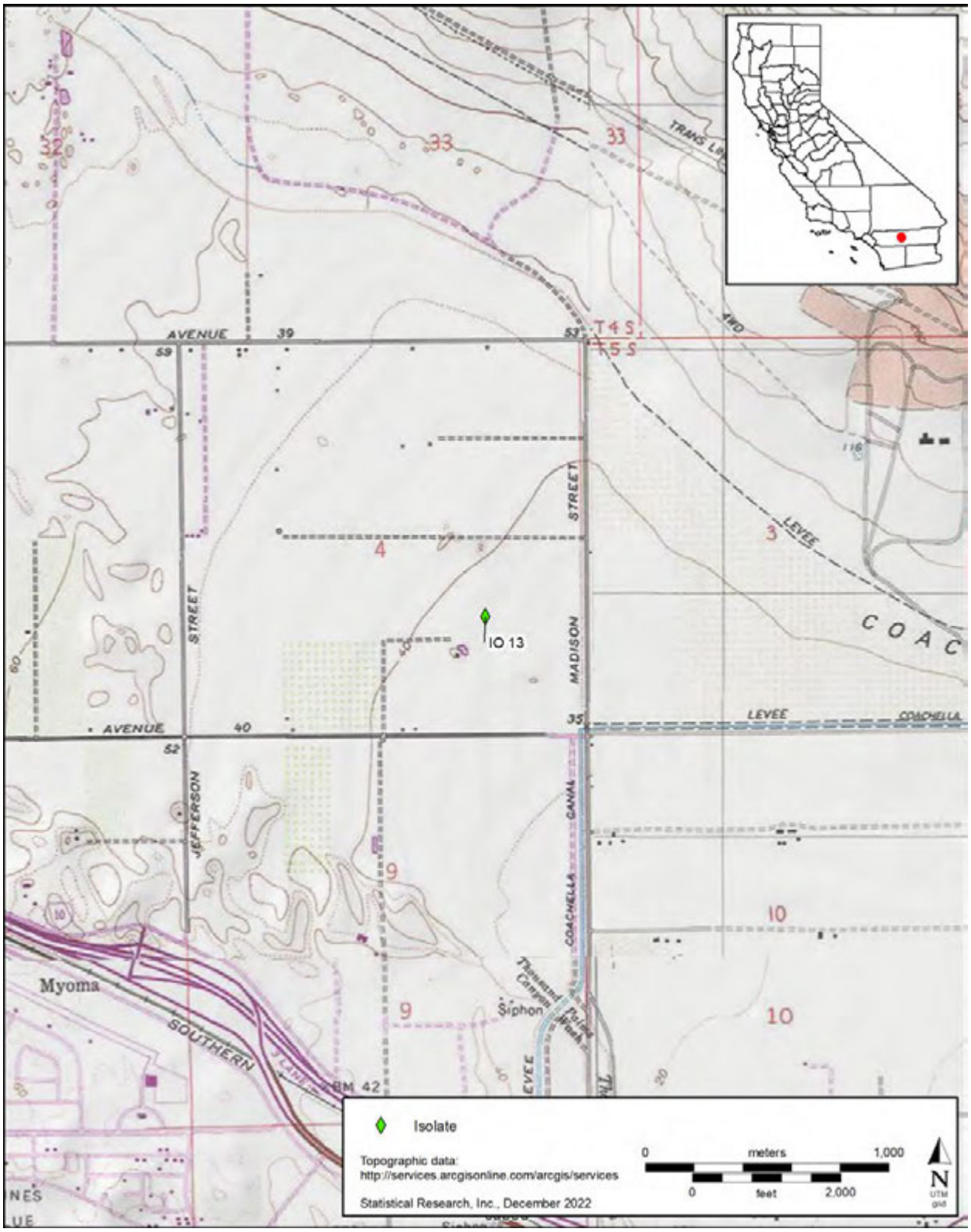
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 13

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 14

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** NE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568558.4502 mE/ 3736809.8637 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated historical-period glass Coca-Cola bottle that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The bottle reads, "Coca-Cola // Trademark registered // min contents 6 FL ozs" on one side and "bottle pat.D-105529" on the other, and "San Bernardino//Calif." is embossed on the base.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 14, a glass Coca-Cola bottle, close-up view from above (DSCF1710). 08/07/2022

***P6. Date Constructed/Age and Source:**

☑ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

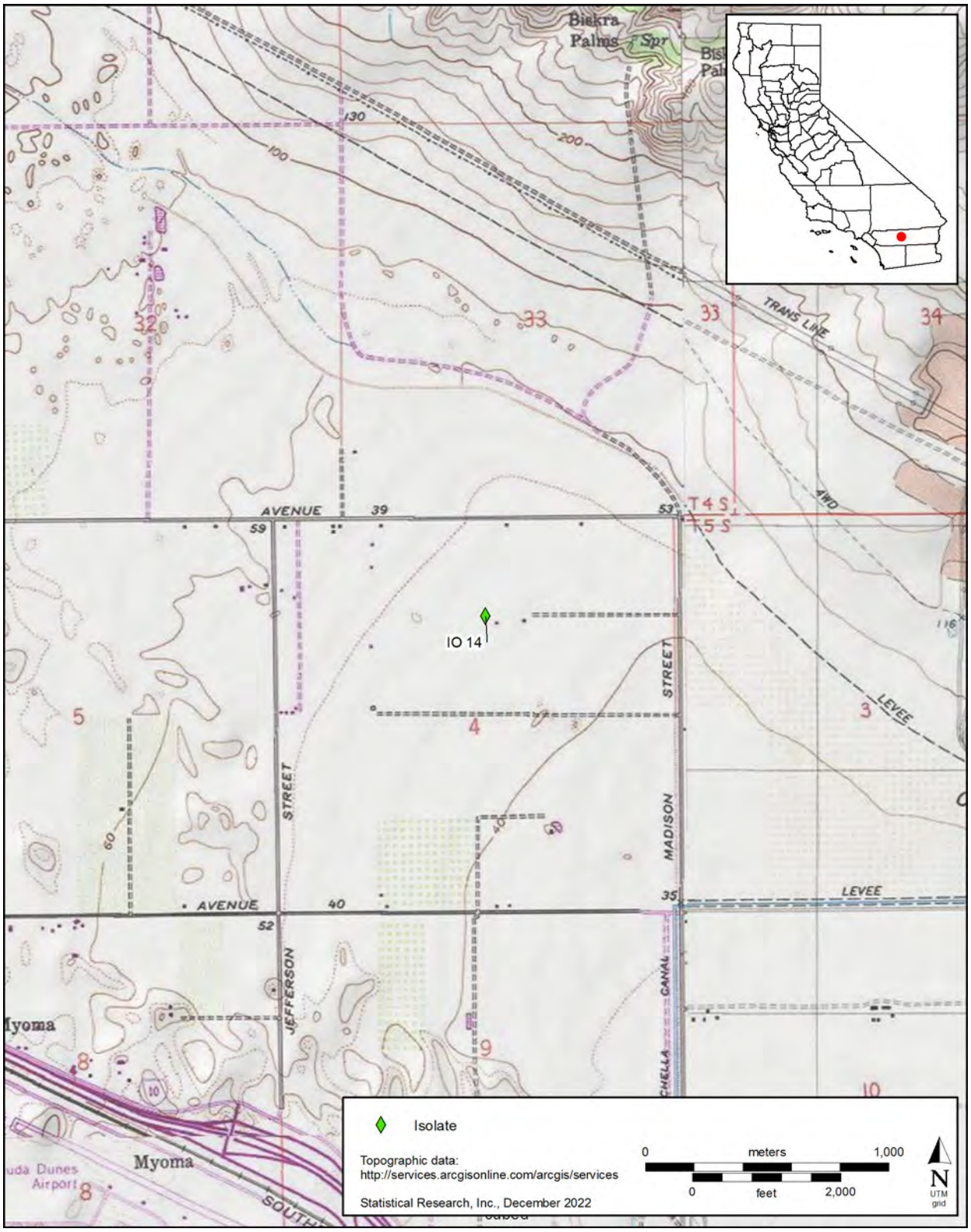
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 14

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 22

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** NE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

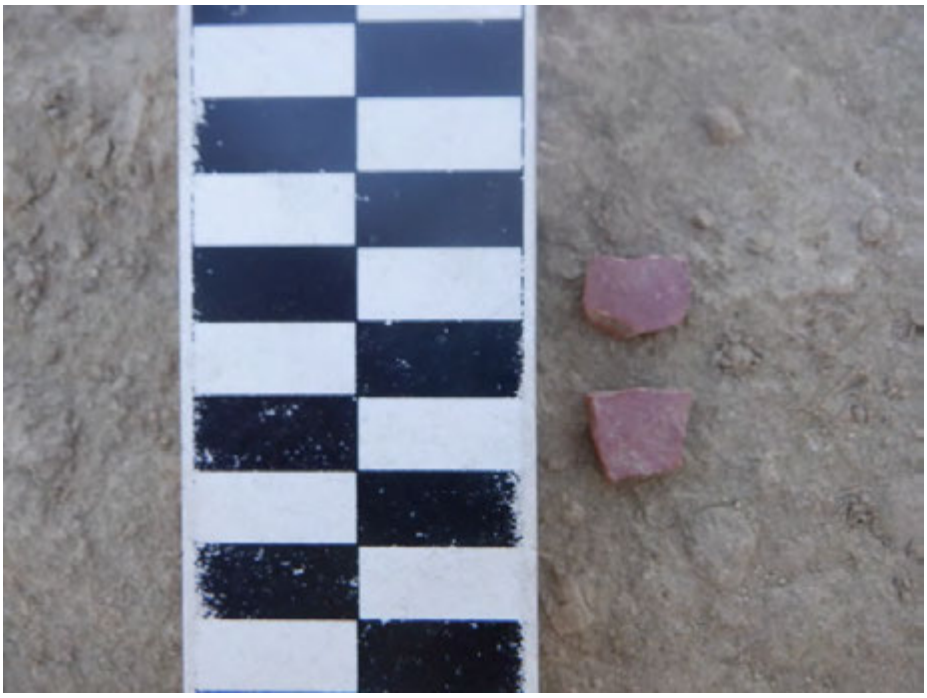
d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568895.4752 mE/ 3736531.2115 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of two isolated prehistoric ceramic sherds that were discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherds are small body sherds with fine paste and red exteriors.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 22, ceramic sherds, close-up view from above (DSCF1554). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

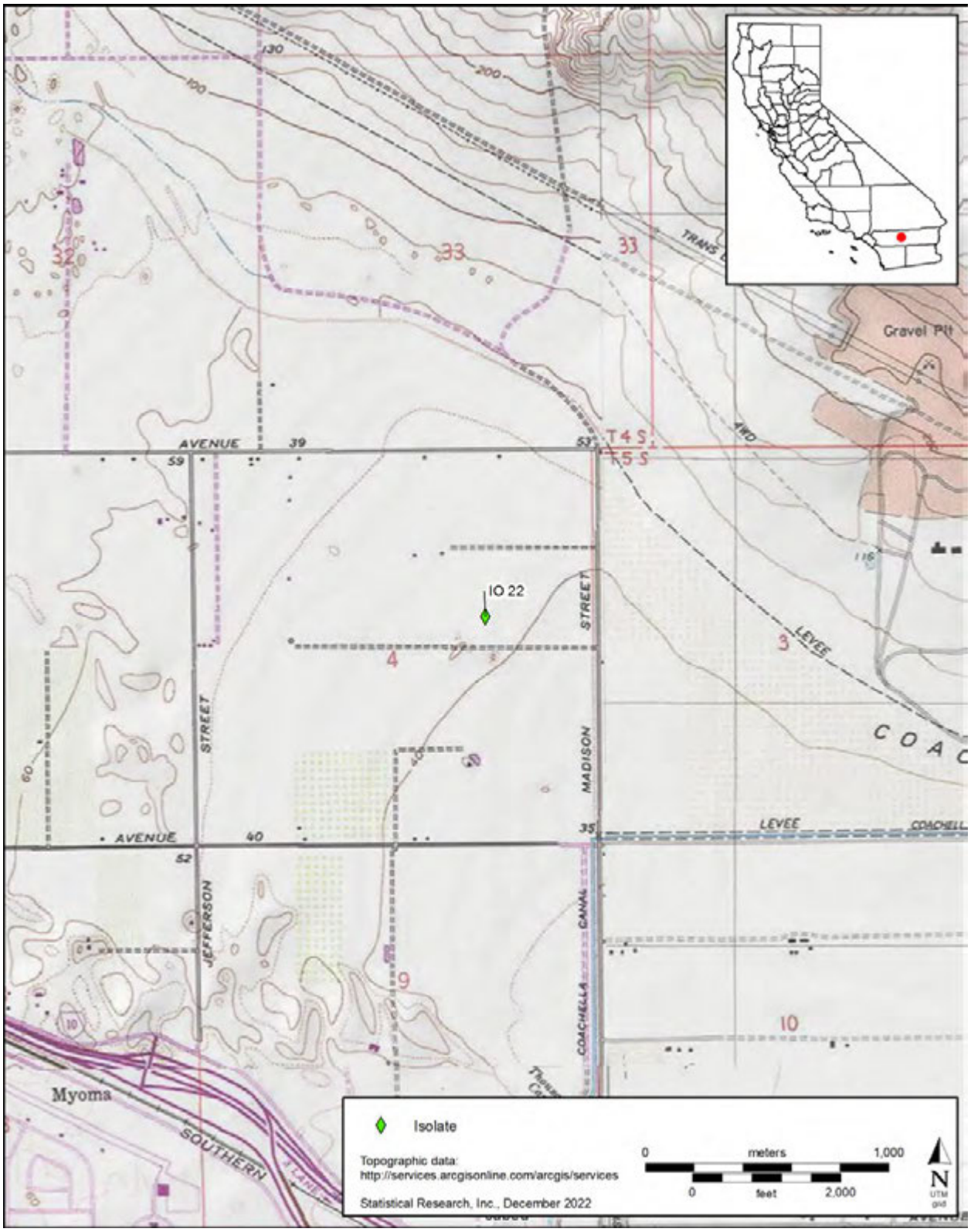
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 22

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 24

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568880.5613 mE/ 3736419.7382 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd that was discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd with buff interior and fine gray paste exterior.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 24, a ceramic sherd, close-up view from above (DSCF1789). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

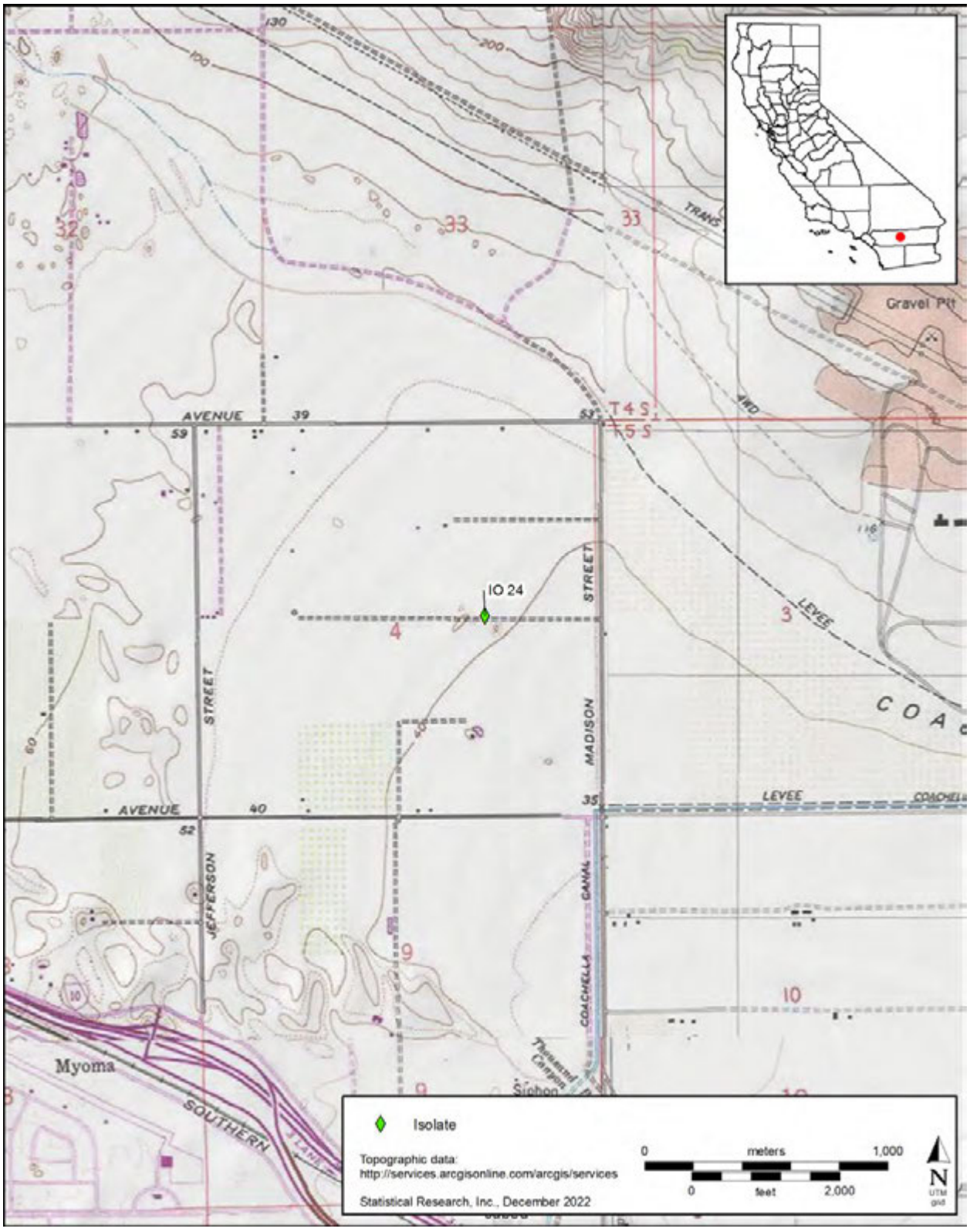
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 24

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 31

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568700.6537 mE/ 3736067.0021 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of two isolated prehistoric ceramic sherds discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherds are small body sherds with red paste exteriors.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 31, one of the two ceramic sherds, close-up view from above (DSCF1836). 08/07/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/07/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

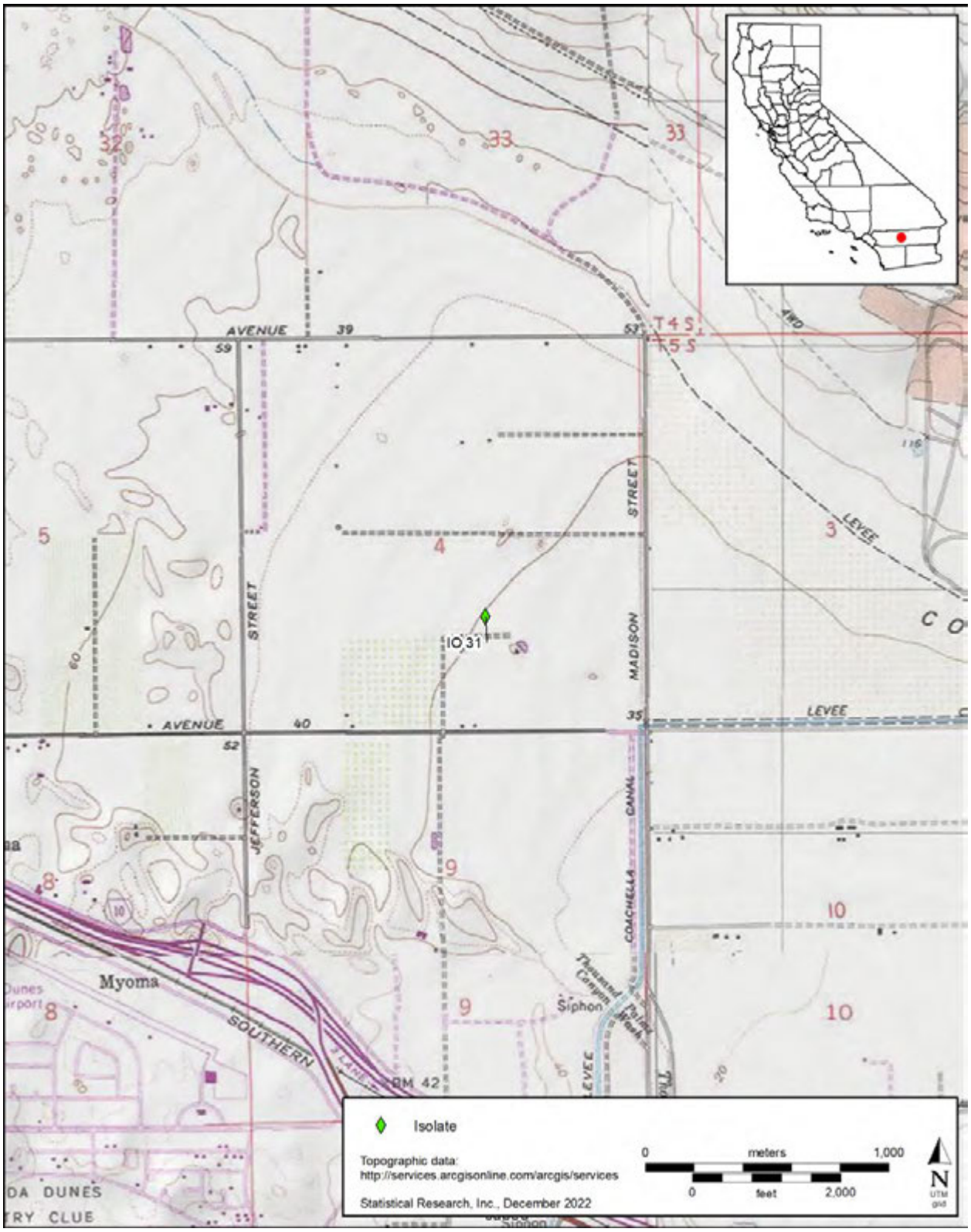
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 31

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 41

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568547.9965 mE/ 3736381.2022 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a rim sherd with a pink exterior and a sandy temper and measures 1.5 cm.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 41, a ceramic sherd, close-up view from above (DSCF1931). 08/11/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/11/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

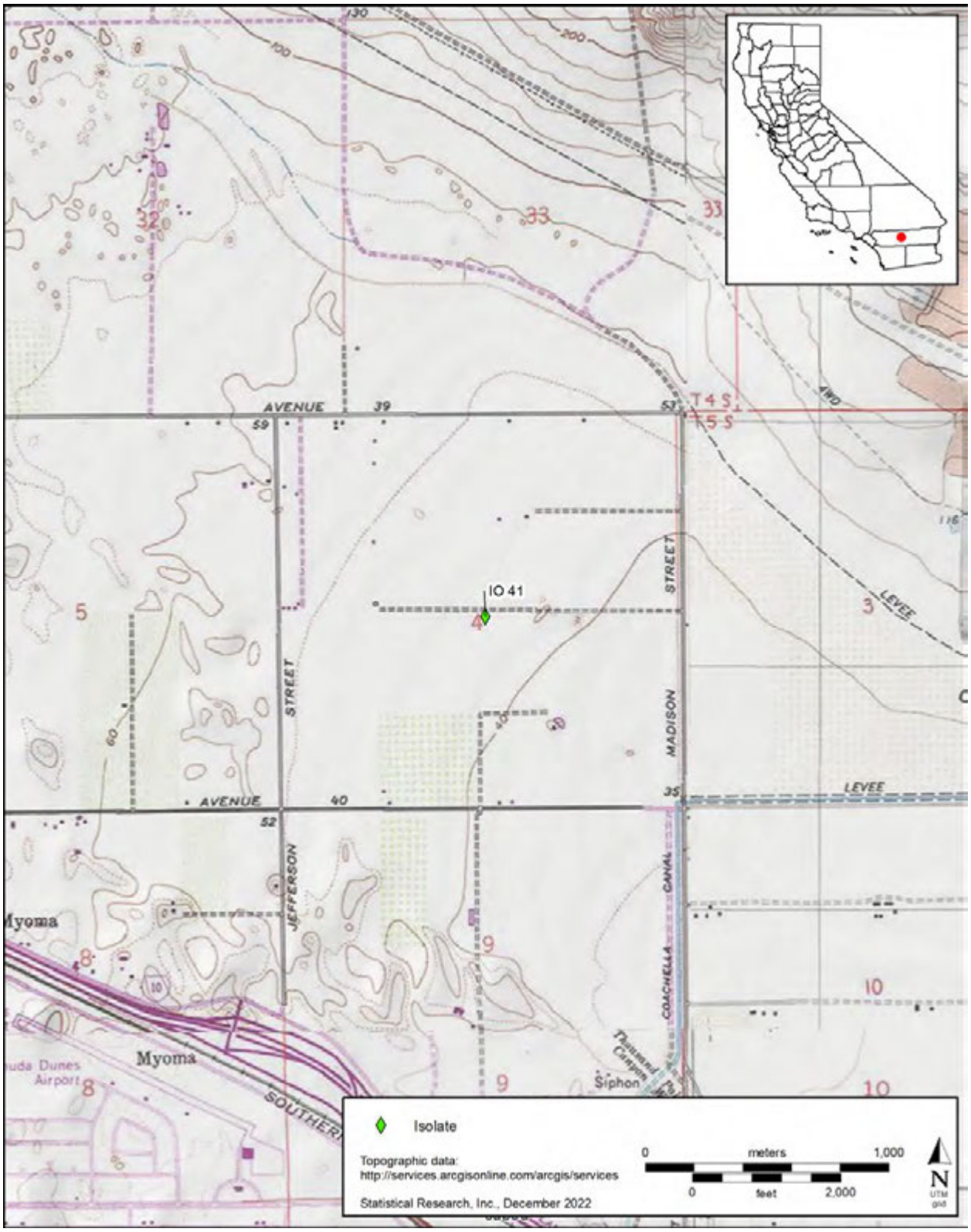
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 41

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 44

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

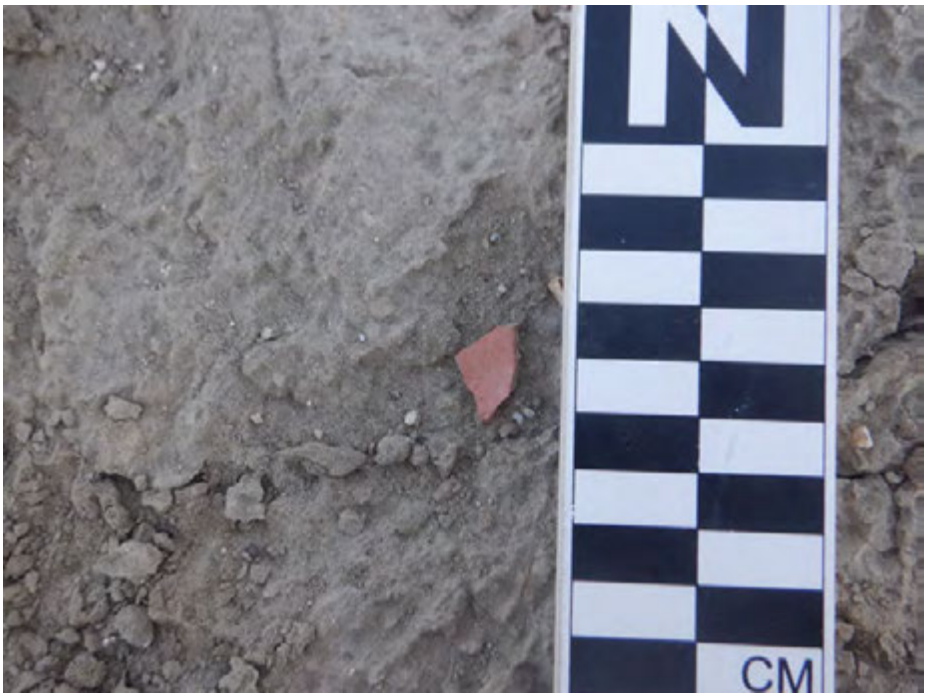
d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568575.3578 mE/ 3736303.5759 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd with an orange interior and exterior, a gray core, and a sandy temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 44, a ceramic sherd, close-up view from above (DSCF1943). 08/11/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/11/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

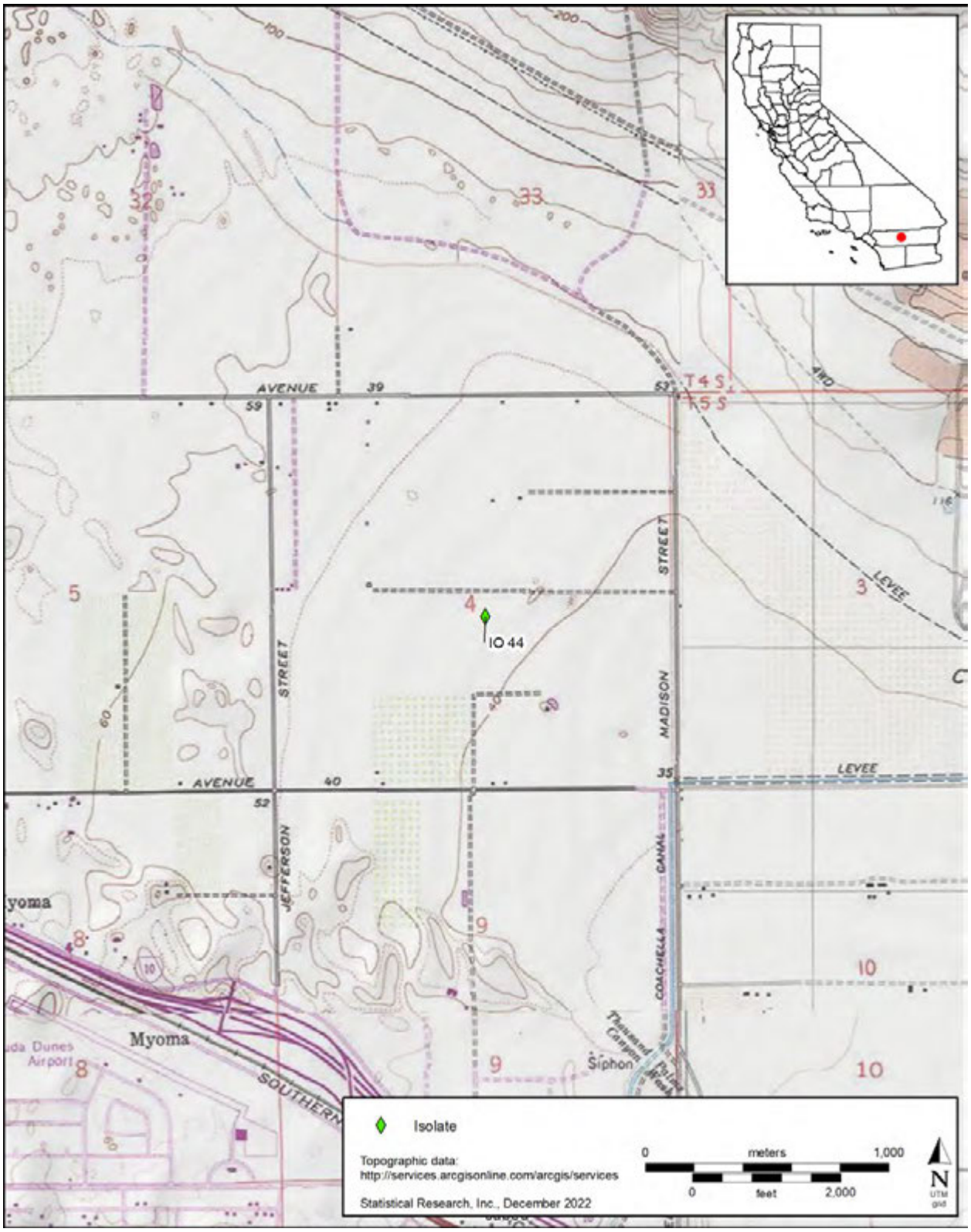
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 44

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 45

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568574.3317 mE/ 3736260.6189 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd with an orange interior and exterior, a gray core, and a sandy temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 45, a ceramic sherd, close-up view from above (DSCF1947). 08/11/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/11/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

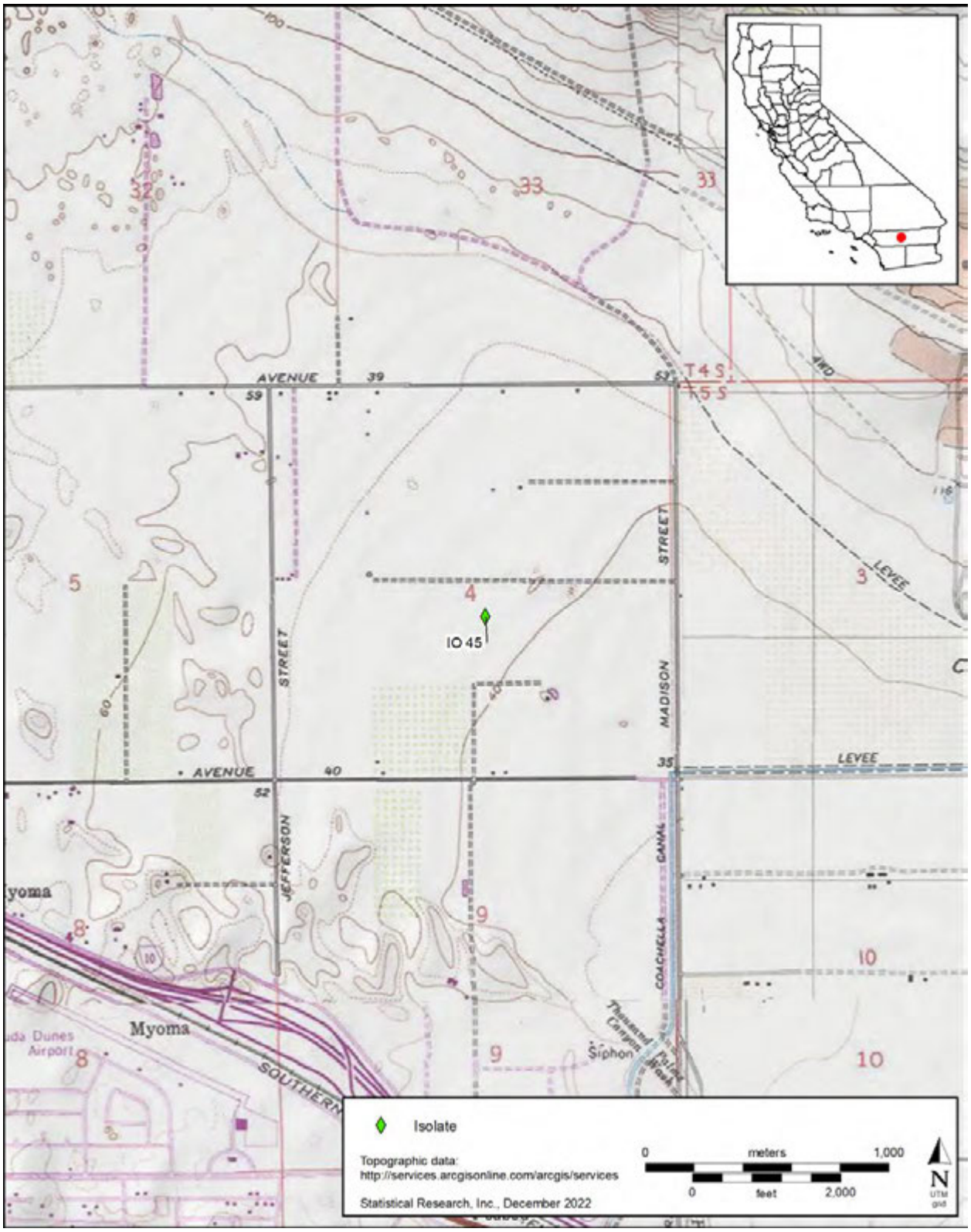
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 45

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 331

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568605.3905 mE/ 3736184.2434 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of two isolated prehistoric ceramic sherds discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherds are small body sherds with brown-gray exteriors, darker interiors, and medium-coarse quartz tempers.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 331, ceramic sherds, close-up view from above (DSCF2389). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

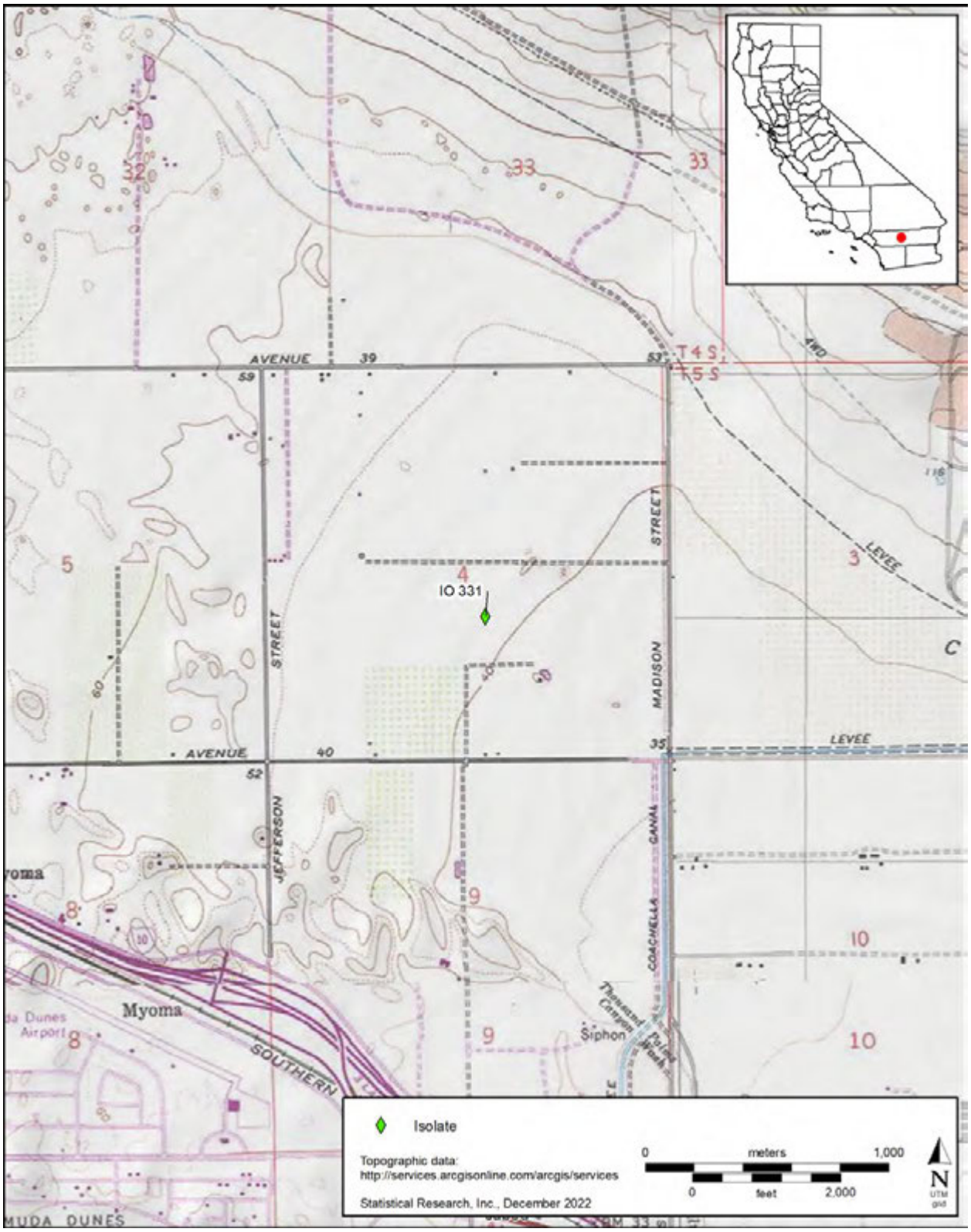
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 331

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 332

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568605.8627 mE/ 3736201.3874 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of two isolated prehistoric marine shells discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The shells are white and have concentric ridges.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 332, marine shells, close-up view from above (DSCF2390). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

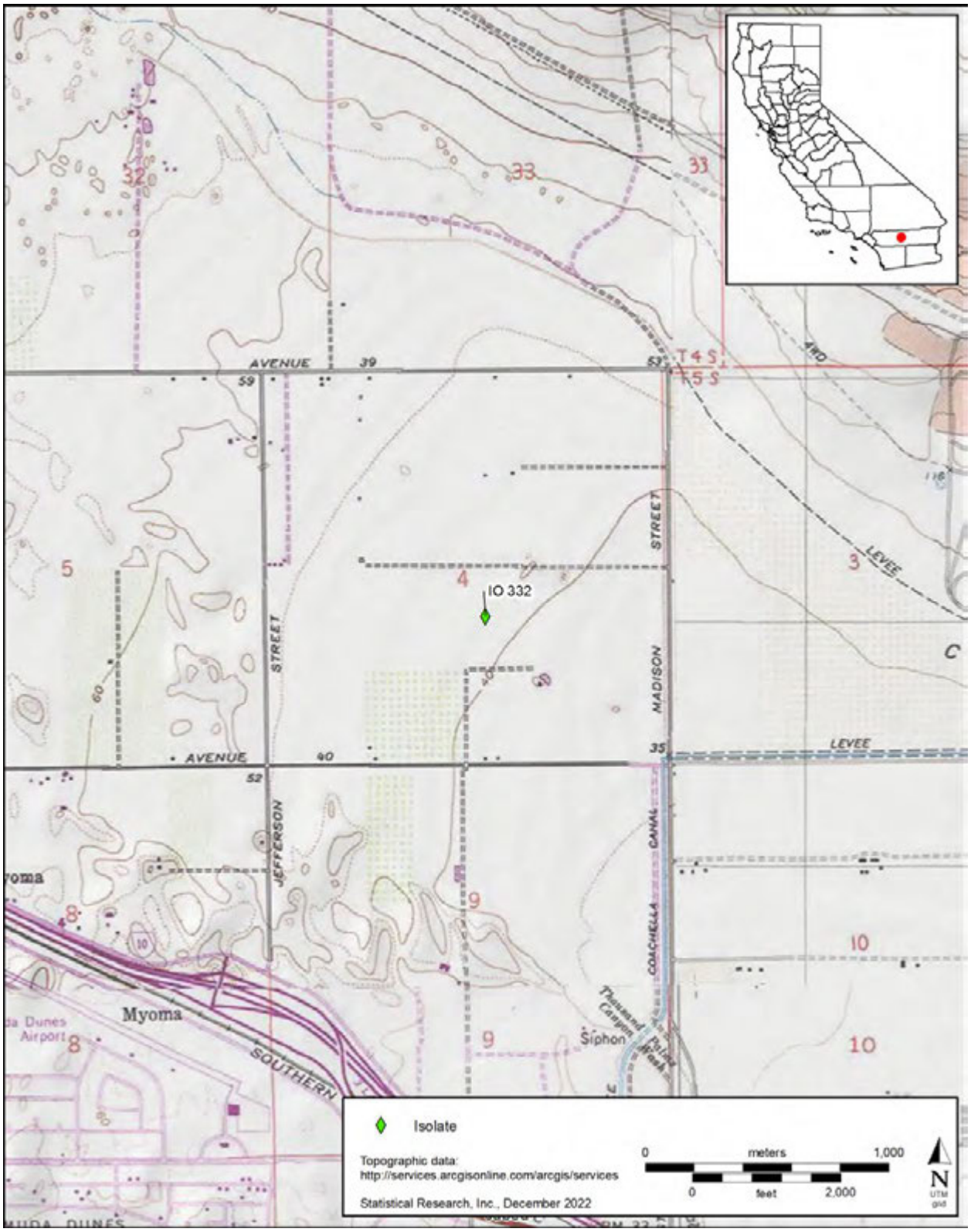
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 332

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 333

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568615.1899 mE/ 3736267.6124 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd with gray-brown exterior, a red-brown interior, a buff paste, and a fine to medium granite and quartz temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 333, ceramic sherds, close-up view from above (DSCF2394). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

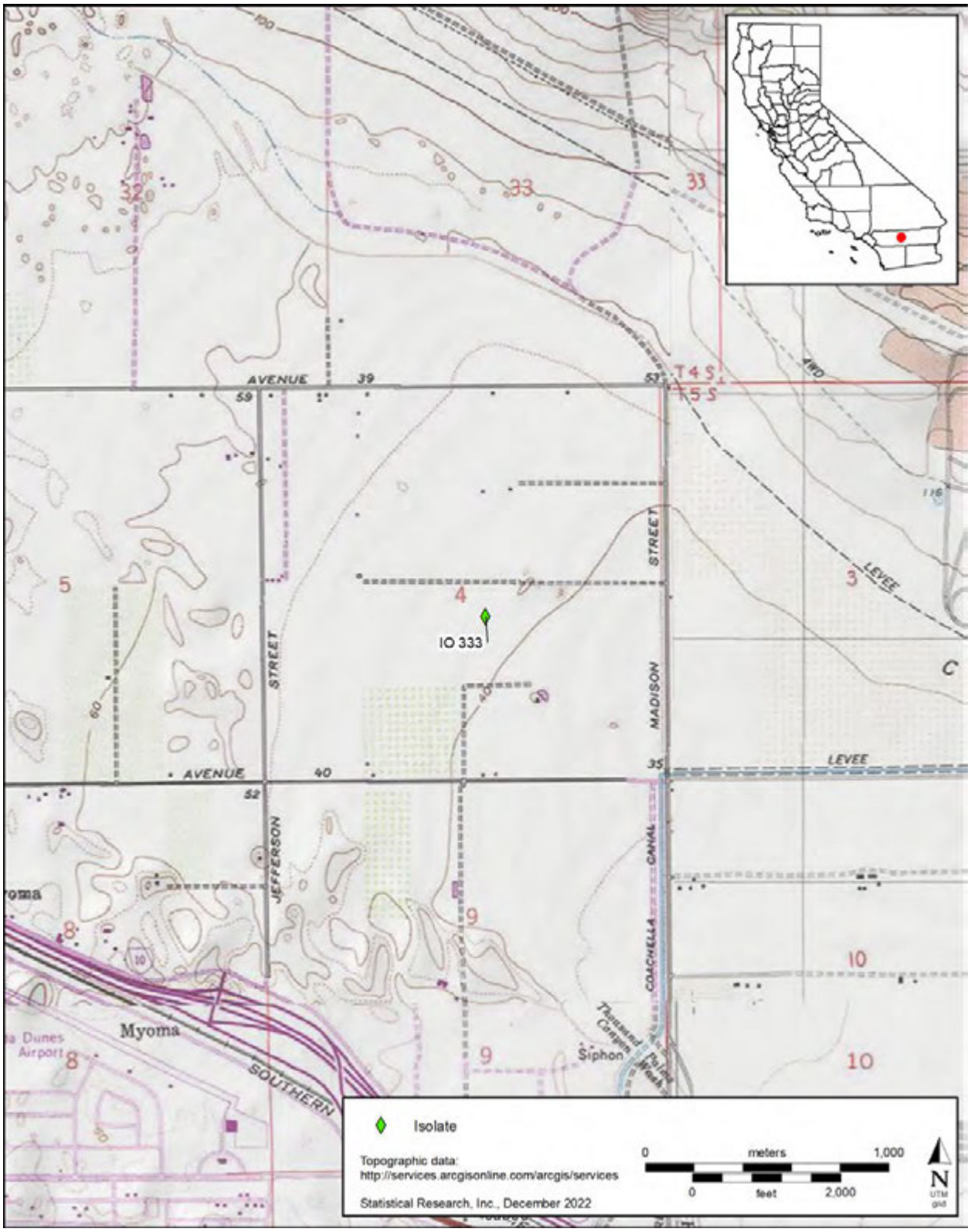
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 333

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 334

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568567.8884 mE/ 3735889.8483 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd with red-orange paste and surfaces and fine to medium quartz temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 334, a ceramic sherd, close-up view from above (DSCF2398). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

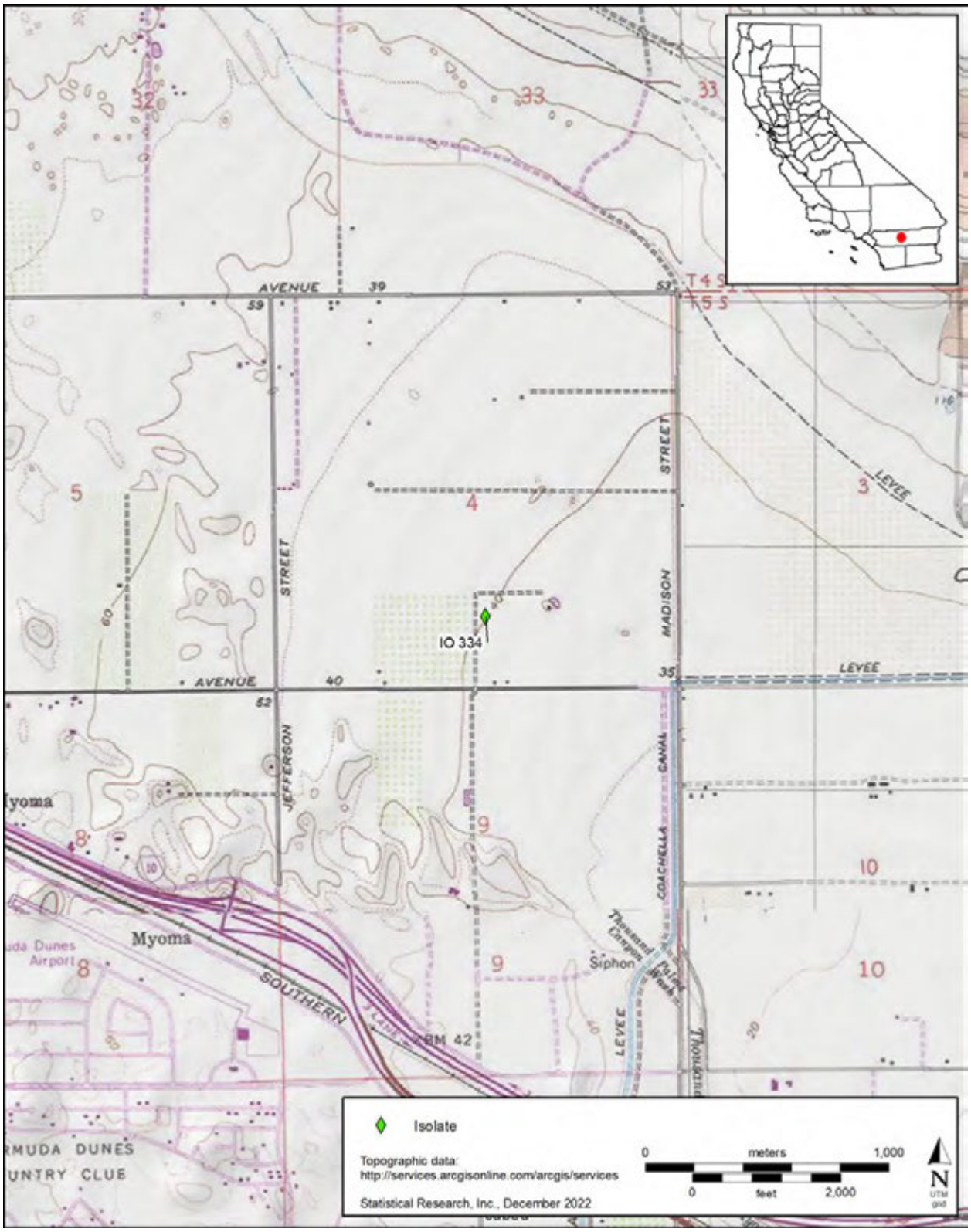
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 334

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 335

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568549.6054 mE/ 3735934.3618 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric faunal bone discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The bone is fragmented, burned, and likely from a large mammal.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 335, a faunal bone close-up view from above (DSCF2402). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

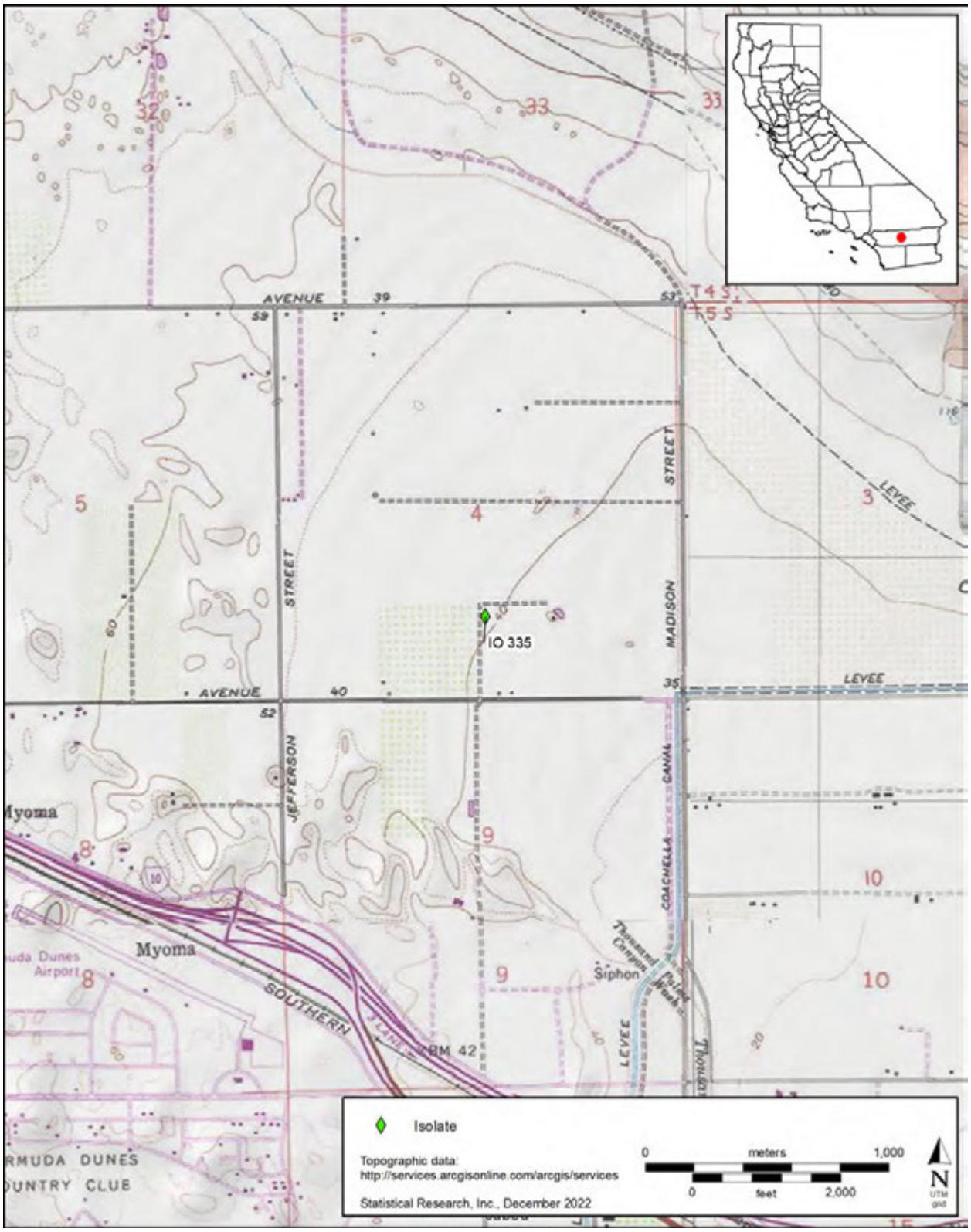
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 335

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 336

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** NE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568610.7961 mE/ 3735999.4556 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a body sherd with a buff-gray exterior, a red-buff interior, and fine to medium quartz temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) Isolate

P5b. Description of Photo (view, date, accession #):

IO 336, a ceramic sherd close-up view from above (DSCF2405). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

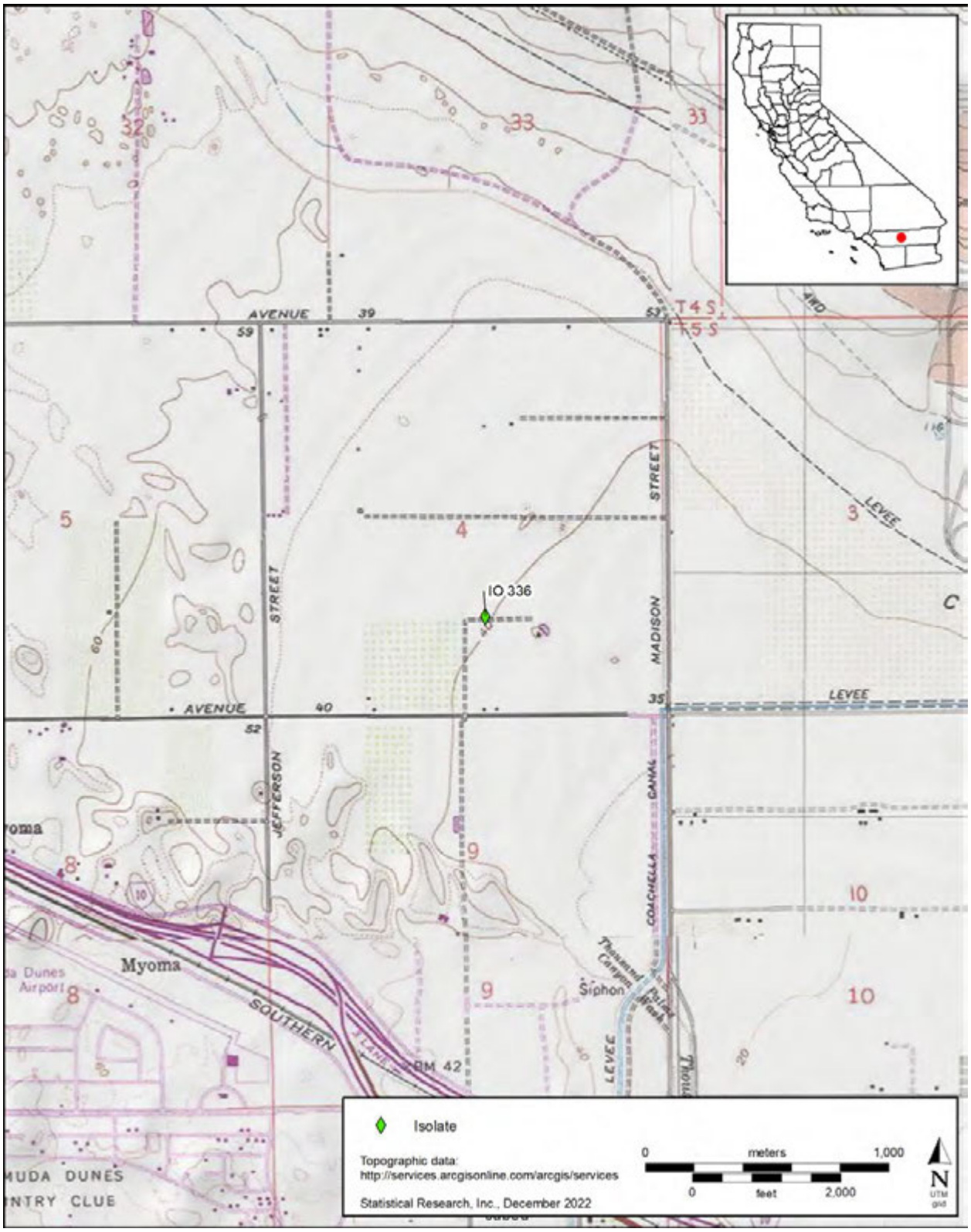
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

***Resource Name or #:** (Assigned by recorder) IO 336

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 337

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568641.2638 mE/ 3735954.6935 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric faunal bone discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The bone is fragmented, burned, and likely from a large mammal.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 337, a faunal bone close-up view from above (DSCF2402). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ■ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded: 09/01/2022**

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

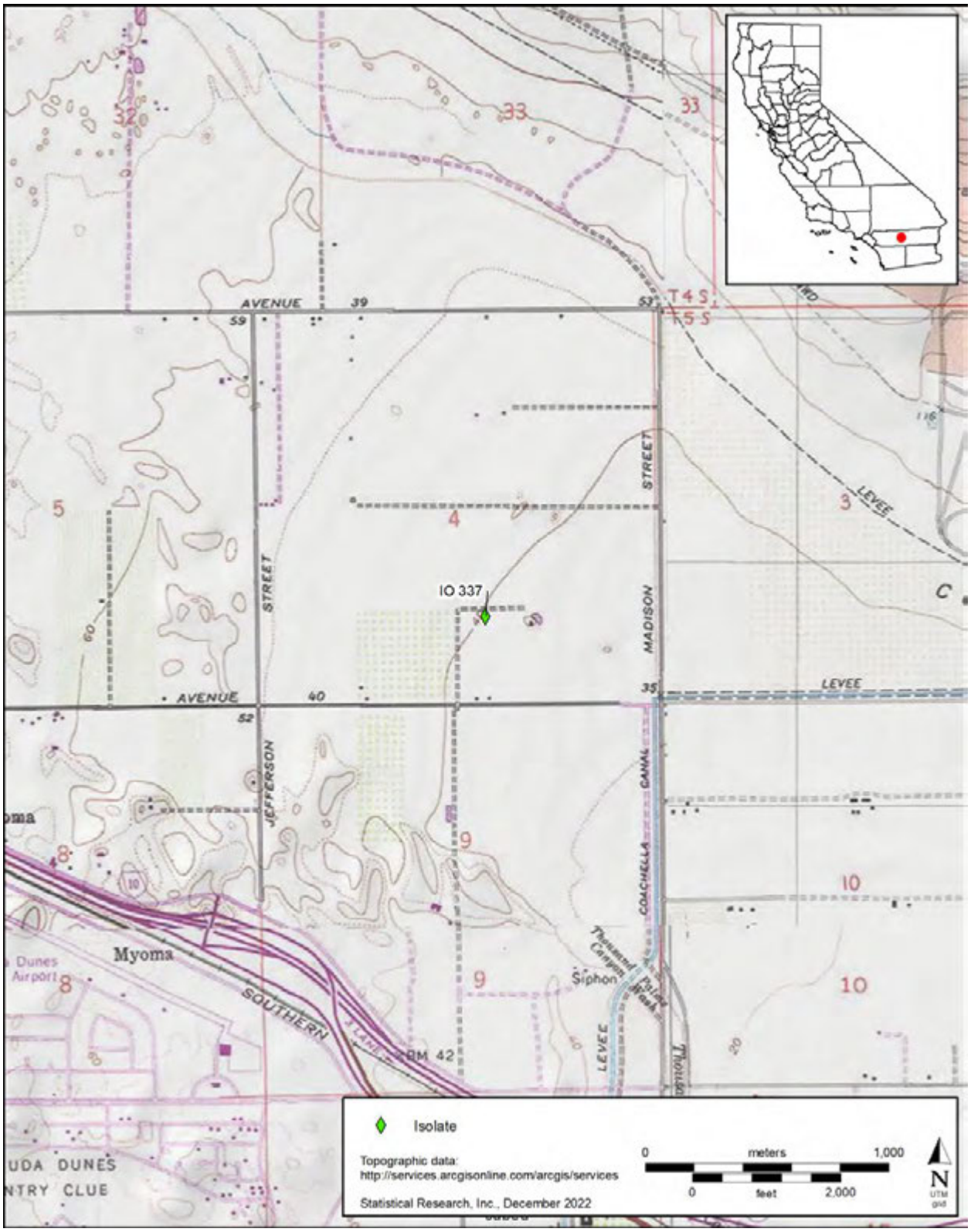
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 337

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 338

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568640.1411 mE/ 3735932.9859 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small, weathered body sherd with a buff-colored interior and exterior, red-orange paste, and fine to medium quartz and granite temper.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 338, a ceramic sherd close-up view from above (DSCF2411). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

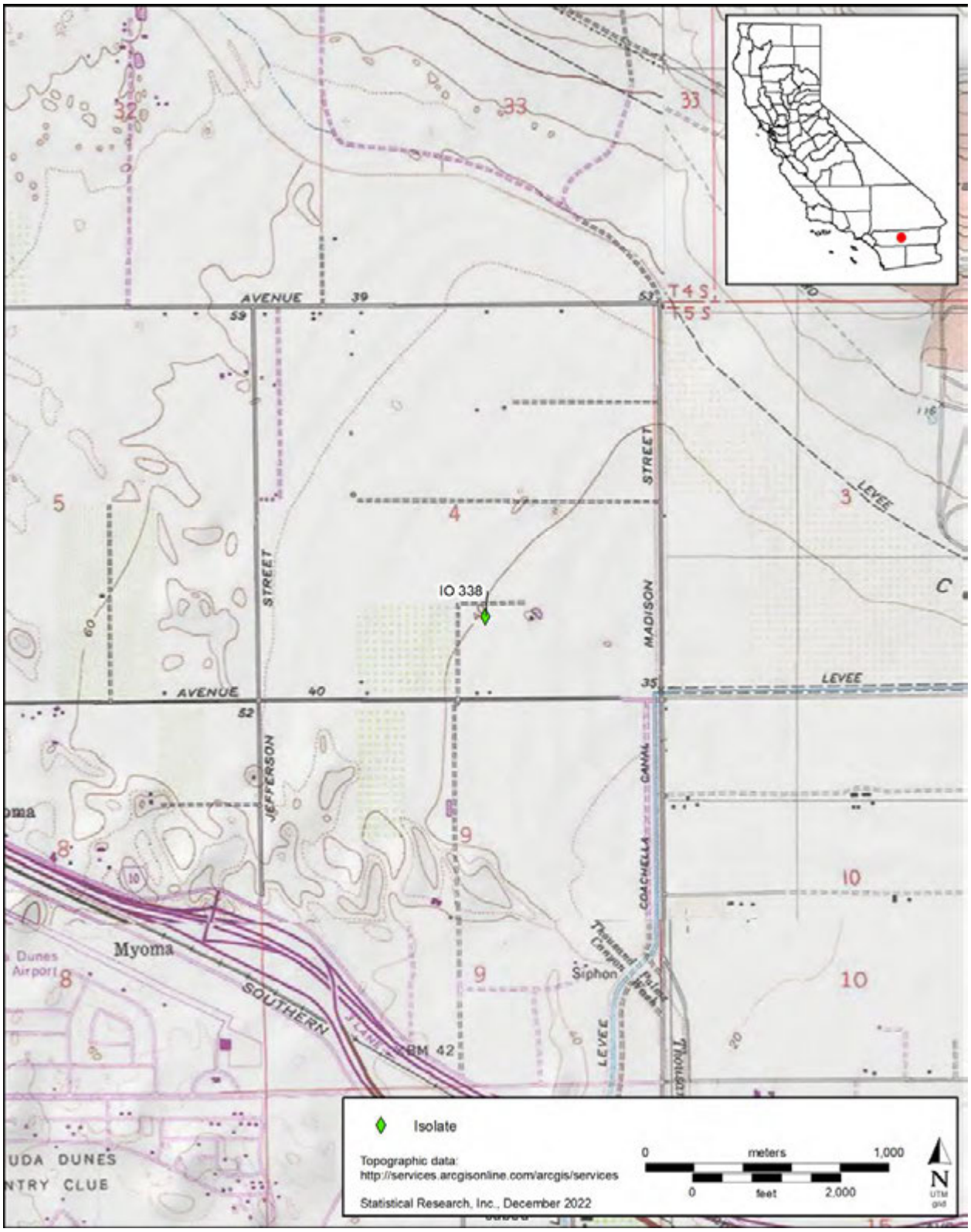
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 338

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 774

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 569249.5392 mE/ 3735748.0482 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The isolate is a small brown ware ceramic body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

N/A

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

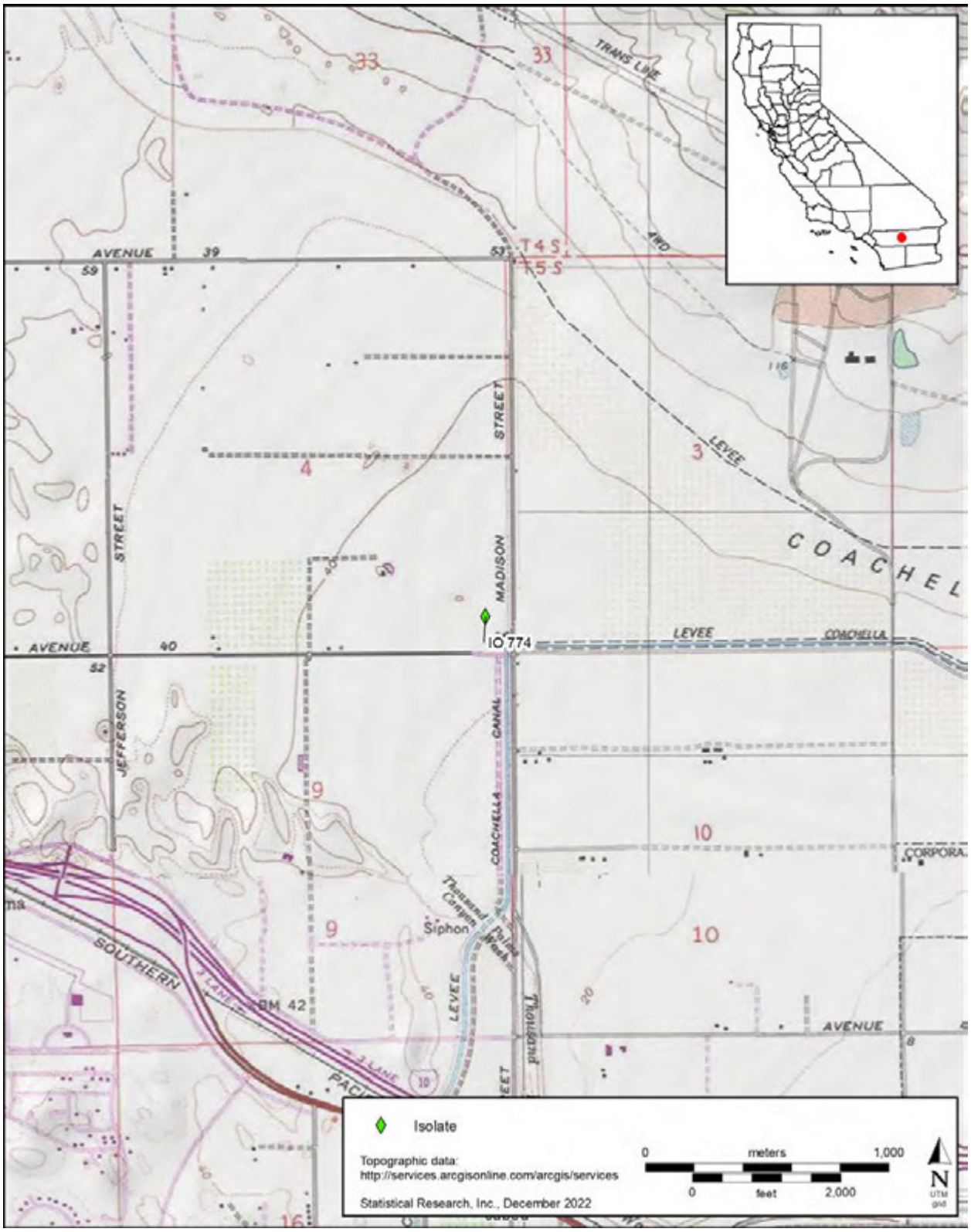
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 774

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 775

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568714.4048 mE/ 3736404.2054 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric marine shell discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. This small, scalloped marine-mollusk-shell fragment was unmodified.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AP 16. Isolate

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):
N/A

***P6. Date Constructed/Age and Source:**
☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**
private

***P8. Recorded by** (Name, affiliation, and address):
Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):
intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

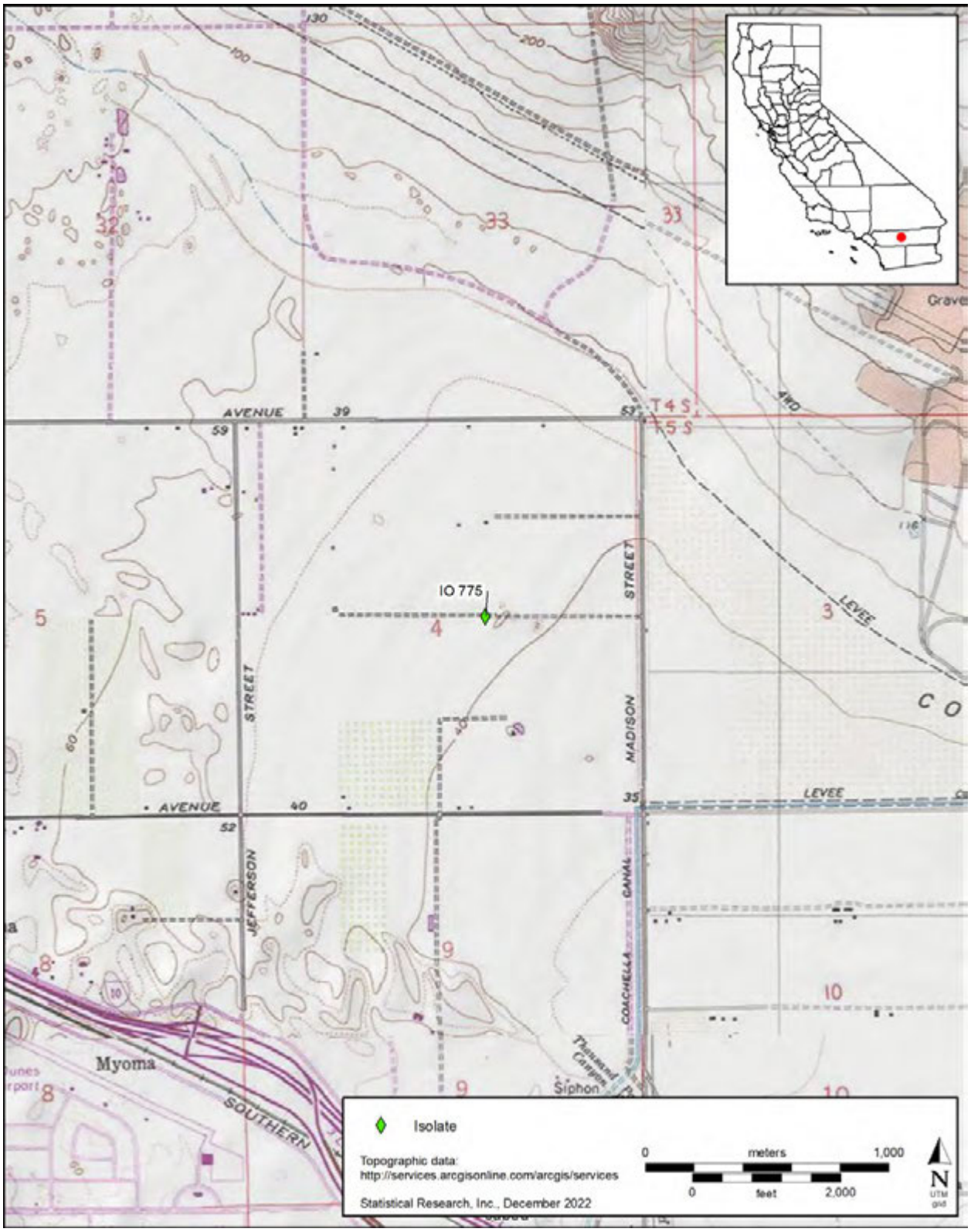
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 775

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 777

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568644.0907 mE/ 3736418.1848 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The indeterminate ceramic body sherd was found in a disturbed surface context next to the dirt road north of site SRI 776.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

N/A

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/24/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

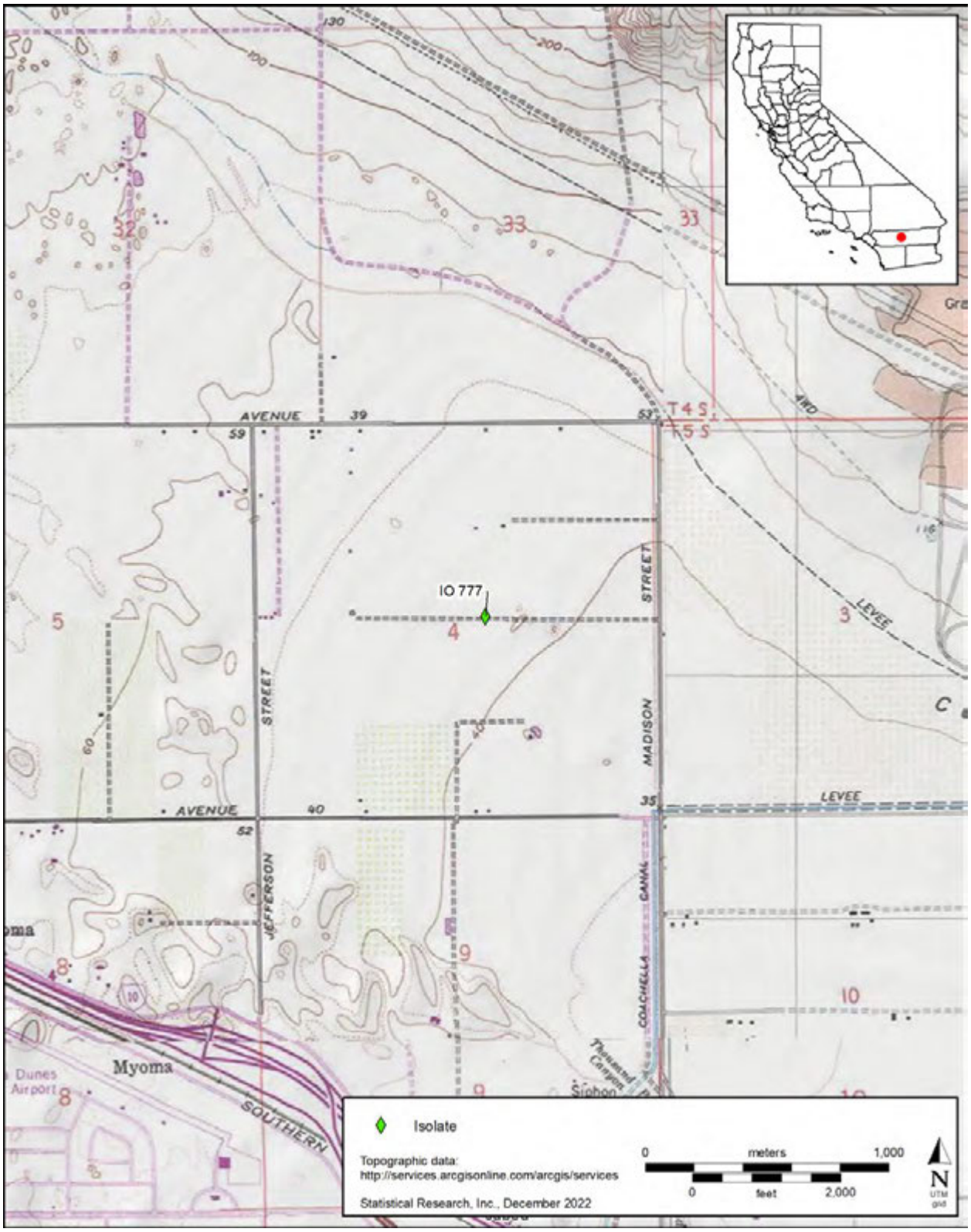
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 777

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 778

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568644.7906 mE/ 3736268.359 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic body sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd measures approximately 1 by 1 cm and is of an indeterminate ceramic type; it was collected.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):
AP 16. Isolate

***P4. Resources Present:**
☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):
N/A

***P6. Date Constructed/Age and Source:**
☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**
private

***P8. Recorded by** (Name, affiliation, and address):
Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 08/31/2022

***P10. Survey Type** (Describe):
intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

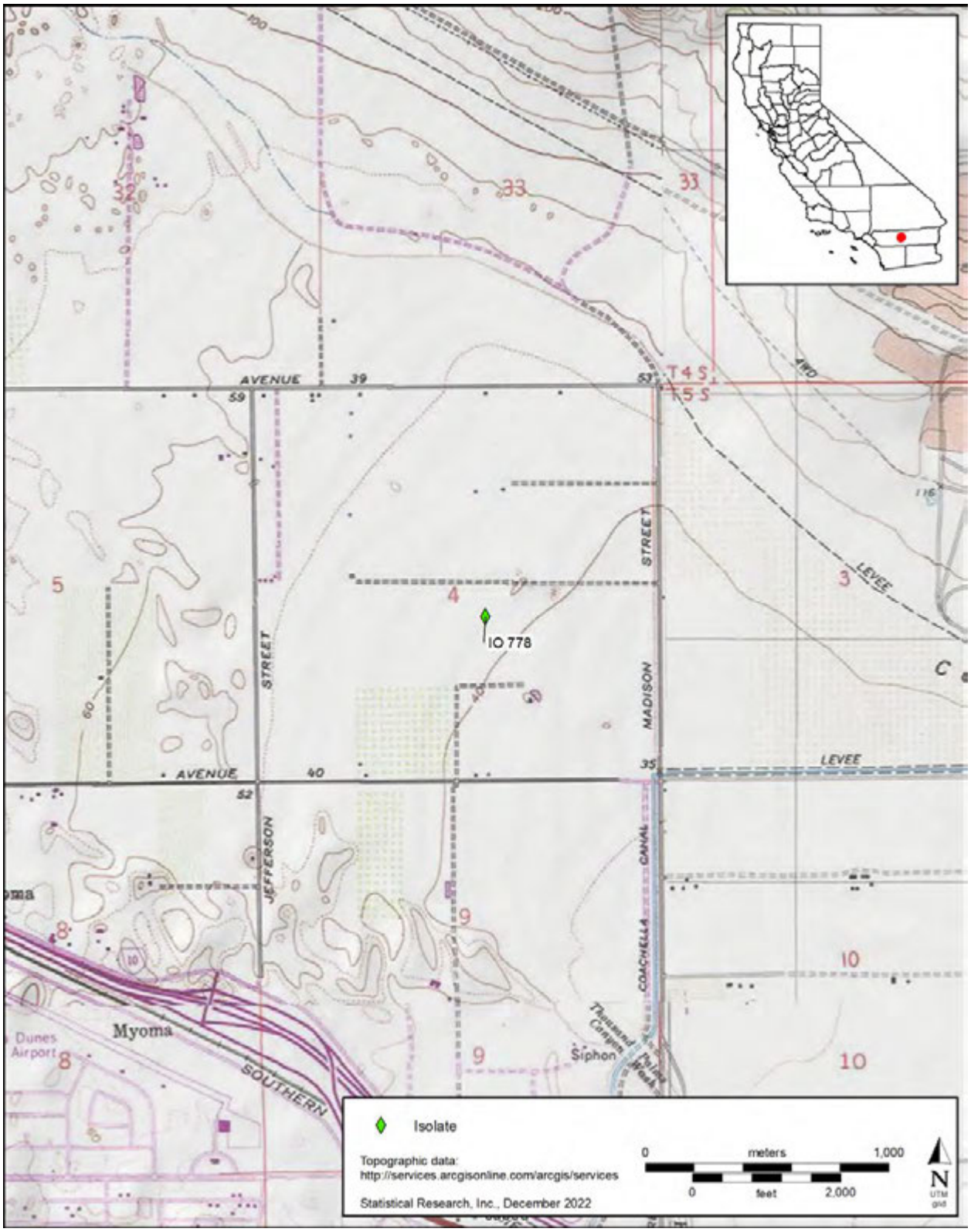
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 778

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 779

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568847.2656 mE/ 3736181.3135 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic body sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The buff ware body sherd measures approximately 4.0 by 2.5 cm and has a slightly red paste. It was collected.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 779, a ceramic sherd close-up view from above (DSCF2591). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

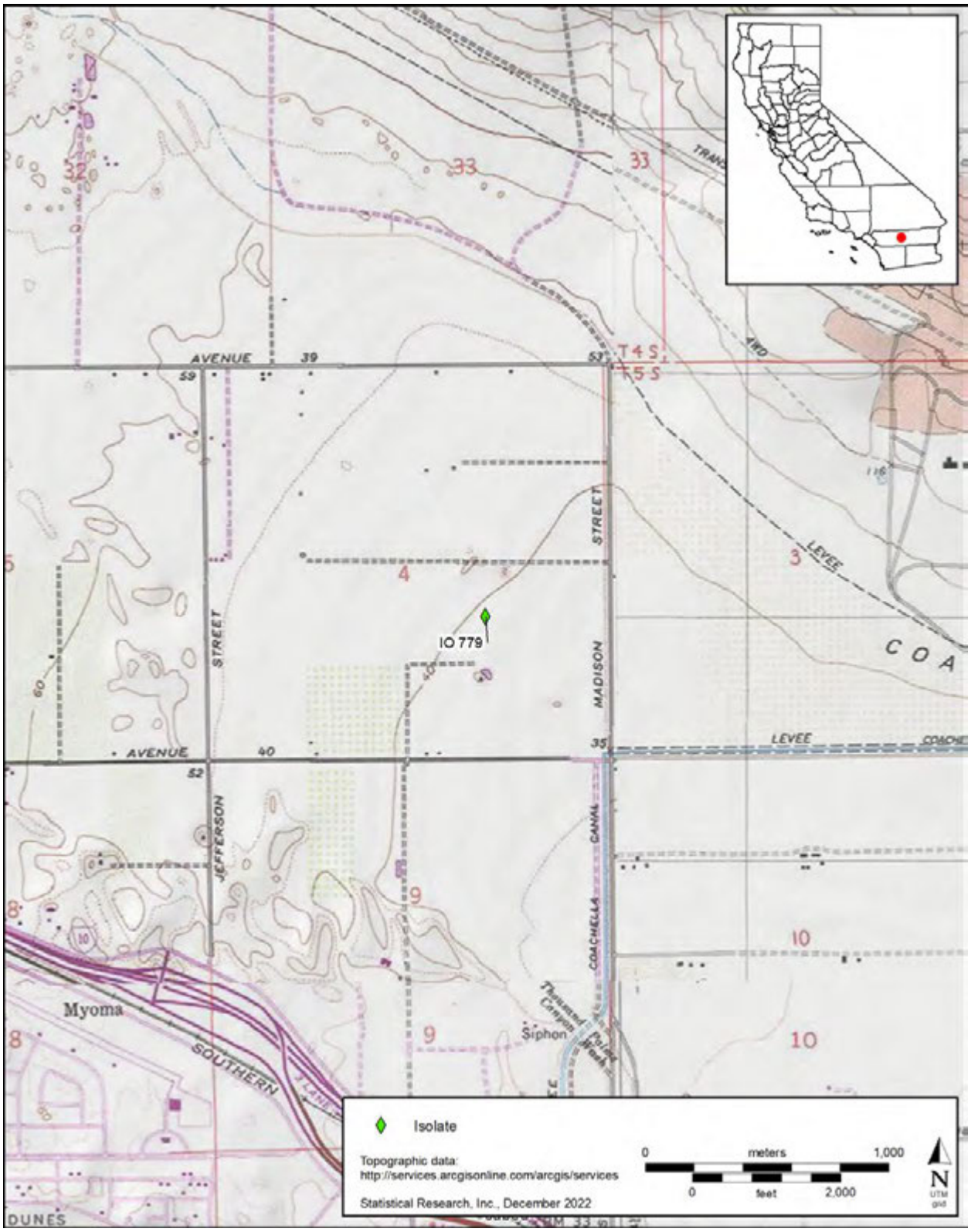
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 779

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 780

P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; NW ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568847.9615 mE/ 3736170.9926 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The brown ware ceramic body sherd has a reddish paste with coarse quartz temper. The sherd was collected.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 780. a ceramic sherd close-up view from above (DSCF2569). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

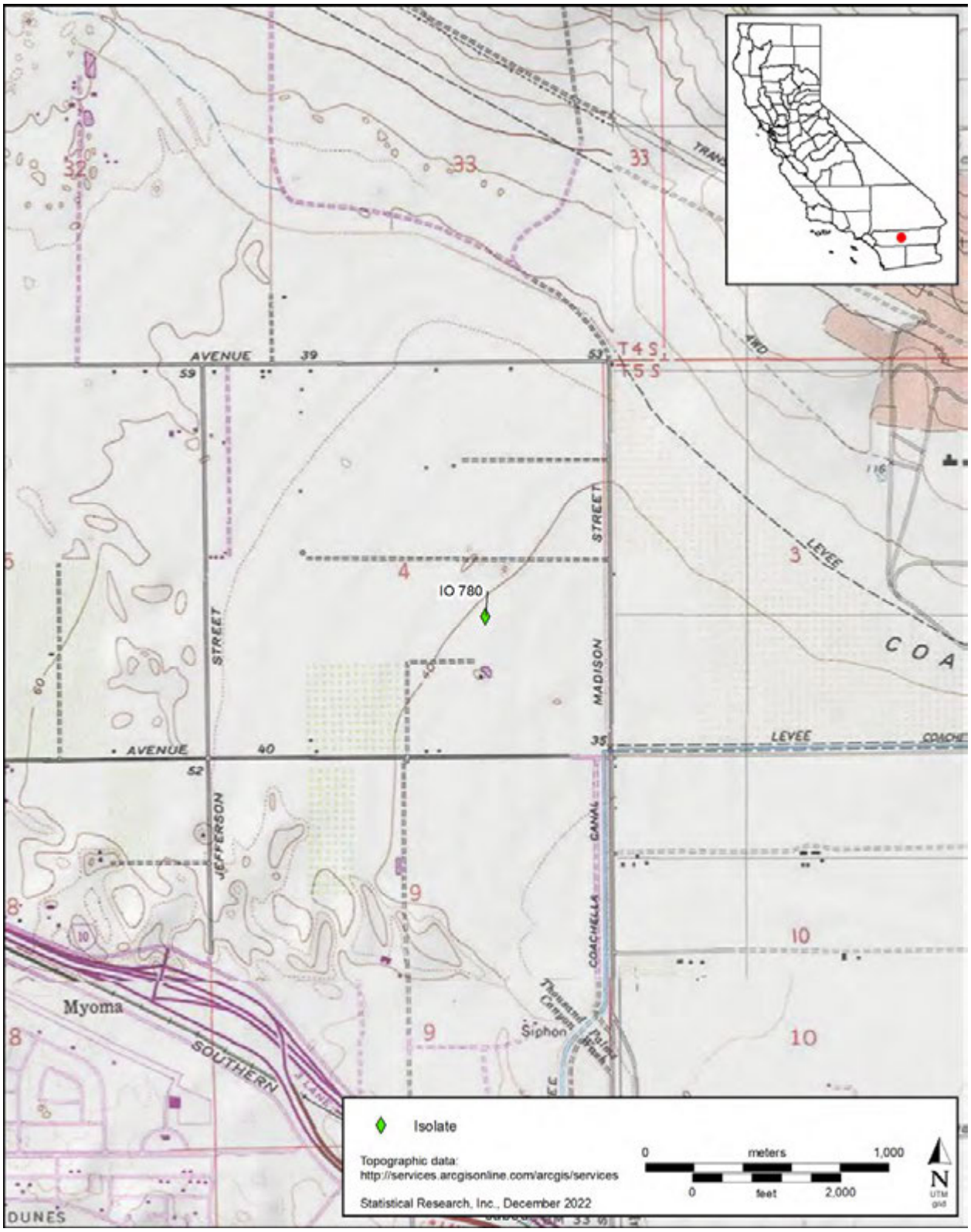
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 780

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 781

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568917.446 mE/ 3736024.671 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of four isolated prehistoric ceramic sherds discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherds are small brown ware body sherds likely associated with a pot drop.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 781, ceramic sherds, close-up view from above (DSCF1664). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
2022 *Desert Retreat Specific Plan Cultural Resource and Paleontological Study, Indio, Riverside County, California*. Technical Report 22-104. Statistical Research, Redlands, California.

***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

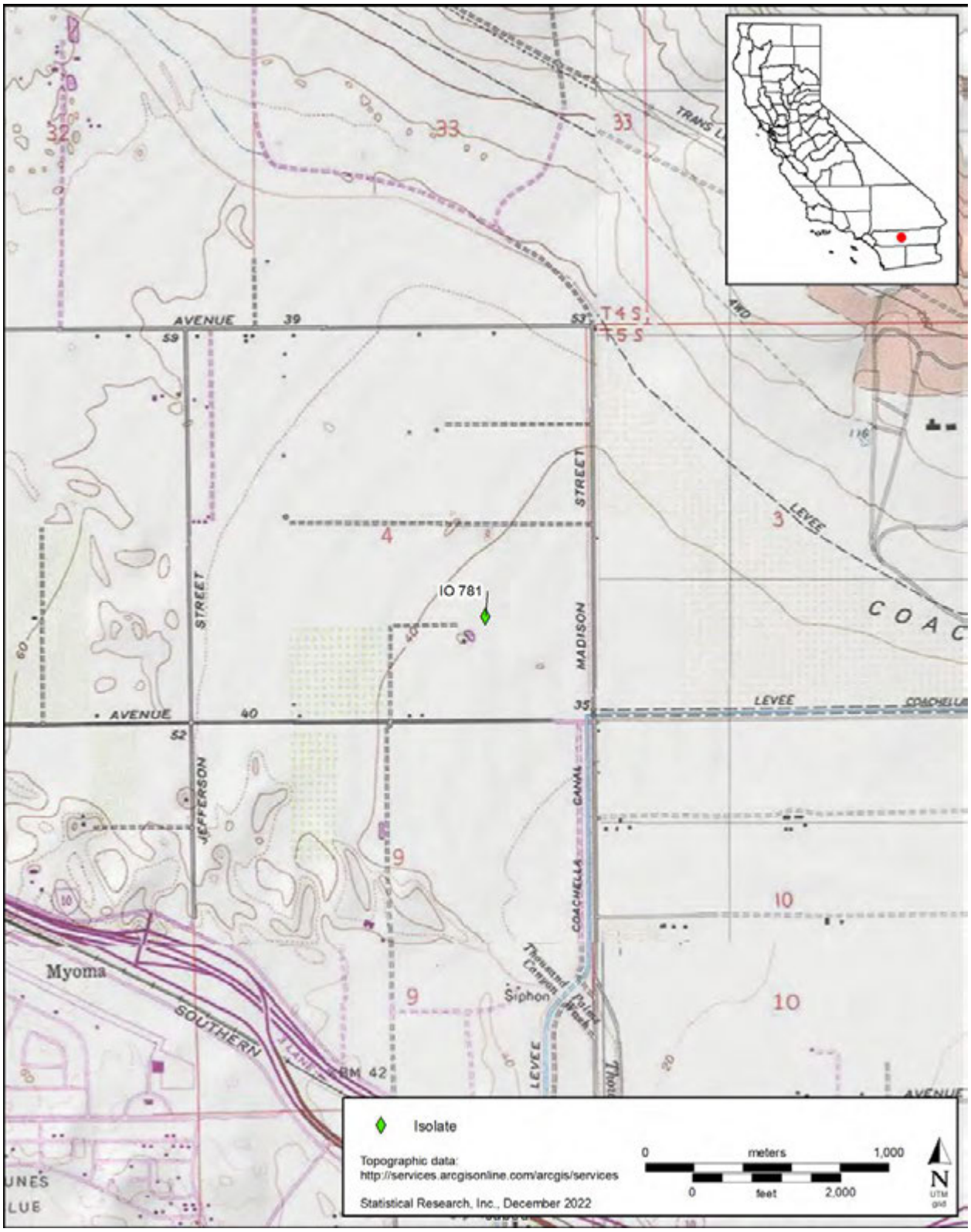
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 781

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #** (Assigned by recorder): IO 782

.P1. Other Identifier: _____

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted**

***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Myoma **Date** 2012 **T** 5S ; **R** 7E ; SE ¼ **of** SE ¼ of **Sec** 4 ; S.B. **B.M.**

c. Address private City Indio Zip 92203

d. UTM (Give more than one for large and/or linear resources): Zone 11N , 568919.9774 mE/ 3736013.0442 mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

This resource consists of an isolated prehistoric ceramic sherd discovered on the ground surface within an agricultural field during a survey associated with the Desert Retreat Specific Plan project. The sherd is a small body sherd.

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

***P3b. Resource Attributes** (List attributes and codes):

AP 16. Isolate

***P4. Resources Present:**

☐ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
■ Other (Isolates, etc.) isolate

P5b. Description of Photo (view, date, accession #):

IO 782, a ceramic sherd close-up view from above (DSCF1662). 09/01/2022

***P6. Date Constructed/Age and Source:**

☐ Historic ☑ Prehistoric ☐ Both

***P7. Owner and Address:**

private

***P8. Recorded by** (Name, affiliation, and address):

Luke Burnor and Bethany Greene
Statistical Research, Inc.
617 Texas Street
Redlands, CA 92374

***P9. Date Recorded:** 09/01/2022

***P10. Survey Type** (Describe):

intensive pedestrian survey

***P11. Report Citation** (Cite survey report and other sources, or enter "none."):

Stanton, Patrick B., Felicia V. De Peña, and Joseph El-Adli
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***Attachments:** ☐ NONE ■ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

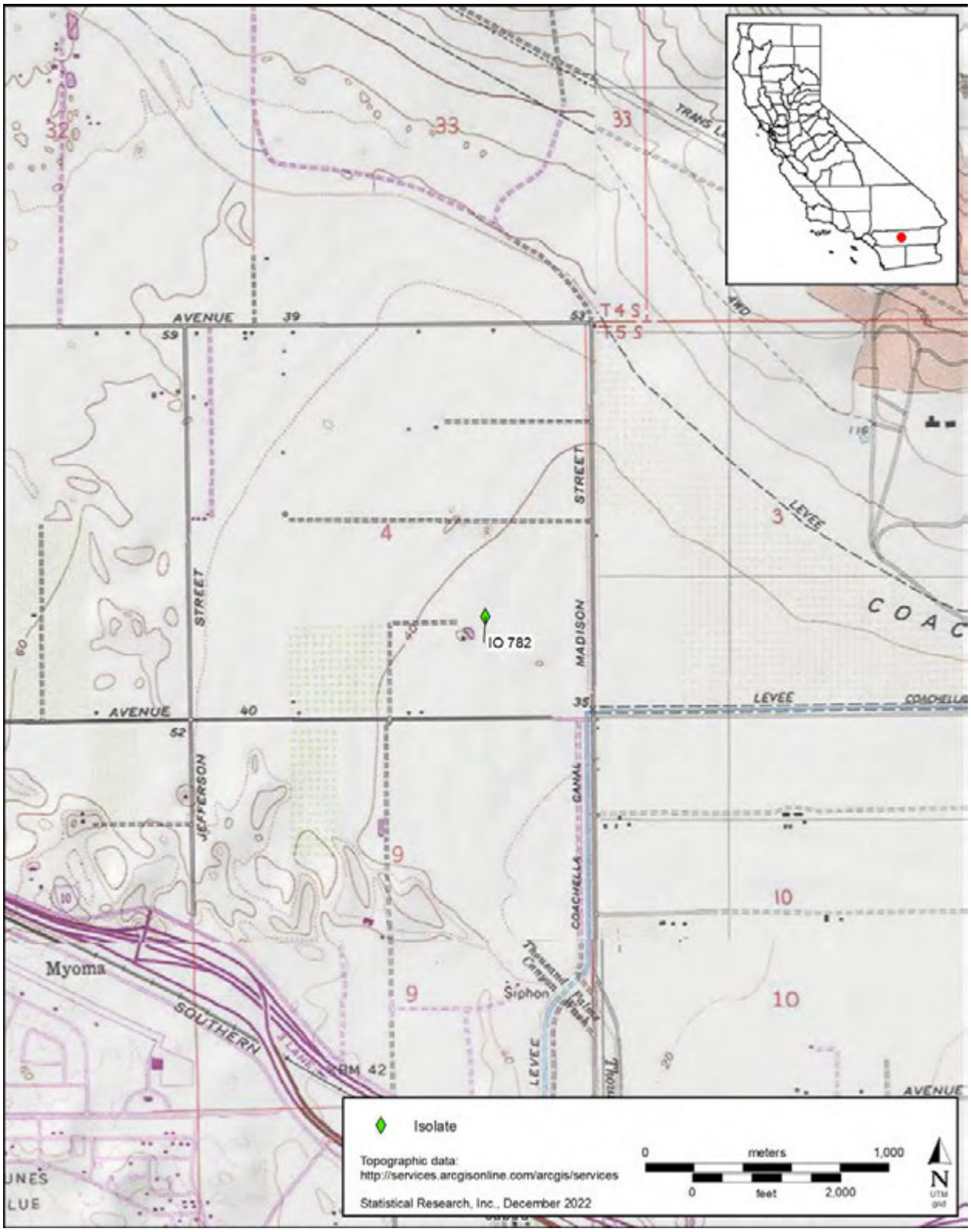
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 2 **of** 2 ***Resource Name or #:** (Assigned by recorder) IO 782

***Map Name:** Myoma, CA, 7.5-minute USGS quadrangle ***Scale:** 1:24,000 ***Date of map:** 2012



Paleontological-Records-Search Results

WESTERN SCIENCE CENTER

Statistical Research, Inc.
Joseph El Adli
617 Texas St.
Redlands, CA 92374

August 25, 2021

Dear Mr. El Adli,

This letter presents the results of a record search conducted for Statistical Research, Inc. Debonne Property Due Diligence Assessment Project (21PH01) in the City of Indio, Riverside County, California. The project site is located in Section 4 of Township 5 South and Range 7 East.

The geologic unit underlying the project area is mapped entirely as Quaternary alluvium dating to the Pliocene-Holocene, with a small area of Quaternary sand deposits within the one-mile radius of the project area. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. One of these, WSC Locality 195, is approximately three miles east of the project area and produced a limited flora and fauna, including several different rodents and lizards. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (*Mammuthus columbi*), Pacific mastodon (*Mammut pacificus*), sabertooth cat (*Smilodon fatalis*), ancient horse (*Equus* sp.), and many other Pleistocene megafauna.

Any fossils recovered from the Debonne Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Quaternary alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

If you have any questions, or would like further information, please feel free to contact me at amcdonald@westerncentermuseum.org

Sincerely,

Andrew McDonald
Curator

APPENDIX G

Energy Data

Table 1. Summary of Energy Use During Construction		
Fuel Type	**Quantity**	
Diesel		
Off-Road Construction Equipment	1,297,268	Gallons
On-Road Motor Vehicles	329,227	Gallons
Total	1,626,495	Gallons
Gasoline		
Off-Road Construction Equipment	0	Gallons
On-Road Motor Vehicles	149,059	Gallons
Total	149,059	Gallons
Total Transportation	**1,775,555**	**Gallons**
Electricity		
Total	80,342.1	kWh

Table 2. Summary of Annual Energy Use During Operation		
Source	**Units**	**Buildout**
Electricity		
Residences	kWh/yr	6,377,330
Water Conveyance	kWh/yr	1,660,810
Total Electricty	***kWh/yr***	***8,038,140***
Natural Gas		
Residences	kBTU/yr	22,688,900
Total Natural Gas	***kBTU/yr***	***22,688,900***
Transportation/On-Site Sources		
Diesel	gallons	199,566
Gasoline	gallons	443,782
Total	***gallons***	***643,348***

Table 3. Water by Land Use				
Land Use	**Units**	**Indoor/Outdoor Use**	**Indoor Use**	**Outdoor Use**
Buildout	Mgal	78.1848 / 57.8547	78.1848	57.8547

Water and Wastewater Electricity Intensity (kWh/gallon)

Supply Water	0.009727
Treat Water	0.000111
Distribute Water	0.001272
Wastewater Treatment	0.001911

Source: CalEEMod User's Guide, Appendix D, Table 9.2 Riverside

Indoor Water Factor	0.013021	kWh/gallon (supply, treat, distribute, wastewater treatment)
Outdoor Water Factor	0.01111	kWh/gallon (supply, treat, and distribute)

Notes:

Electricity and Natural Gas for the Proposed Project is total operational usage.
Electricity, natural gas, and mobile usage was calculated from CalEEMod. Indoor water factor used for entire Project Site for conservative analysis.

Table 4. Off-Road Equipment Fuel Usage During Construction							
Phase Name	Off-road Equipment Type	Amount	Hours per Day	Horsepower	Load Factor	Number of Days	Diesel Fuel Usage (Gallons per Project)
Mass Grading	Graders	3	8	187	0.41	131	12053
Mass Grading	Off-Highway Trucks	4	8	402	0.38	131	32018
Mass Grading	Pumps	1	8	84	0.74	131	3257
Mass Grading	Rubber Tired Dozers	3	8	247	0.4	131	15531
Mass Grading	Scrapers	15	8	367	0.48	131	138462
Mass Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	131	5642
Street Improvements	Pavers	2	8	130	0.42	131	5722
Street Improvements	Paving Equipment	2	8	132	0.36	131	4980
Street Improvements	Rollers	2	8	80	0.38	131	3186
Precise Grading	Dumpers/Tenders	5	8	16	0.38	1847	22460
Precise Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	1847	53031
Building Construction	Air Compressors	3	8	78	0.48	1847	82982
Building Construction	Cement and Mortar Mixers	5	8	9	0.56	1847	18618
Building Construction	Forklifts	2	8	89	0.2	1847	26301
Building Construction	Generator Sets	2	8	84	0.74	1847	91848
Building Construction	Off-Highway Trucks	2	8	402	0.38	1847	225718
On-Site Paving	Cement and Mortar Mixers	5	8	9	0.56	1847	18618
On-Site Paving	Graders	2	8	187	0.41	1847	113288
On-Site Paving	Off-Highway Trucks	2	8	402	0.38	1847	225718
On-Site Paving	Paving Equipment	1	8	132	0.36	1847	35108
On-Site Paving	Plate Compactors	1	8	8	0.43	1847	2541
On-Site Paving	Rollers	2	8	80	0.38	1847	44919
On-Site Paving	Tractors/Loaders/Backhoes	2	8	97	0.37	1847	53031
Finishings	Air Compressors	3	6	78	0.48	1847	62237
						Total	**1,297,268**

Table 5. On-Road Vehicle Fuel Usage During Construction														
		Daily Trips		Total			Trip Length (Miles)			Total Length (Miles)			Fuel Consumption (Gallons)	
Phase	Days	Worker	Vendor	Worker Trips	Vendor Trips	Haul Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling	Gasoline	Diesel
Mass Grading	131	30	0	3,930	0	39,300	11	5.4	24	43,230	0	943,200	1,617	154,475
Street Improvements	131	15	0	1,965	0	0	11	5.4	20	21,615	0	0	808	647
Precise Grading	1847	8	0	14,776	0	0	11	5.4	20	162,536	0	0	6,078	4,867
Building Construction	1847	125	20	230,875	36,940	0	11	5.4	20	2,539,625	199,476	0	94,971	108,440
On-Site Paving	1847	25	5	46,175	9,235	0	11	5.4	20	507,925	49,869	0	18,994	23,308
Finishings	1847	35	10	64,645	18,470	0	11	5.4	20	711,095	99,738	0	26,592	37,490
Total	**7650**	**238**	**35**	**362,366**	**64,645**	**39,300**	**n/a**	**n/a**	**n/a**	**3,986,026**	**349,083**	**943,200**	**149,059**	**329,227**

Fuel Efficiency	Gas	DSL
Workers	26.74	33.40
Vendor/Haul Trucks	0	6.16

Notes:

Fuel efficiency calculated in ***Table 7: EMFAC2021 Results - Construction.***

Table 6. EMFAC2021 Results - Construction								
Vehicle Class	Fuel	VMT (miles per day)	Fuel (1,000 gal per day)	Fuel Efficiency (miles per gallon)	Fuel	VMT (miles per day)	Fuel (1,000 gal per day)	Fuel Efficiency (miles per gallon)
LDA	GAS	26,012,016	885.35	29.38	DSL	67,629	1.59	42.60
LDT1	GAS	2,083,796	86.06	24.21	DSL	532	0.02	24.39
LDT2	GAS	11,902,838	496.16	23.99	DSL	11,902,838	496.16	23.99
			Average (LDA, LDT1, LDT2)	**26.74**				**33.40**
T7 Tractor Construction	DSL	468,880	76.15	6.16				

Construction Worker Fleet Mix

LDA	50%
LDT1	25%
LDT2	25%

Vendor and Delivery/Haul Truck Fleet Mix

HHDT	100%

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Riverside
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Riverside	2024	LDA	Aggregate	Aggregate	Gasoline	629406.9139	26012015.9	2933201.6	885.3531448
Riverside	2024	LDA	Aggregate	Aggregate	Diesel	1959.753877	67629.41363	8510.289208	1.587488661
Riverside	2024	LDA	Aggregate	Aggregate	Electricity	27518.77403	1301384.091	138292.8532	0
Riverside	2024	LDT1	Aggregate	Aggregate	Gasoline	56644.68754	2083796.214	245944.4656	86.05742214
Riverside	2024	LDT1	Aggregate	Aggregate	Diesel	27.91479909	531.8512619	80.27526642	0.021802063
Riverside	2024	LDT1	Aggregate	Aggregate	Electricity	84.34216698	3889.811959	418.7034483	0
Riverside	2024	LDT2	Aggregate	Aggregate	Gasoline	277174.2091	11902837.74	1301926.113	496.1591618
Riverside	2024	LDT2	Aggregate	Aggregate	Diesel	899.7266747	40768.10858	4340.043998	1.246726603
Riverside	2024	T7 Tractor Class	Aggregate	Aggregate	Diesel	5935.176178	468879.7627	86238.10987	76.14872038
									1546.574466
									1546574.466

Gas	1467.569729	1467569.729	535662951	564,499,680.25
Diesel	79.00473771	79004.73771	28836729.26	

Table 7. Water Usage for Control of Fugitive Dust During Construction			
Phase Name	**Total Acres**	**Gallons for Project**	**Electricity (kWh)**
Mass Grading	2358	7,121,160	69,267.5
Precise Grading	377	1,138,540	11,074.6
Total	**2735**	**8,259,700**	**80,342.1**

Notes:

Total acres graded based on CalEEMod output sheets.

Water Usage

3,020 gallons per acre

Source: Air & Waste Management Association, Air Pollution Engineering Manual, 1992 Edition

Supply Water Electricity Intensity

0.009727 kWh/gallons (CalEEMod default)

Table 8. On road Vehicles - Operational				
		Fuel Consumption (gal)		
Scenario	Annual VMT	Gasoline	Diesel	Total
Operation	14,293,926	443,782	199,566	**643,348**

Table 9. Fuel Consumption Summary		
Fuel	Fuel Efficiency (MPG)	%Fleet
Gasoline	28.6	88.7%
Diesel	8.1	11.3%

Notes:

Percent fleet and fuel efficiency based on ***Table 10: EMFAC2021 Emissions Inventory-Operations***

Annual VMT obtained from the CalEEMod Output files.

Table 10. EMFAC2021 Emissions Inventory - Operations				
Fuel	VMT (miles/day)	Fuel Consumption (1,000 gal/day)	Fuel Efficiency (miles per gallon)	Fuel Percentage
GAS	51,933,524	1,818	28.6	89%
DSL	6,624,858	818	8.1	11%

Note: Fuel percentage based on VMT.
Fuel efficiency calculated using fuel consumption and VMT from EMFAC2021.

Buildout
Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Riverside
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Riverside	2032	All Other Buses	Aggregate	Aggregate	Diesel	247.9014387	12533.26587	2206.3228	1.2277227
Riverside	2032	LDA	Aggregate	Aggregate	Diesel	950.8351076	30728.14707	4102.3475	0.6531138
Riverside	2032	LDT1	Aggregate	Aggregate	Diesel	0.327091437	15.00079952	1.5902189	0.00051711
Riverside	2032	LDT2	Aggregate	Aggregate	Diesel	1220.283489	52198.28355	5771.4771	1.39497073
Riverside	2032	LHD1	Aggregate	Aggregate	Diesel	17401.58614	607015.7344	218890.06	28.6739638
Riverside	2032	LHD2	Aggregate	Aggregate	Diesel	8254.506914	282177.9201	103831.31	15.7811554
Riverside	2032	MDV	Aggregate	Aggregate	Diesel	2868.416296	111077.7183	13019.918	4.10850866
Riverside	2032	MH	Aggregate	Aggregate	Diesel	2341.306483	18775.79107	234.13065	1.81470373
Riverside	2032	Motor Coach	Aggregate	Aggregate	Diesel	68.69025355	8121.219836	1578.502	1.33266376
Riverside	2032	PTO	Aggregate	Aggregate	Diesel	0	47493.92244	0	8.78026206
Riverside	2032	SBUS	Aggregate	Aggregate	Diesel	495.8355889	9781.055718	7179.6993	1.30259528
Riverside	2032	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	13.47844098	914.7108206	309.73457	0.0946902
Riverside	2032	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	17.12024406	1265.702582	393.42321	0.13129999
Riverside	2032	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	70.08715869	3220.517676	1610.6029	0.33164257
Riverside	2032	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	117.1730951	23205.02661	2692.6377	2.12198282
Riverside	2032	T6 Instate Delivery	Aggregate	Aggregate	Diesel	538.2221192	17708.49558	7680.4296	1.9222615
Riverside	2032	T6 Instate Delivery	Aggregate	Aggregate	Diesel	517.9077095	16956.32263	7390.543	1.85638785
Riverside	2032	T6 Instate Delivery	Aggregate	Aggregate	Diesel	1478.335732	48569.34263	21095.851	5.25549347
Riverside	2032	T6 Instate Delivery	Aggregate	Aggregate	Diesel	269.1912176	13182.26006	3841.3587	1.4107552
Riverside	2032	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	2022.904243	78756.7704	23384.773	8.55981195
Riverside	2032	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	4632.610891	182935.7114	53552.982	19.9221033
Riverside	2032	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	3350.447765	132239.5107	38731.176	14.3284068
Riverside	2032	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	1886.530529	70935.62281	21808.293	7.66596842
Riverside	2032	T6 Instate Tractor C	Aggregate	Aggregate	Diesel	23.47548552	1100.164495	271.37661	0.11724581
Riverside	2032	T6 Instate Tractor C	Aggregate	Aggregate	Diesel	590.7341862	30544.5252	6828.8872	3.02813577
Riverside	2032	T6 OOS Class 4	Aggregate	Aggregate	Diesel	9.817686576	689.4767049	225.61044	0.06695195
Riverside	2032	T6 OOS Class 5	Aggregate	Aggregate	Diesel	12.3486205	945.8380548	283.7713	0.09219139
Riverside	2032	T6 OOS Class 6	Aggregate	Aggregate	Diesel	51.95667772	2471.501898	1193.9645	0.23798396
Riverside	2032	T6 OOS Class 7	Aggregate	Aggregate	Diesel	67.77424454	17970.89208	1557.4521	1.58788034
Riverside	2032	T6 Public Class 4	Aggregate	Aggregate	Diesel	95.43557131	3414.940376	489.58448	0.38184625
Riverside	2032	T6 Public Class 5	Aggregate	Aggregate	Diesel	152.9637307	5449.015916	784.70394	0.61564616
Riverside	2032	T6 Public Class 6	Aggregate	Aggregate	Diesel	199.1139013	7329.099132	1021.4543	0.81474109
Riverside	2032	T6 Public Class 7	Aggregate	Aggregate	Diesel	327.7868519	14507.43188	1681.5466	1.57554478
Riverside	2032	T6 Utility Class 5	Aggregate	Aggregate	Diesel	180.6562999	7205.301026	2312.4006	0.75285894
Riverside	2032	T6 Utility Class 6	Aggregate	Aggregate	Diesel	34.0837255	1359.962418	436.27169	0.141804
Riverside	2032	T6 Utility Class 7	Aggregate	Aggregate	Diesel	37.62730655	1835.648495	481.62952	0.19000217
Riverside	2032	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	5966.955223	1226232.281	137120.63	175.037468
Riverside	2032	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	5917.219492	1669899.268	135977.7	224.245959
Riverside	2032	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	2557.817534	606540.9172	58778.647	83.6047697
Riverside	2032	T7 POLA Class 8	Aggregate	Aggregate	Diesel	2856.937689	468026.7808	46739.501	74.9838932
Riverside	2032	T7 Public Class 8	Aggregate	Aggregate	Diesel	566.9549757	22714.91649	2908.479	3.75518554
Riverside	2032	T7 Single Concrete/	Aggregate	Aggregate	Diesel	1086.971356	71101.74224	10239.27	10.9534124
Riverside	2032	T7 Single Dump Cla	Aggregate	Aggregate	Diesel	1282.468572	64339.83133	12080.854	10.411182
Riverside	2032	T7 Single Other Cla	Aggregate	Aggregate	Diesel	1677.086112	86274.93775	15798.151	13.8133447
Riverside	2032	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	32.71272776	2122.331197	150.47855	0.75806429

Riverside	2032	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	8073.395415	536538.2592	117306.44	80.7212091
Riverside	2032	T7 Utility Class 8	Aggregate	Aggregate	Diesel	153.1672086	6435.071541	1960.5403	1.00985338
Riverside	2032	LDA	Aggregate	Aggregate	Gasoli	634420.4573	25884314.78	2945321.4	765.476721
Riverside	2032	LDT1	Aggregate	Aggregate	Gasoli	50616.82444	1903176.141	222558.27	68.1831823
Riverside	2032	LDT2	Aggregate	Aggregate	Gasoli	335459.2668	14072532.06	1566629.9	502.13082
Riverside	2032	LHD1	Aggregate	Aggregate	Gasoli	22204.91688	815356.3998	330820.18	51.5087232
Riverside	2032	LHD2	Aggregate	Aggregate	Gasoli	3167.200727	107774.549	47186.572	7.88737682
Riverside	2032	MCY	Aggregate	Aggregate	Gasoli	31600.81526	179399.2865	63201.631	4.17874896
Riverside	2032	MDV	Aggregate	Aggregate	Gasoli	220512.7906	8789167.059	1008990.9	387.487411
Riverside	2032	MH	Aggregate	Aggregate	Gasoli	3868.19287	33593.47	386.97401	6.8942901
Riverside	2032	OBUS	Aggregate	Aggregate	Gasoli	407.5364207	15254.9995	8153.9887	2.76635238
Riverside	2032	SBUS	Aggregate	Aggregate	Gasoli	529.3822196	24177.58655	2117.5289	2.67658024
Riverside	2032	T6TS	Aggregate	Aggregate	Gasoli	1839.119569	96688.30248	36797.104	17.2860973
Riverside	2032	T7IS	Aggregate	Aggregate	Gasoli	4.171434704	402.801382	83.462066	0.09291009
Riverside	2032	UBUS	Aggregate	Aggregate	Gasoli	109.314145	11686.34287	437.25658	1.48733224

	VMT Sum	Fuel Sum	Fuel Sum/Year
Diesel	6624858.188	817.5681558	**298,412,377**
Gas	51933523.78	1818.056546	**663,590,639**
			962,003,016

APPENDIX H

Geotechnical/Soils Due Diligence Review

GEOTECHNICAL/SOILS DUE DILIGENCE REVIEW
APPROXIMATELY 360-ACRE RESIDENTIAL DEVELOPMENT ("DEBONNE")
CITY OF INDIO, CALIFORNIA

Prepared for

PULTE GROUP
27401 Los Altos, Suite 400
Mission Viejo, CA 92691

Project No. 12656.001

July 19, 2021

Leighton and Associates, Inc.
A LEIGHTON GROUP COMPANY

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A LEIGHTON GROUP COMPANY

July 19, 2021

Project No. 12656.001

Pulte Group
27401 Los Altos, Suite 400
Mission Viejo, CA 92691

Attention: Mr. Darren Warren

Subject: Geotechnical/Soils Due Diligence Review
Approximately 360-Acre Residential Development ("Debonne")
City of Indio, California

In accordance with your request and authorization, we are pleased to present herewith the results of our geotechnical/soils due diligence review of the subject project. The site is located northeast of the intersection of Avenue 40 and Jefferson Street in the City of Indio, California. We understand that the subject site/parcels, known collectively as planned "Debonne" project, will be a single-family / active adult residential development. This report is an update to our previous draft report dated March 3, 2020. This report summarizes our findings and conclusions, and provides preliminary geotechnical recommendations for site development based on updated site plan. Based on the results of this evaluation, the site appears suitable for the intended use provided our recommendations included herein are properly incorporated during design and construction phases of development. However, it should be noted that additional geotechnical evaluations or review will be required as site development and/or grading plans become available.

If you have any questions regarding this report, please do not hesitate to contact the undersigned. We appreciate this opportunity to be of service on this project.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

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1.0 INTRODUCTION

1.1 Purpose and Scope

This geotechnical report is for the proposed "Debonne" residential project located in the City of Indio (see Figure 1). Our scope of services for this exploration included the following:

- Review our in-house and relevant published data for this area including adjacent WRP-7 water treatment plant (see references at the end of this report).
- A site geologic reconnaissance and visual observations of surface conditions.
- Excavation, sampling and logging of 24 exploratory geotechnical hollow stem auger borings and 20 cone penetrometer tests (CPT's) throughout the site. Logs of test borings and CPT's are presented in Appendix A.
- Laboratory testing of representative soil samples obtained from the subsurface exploration program. A brief description of laboratory testing procedures and laboratory test results are presented in Appendix B.
- Geotechnical engineering analyses performed or as directed by a California registered Geotechnical Engineer (GE) including preliminary foundation and seismic design parameters based on the 2019 California Building Code (CBC). A California Certified Engineering Geologist (CEG) performed engineering geology review of site geologic hazards.
- Preparation of this report which presents the results of our exploration and provides preliminary geotechnical recommendations for the proposed development. It should be noted that geotechnical reviews and/or additional subsurface investigations may be recommended based on future site development plans.

This report is not intended to be used as an environmental assessment (Phase I or other), and foundation and/or a rough grading plan review.

1.2 Site Location and Description

The project site is located on eight contiguous undeveloped parcels, totaling approximately 360-acres, located northeast of the intersection of Avenue 40 and Jefferson Street, in the City of Indio, California. The approximate limits of the site are shown on the Site Location Map, Figure 1. The property is bounded on the north by Avenue 38 and the Coachella Valley Water District's WRP-7, Madison

Street to the east, 40th Avenue to the south and Shadow Hills High School, and Jefferson Street to the west.

Topographically, the overall site and surrounding areas slope in a southeasterly direction. Site elevations range from approximately 50 feet above mean sea level (msl) near the northwestern corner to a low point elevation of approximately 30 feet (msl) near the southeast corner of the property.

The site is currently vacant land and appears to have been used for agricultural purposes Stockpiles of soil are noted in the east-central portion of the site. An abandoned residence is located in the northeastern portion of the site.

1.3 Proposed Development

Based on information provided, we understand that the proposed development will consist of approximately 1,500 residential units, a 7-acre recreational facility, a clubhouse, and associated street improvements. Details on lot size are unavailable at this time. We anticipate each lot is to host a one- or two-story single or multi-family residential homes consisting of typical wood-frame structure with slab-on-grade foundations. The foundation loads are not expected to exceed 2,500 pounds per lineal foot (plf) for continuous footings.

We anticipate that site grading will include typical cut and fill grading to create level pads, access streets and 2:1 slopes. The maximum proposed cut and fill thickness is unknown at this time but not expected to exceed 10 feet. If site development significantly differs from the assumptions made herein, the recommendations included in this report should be subject to further review and evaluation.

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1 Field Exploration

Our field exploration program consisted of 24 hollow-stem auger borings and 20 Cone Penetrometer Tests (CPT) performed at the approximate locations shown on the Boring/CPT Location Plan Map (Plate 1). During hollow stem auger excavations, bulk samples and relatively "undisturbed" Ring samples were collected from the exploration borings for further laboratory testing and evaluation. The relatively undisturbed samples were obtained utilizing a modified California drive sampler (2⅜-inch inside diameter and 3-inch outside diameter) driven 18 inches in general accordance with ASTM Test Method D3550. The number of blows to drive the samplers are recorded on the boring logs for each 6-inch increment (unless encountering refusal or >50 blows per 6 inches). Sampling was conducted by a staff geologist from our firm. After logging and sampling, the excavations were loosely backfilled with spoils generated during excavation. The logs of exploratory hollow stem auger borings are presented in Appendix A. The CPT were conducted throughout the property (see Plate 1) by Kehoe Testing & Engineering, Inc and Logs are also included in Appendix A.

2.2 Laboratory Testing

Laboratory tests were performed on representative bulk and undisturbed drive samples to provide a basis for development of remedial earthwork and geotechnical design parameters. Selected samples were tested for the following parameters: insitu moisture and density, maximum dry density (Proctor), R-Value, gradation, collapse, soluble sulfate, pH, resistivity and chloride content. The results of our laboratory testing are presented in Appendix B.

3.0 GEOTECHNICAL AND GEOLOGIC FINDINGS

3.1 Regional Geology

The site is located in the Coachella Valley in the Colorado Desert Geomorphic Province of California. The San Bernardino Mountains of the Transverse Ranges Geomorphic Province are to the north and the San Jacinto Mountains of the Peninsular Range are to the south. The dominant structural feature in this region is the active San Andreas transform system that consists of several major northwest-trending right lateral strike slip faults that extend through the San Gorgonio pass along the southern foothills of the San Bernardino Mountains, and along the northeast margin of the Coachella Valley. The San Andreas Fault Zone is composed of a series of fault zones of which the south branch of the San Andreas is located in the immediate site vicinity north of the site. Figure 2, Regional Geologic Map, shows the region as unconsolidated Holocene sediments (alluvium and other deposits).

3.2 Site Specific Geology

Based on the results of our field exploration and review of relevant geologic data for this area (see References), the site subsurface materials consist of alluvial deposits to the depths explored. These units are discussed in the following sections in order of increasing age and further described on the logs of geotechnical borings in Appendix A.

3.2.1 Undocumented Artificial Fill (Afu)

Artificial fill materials were encountered within stockpiles located in the east-central portion of the site. These stockpiles are approximately 10 to 15 feet in height and expected to contain site-generated soils. These soils will need to be removed and re-compacted during site development.

3.2.2 Quaternary Alluvium (Map Symbol Qal)

Quaternary-aged alluvial deposits were encountered in all of our borings to the maximum depth explored. As encountered, the alluvium is typically loose to medium dense in the upper 30 feet and dense to very dense below depths greater than 30 feet. These deposits generally consists of light brown to brownish gray, silty sand (SM) and interbedded layers of poorly-graded sand (SP), sandy silt (ML) and sandy clay (CL). The near surface alluvium (upper 5 feet) is expected to generally possess very low expansion potential (EI<21).

3.3 Groundwater and Surface Water

Groundwater was not encountered in any of the borings and no standing water was observed on the ground surface during the time of the field exploration. According to Department of water Resources, Southern District, Well 337509N1162336W001 located approximately 1 mile southwest of the site, groundwater depths may be between 90 and 140 feet below ground surface (bgs). Based on this data, it appears that shallow groundwater has not been present recently, or historically. As such, groundwater is not expected to be a constraint to development of the site. However, it should be noted that local perched water conditions may exist intermittently and may fluctuate seasonally, depending on rainfall and irrigation conditions. Surface runoff from the adjacent elevated portions of the site should be anticipated.

3.4 Faulting and Fissuring

This site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or County of Riverside Fault Zone. No active, inactive fault traces or fissuring are known to traverse the planned development portions (Bryant and Hart 2007) and no evidence of onsite faulting was observed during our investigation. As defined by the California Geologic Survey, an active fault is one that has had surface displacement within the Holocene Epoch (roughly the last 11,000 years).

The closest known active fault zones are the Coachella Segment of the San Andreas Fault Zone. The Coachella Segment of the San Andreas Fault Zone is located approximately, 2.5 miles (4.0 km) northwest of the site (Blake, 2000d). The Coachella Segment of the San Andreas Fault Zone is considered to be the source of the design earthquake.

3.5 Ground Shaking

Strong ground shaking can be expected at the site during moderate to severe earthquakes in this general region. This is common to virtually all of Southern California. Intensity of ground shaking at a given location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characteristics. The site-specific seismic coefficients provided in this section are based on an interactive tools/programs currently available on USGS website and OSHPD seismic maps. Based on ASCE 7-16 and our site-specific ground motion analysis for site Class D, the seismic coefficients for this site are as listed in the following table:

Table 1. 2019 CBC Site Specific Seismic Coefficients

CBC Categorization/Coefficient	Design Value
Site Latitude	**33.76564**
Site Longitude	**-116.26024**
Site Class Definition	**D**
Mapped Spectral Response Acceleration at 0.2s Period, S_s	**2.47 g**
Mapped Spectral Response Acceleration at 1s Period, S_1	**0.95 g**
Site-Specific Analysis (ASCE 7-16)	
Adjusted Spectral Response Acceleration at 0.2s Period, S_{MS}	**2.14 g**
Adjusted Spectral Response Acceleration at 1s Period, S_{M1}	**1.97 g**
Design Spectral Response Acceleration at 0.2s Period, S_{DS}	**1.43 g**
Design Spectral Response Acceleration at 1s Period, S_{D1}	**1.3 g**

g = Gravity acceleration

The results of our site-specific analysis is presented in Appendix C. Based on this analysis, the Peak Horizontal Ground Acceleration (PGA) is 1.07g.

3.6 Dynamic Settlement (Liquefaction and Dry Settlement)

Liquefaction and dynamic settlement of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Research and historical data indicate that loose granular soils below a near-surface groundwater table are most susceptible to liquefaction. Due to the absence of shallow groundwater, the liquefaction-induced settlement is considered very low on this site.

However, during a strong seismic event, seismically-induced settlement can still occur within loose to moderately dense, dry or saturated granular soils. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. Based on the proposed remedial grading recommendations in areas of planned development, the potential total settlement resulting from ground shaking is expected to be less than 4 inches in the upper 50 feet of soils (see Appendix C).

3.7 Flooding

This report does not address conventional flood hazard risk associated with this site. However, per the official FEMA Flood Hazard Areas Map (FIRM Panel 06065C1620G), the southwest portion of the site is located in Zone X – "0.2 pct Annual Chance Flood Hazard", while the northeast portion of the site is located in

Zone A – "Without Base Flood Elevation". Portions of the site lie within a 100 and 500 year flood zone (Figure 6).

3.8 Seiche and Tsunami

Due to the lack of nearby open bodies of water, the possibility of the affects due to seiches or tsunami is considered nil.

3.9 Expansive/Collapsible Soils

Limited laboratory testing indicated that onsite soils possess a very low expansion potential (EI<21). Based on the remedial grading recommendations in areas of planned development, the potential impact due to collapsible soils is considered very low.

3.10 Slope Stability and Landslides

Significant slopes are not located on or near the site. As such, slope instability is not considered an issue at this site. The site is not considered susceptible to seismically induced landslides.

4.0 SUMMARY OF FINDINGS AND CONCLUSIONS

Based on the results of this exploration, it is our opinion that the proposed development is feasible from a geotechnical/geologic standpoint. The following is a summary of the main geotechnical findings or factors that may affect development of the site.

- The existing onsite soils appear to be suitable for reuse as fill during proposed grading provided they are relatively free of organic material and debris.
- Undocumented fill soils (existing stockpiled soils), topsoil, and upper 5 feet of alluvium are considered to be potentially compressible. These materials should be removed and recompacted in areas of planned development.
- Based on our subsurface explorations, it is our opinion that the onsite earth materials in most areas can be excavated with heavy-duty conventional grading equipment in good working condition.
- Evidence of active faulting was not identified within the planned development area of the subject site. Strong ground shaking may occur at this site due to local earthquake activity.
- Perched groundwater was not encountered, however, may develop in areas of soils with contrasting permeabilities possibly resulting in saturated fills or seepage from slopes. This condition is often a result of individual homeowners' water use and irrigation practices.
- Based on preliminary laboratory results and field observations, onsite earth materials are expected to possess a very low expansion potential and negligible sulfate exposure to concrete. Additional testing should be performed during site grading to verify these observations.
- Fill slopes are anticipated to be less than 20 feet in height and are expected to be grossly and surficially stable if constructed at 2:1 gradient or flatter.
- Unprotected pads and slope faces will be susceptible to erosion. This risk can be reduced by planting the slopes as soon as possible after grading, and by maintaining proper erosion control measures

5.0 RECOMMENDATIONS

5.1 General

Based on the results of this preliminary exploration, it is our opinion that the subject site is suitable for the proposed development from a geotechnical viewpoint. Grading of the site should be in accordance with our recommendations included in this report and future recommendations based on additional site-specific development plans and evaluations made during construction by the geotechnical consultant.

5.2 Earthwork Considerations

Earthwork should be performed in accordance with the General Earthwork and Grading Specifications in Appendix D as well as the following recommendations. The recommendations contained in Appendix D, are general grading specifications provided for typical grading projects and some of the recommendations may not be strictly applicable to this project. The specific recommendations contained in the text of this report supersede the general recommendations in Appendix D.

The contract between the developer and earthwork contractor should be worded such that it is the responsibility of the contractor to place the fill properly in accordance with the recommendations of this report, and applicable County Grading Ordinances, notwithstanding the testing and observation of the geotechnical consultant during construction.

5.2.1 Site Preparation and Remedial Grading

Prior to grading, the proposed structural improvement areas (i.e. all structural fill areas, pavement areas, buildings, etc.) of the site should be cleared of surface and subsurface obstructions, heavy vegetation and boulders. Roots and debris should be disposed of offsite. Septic Tanks or seepage pits, if encountered, should be abandoned in accordance with the County of Riverside Department of Health Services guidelines.

The near surface soils/alluvium (including artificial fill/stockpiles) are potentially compressible in their present state and may settle under the surcharge of fills or foundation loading. As such, these materials should be removed (over-excavated) and re-compacted in all settlement-sensitive areas. We recommend that the upper 5 feet of alluvium or 3 feet below bottom of footings, whichever deeper, should be removed/over-excavated and recompacted prior to foundation construction or placement of any

additional fill. The removal limit should be established by a 1:1 (horizontal: vertical) projection from the edge of fill soils supporting settlement-sensitive structures downward and outward to competent material identified by the geotechnical consultant. Removal will also include benching into competent material as the fills rise. Areas adjacent to existing structures or property limits may require special considerations and monitoring. Steeper temporary slopes in these areas may be considered.

5.2.2 Structural Fills

The onsite soils are generally suitable for re-use as compacted fill provided they are free of debris and organic matter. Areas to receive structural fill and/or other surface improvements should be scarified to a minimum depth of 8 inches, conditioned to at least optimum moisture content, and recompacted. Fill soils should be placed at a minimum of 90 percent relative compaction (based on ASTM D1557) and near or above optimum moisture content. Placement and compaction of fill should be performed in accordance with local grading ordinances under the observation and testing of the geotechnical consultant. The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts not exceeding 8 inches in thickness.

Fill slope keyways will be necessary at the toe of all fill slopes and cut slope replacement fills. Keyway schematics, including dimensions and subdrain recommendations, are provided in Appendix D. All keyways should be excavated into dense bedrock or dense alluvium as determined by the geotechnical engineer. The cut portions of all slope and keyway excavations should be geologically mapped and approved by a geologist prior to fill placement.

Fills placed on slopes steeper than 5:1 (horizontal:vertical) should be benched into dense soils (see Appendix D for benching detail). Benching should be of sufficient depth to remove all loose material. A minimum bench height of 2 feet into approved material should be maintained at all times.

5.2.3 Shrinkage and Subsidence

The volume change of excavated onsite materials upon compaction is expected to vary with materials, volume of roots and deleterious materials, density, insitu moisture content, location, and compaction effort. The in-place and compacted densities of soil materials vary and accurate overall determination of shrinkage and bulking cannot be made. Therefore, we recommend site grading include, if possible, a balance area or ability to adjust import quantities to accommodate some variation. Based on our

experience with similar materials, we anticipate 10 to 15 percent shrinkage in the upper 5 feet of dune sand/alluvium.

Subsidence due solely to scarification, moisture conditioning and recompaction of the exposed bottom of overexcavation, is expected to be on the order of 0.15 foot. This should be added to the above shrinkage value for the recompacted fill zone, to calculate overall subsidence.

5.2.4 Import Soils

Import soils and/or borrow sites, if needed, should be evaluated by the geotechnical consultant prior to import. Import soils should be uncontaminated, granular in nature, free of organic material (loss on ignition less-than 2 percent), have a very low expansion potential (with an Expansion Index less than 21) and have a low corrosion impact to the proposed improvements.

5.2.5 Utility Trenches

Utility trenches should be backfilled with compacted fill in accordance with Sections 306-1.2 and 306-1.3 of the Standard Specifications for Public Works Construction, ("Greenbook"), 2018 Edition (or most recent). Fill material above the pipe zone should be placed in lifts not exceeding 8 inches in uncompacted thickness and should be compacted to at least 90 percent relative compaction (ASTM D 1557) by mechanical means only. Site soils may generally be suitable as trench backfill provided these soils are screened of rocks over 1½ inches in diameter and organic matter. If imported sand is used as backfill, the upper 3 feet in building and pavement areas should be compacted to 95 percent. The upper 6 inches of backfill in all pavement areas should be compacted to at least 95 percent relative compaction.

Where granular backfill is used in utility trenches adjacent moisture sensitive subgrades and foundation soils, we recommend that a cut-off "plug" of impermeable material be placed in these trenches at the perimeter of buildings, and at pavement edges adjacent to irrigated landscaped areas. A "plug" can consist of a 5-foot long section of clayey soils with more than 35-percent passing the No. 200 sieve, or a Controlled Low Strength Material (CLSM) consisting of one sack of Portland-cement plus one sack of bentonite per cubic-yard of sand. CLSM should generally conform to Section 201-6 of the Standard Specifications for Public Works Construction, ("Greenbook"), 2018 Edition. This is intended to reduce the likelihood of water permeating trenches from landscaped areas, then seeping along permeable trench backfill into the building and pavement subgrades, resulting in wetting of moisture sensitive subgrade earth materials under buildings and pavements.

Excavation of utility trenches should be performed in accordance with the project plans, specifications and the California Construction Safety Orders (current Edition). The contractor should be responsible for providing a "competent person" as defined in Article 6 of the California Construction Safety Orders. Contractors should be advised that sandy soils (such as fills generated from the onsite alluvium) could make excavations particularly unsafe if all safety precautions are not properly implemented. In addition, excavations at or near the toe of slopes and/or parallel to slopes may be highly unstable due to the increased driving force and load on the trench wall. Spoil piles from the excavation(s) and construction equipment should be kept away from the sides of the trenches. Leighton does not consult in the area of safety engineering.

5.2.6 Drainage

All drainage should be directed away from structures, slopes and pavements by means of approved permanent/temporary drainage devices. Adequate storm drainage of any proposed pad should be provided to avoid wetting of foundation soils. Irrigation adjacent to buildings should be avoided when possible. As an option, sealed-bottom planter boxes and/or drought resistant vegetation should be used within 5-feet of buildings.

5.2.7 Slope Design and Construction

Based on our understanding and planning purposes, all fill and cut slopes will be designed and constructed at 2:1 (horizontal:vertical) with benches at maximum 30 foot intervals. These slopes are considered grossly stable for static and pseudostatic conditions. For planning purposes, cut slopes exceeding 5 feet in height should be constructed as replacement fill slopes due to the highly erosive nature of site soils. Future grading plans should be subject to further review and evaluation.

The outer portion of fill slopes should be either overbuilt by 2 feet (minimum) and trimmed back to the finished slope configuration or compacted in vertical increments of 5 feet (maximum) by a weighted sheepsfoot roller as the fill is placed. The slope face should then be track-walked by dozers of appropriate weight to achieve the final slope configuration and compaction to the slope face.

Slope faces are inherently subject to erosion, particularly if exposed to wind, rainfall and irrigation. Landscaping and slope maintenance should be conducted as soon as possible in order to increase long-term surficial stability. Berms should be provided at the top of fill slopes. Drainage should be directed such that surface runoff on the slope face is minimized

5.3 Foundation Design

5.3.1 Bearing and Lateral Pressures

Based on our analysis, the proposed residential/ and retail/commercial structures may be founded on conventional foundation systems based on the design parameters provided below. The proposed foundations and slabs should be designed in accordance with the structural consultants' design, the minimum geotechnical recommendations presented herein, and the 2019 CBC. In utilizing the minimum geotechnical foundation recommendations, the structural consultant should design the foundation system to acceptable deflection criteria as determined by the architect. Foundation footings may be designed with the following geotechnical design parameters:

- Bearing Capacity: A net allowable bearing capacity of 2,000 pounds per square foot (psf), or a modulus of subgrade reaction of 150 pci may be used for design of footings founded entirely into compacted fill. The footings should extend a minimum of 12 inches below lowest adjacent grade. A minimum base width of 18 inches for continuous footings and a minimum bearing area of 3 square feet (1.75 ft by 1.75 ft) for pad foundations should be used. Additionally, an increase of one-third may be applied when considering short-term live loads (e.g. seismic and wind).
- Passive Pressures: The passive earth pressure may be computed as an equivalent fluid having a density of 300 psf per foot of depth, to a maximum earth pressure of 3,000 pounds per square foot. A coefficient of friction between soil and concrete of 0.35 may be used with dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one-third

The footing width, depth, reinforcement, slab reinforcement, and the slab-on-grade thickness should be designed by the structural consultant based on recommendations and soil characteristics indicated herein and the most recently adopted edition of the CBC.

5.3.2 Settlement

The project civil engineer, structural engineer, and architect should consider the potential effects of both static settlement and dynamic settlement presented below.

- Static Settlement**:** Most of the static settlement of onsite soils is expected to be immediate or within 30 days following fill placement. A differential static settlement of 0.5 inch over a 30-foot span may be considered for design purposes. Additional settlement will also occur in the future if sites grades are raised or due to specific or large footing/foundation loads.

- Dynamic Settlement: Based on our analysis, we estimate that total dynamic settlement is expected to be less than 5.0 inch. Due to relatively uniform alluvium, this settlement is expected to be global and differential settlement is expected to be minimal or less than 0.25 inches over a 40-foot horizontal span.

5.3.3 Vapor Retarder

It has been a standard of care to install a moisture retarder underneath all slabs where moisture condensation is undesirable. Moisture vapor retarders may retard but not totally eliminate moisture vapor movement from the underlying soils up through the slabs. Moisture vapor transmission may be additionally reduced by use of concrete additives. Leighton does not practice in the field of moisture vapor transmission evaluation/mitigation. Therefore, we recommend that a qualified person/firm be engaged/consulted with to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction. This person/firm should provide recommendations for mitigation of potential adverse impact of moisture vapor transmission on various components of the structure as deemed appropriate. The slab subgrade soils should be well wetted prior to placing concrete.

5.4 Retaining Walls

Retaining wall earth pressures are a function of the amount of wall yielding horizontally under load. If the wall can yield enough to mobilize full shear strength of backfill soils, then the wall can be designed for "active" pressure. If the wall cannot yield under the applied load, the shear strength of the soil cannot be mobilized and the earth pressure will be higher. Such walls should be designed for "at rest" conditions. If a structure moves toward the soils, the resulting resistance developed by the soil is the "passive" resistance. Retaining walls backfilled with non-expansive soils should be designed using the following equivalent fluid pressures:

Table 2. Retaining Wall Design Earth Pressures (Static, Drained)

Loading Conditions	Equivalent Fluid Density (pcf)	
	Level Backfill	2:1 Backfill
Active	35	50
At-Rest	50	80
Passive*	300	150 (2:1, sloping down)

* This assumes level condition in front of the wall will remain for the duration of the project, not to exceed 3,000 psf at depth. If sloping down (2:1) grades exist in front of walls, then they should be designed using passive values reduced to ½ of level backfill passive resistance values.

Unrestrained (yielding) cantilever walls should be designed for the active equivalent-fluid weight value provided above for very low to low expansive soils that are free draining. In the design of walls restrained from movement at the top (non-yielding) such as basement or elevator pit/utility vaults, the at-rest equivalent fluid weight value should be used. Total depth of retained earth for design of cantilever walls should be measured as the vertical distance below the ground surface measured at the wall face for stem design, or measured at the heel of the footing for overturning and sliding calculations. Should a sloping backfill other than a 2:1 (horizontal:vertical) be constructed above the wall (or a backfill is loaded by an adjacent surcharge load), the equivalent fluid weight values provided above should be re-evaluated on an individual case basis by us. Non-standard wall designs should also be reviewed by us prior to construction to check that the proper soil parameters have been incorporated into the wall design.

All retaining walls should be provided with appropriate drainage. The outlet pipe should be sloped to drain to a suitable outlet. Typical wall drainage design is illustrated in Appendix D, *Retaining Wall Backfill and Subdrain Detail*. Wall backfill should be non-expansive (EI $\leq$ 21) sands compacted by mechanical methods to a minimum of 90 percent relative compaction (ASTM D 1557). Clayey site soils should not be used as wall backfill. Walls should not be backfilled until wall concrete attains the 28-day compressive strength and/or as determined by the Structural Engineer that the wall is structurally capable of supporting backfill. Lightweight compaction equipment should be used, unless otherwise approved by the Structural Engineer.

5.5 Geochemical Characteristics

Limited laboratory testing indicated a negligible concentration of soluble sulfates in onsite soils for representative samples. The laboratory test results are presented in Appendix B.

Additional corrosion testing should be performed on representative finish grade soils at the completion of rough grading. Concrete foundations in contact with site soils should be designed in accordance with 2019 CBC. A qualified corrosion engineer should be consulted to review the results of laboratory tests and coordinate additional testing if corrosion sensitive materials are to be used.

5.6 Preliminary Pavement Design Parameters

In order to provide the following recommendations, we have assumed an average R-value of 30 based on the granular nature of the onsite soils and results of our laboratory testing. For the final pavement design, appropriate traffic indices should be selected by the project civil engineer or traffic engineering consultant and representative samples of actual subgrade materials should be tested for R-value.

Table 3. Preliminary Pavement Design

Street Type	Loading Conditions TI	*AC Pavement Section Thickness*	
		Asphaltic-Concrete (AC) Thickness (inch)	Aggregate Base (AB) Thickness (inch)
Alleys/Local Streets	5.5	4.0	4.0
Collector Traffic/ Trucks	7.0	4.0	8.0
Secondary Perimeter Roadways	7.5	5.0	8.0

The subgrade soils in the upper 6 inches should be properly compacted to at least 95 percent relative compaction (ASTM D1557) and should be moisture-conditioned to near optimum and kept in this condition until the pavement section is constructed. Proof-rolling subgrade to identify localized areas of yielding subgrade (if any) should be performed prior to placement of aggregate base and under the observation of the geotechnical consultant.

Minimum relative compaction requirements for aggregate base should be 95 percent of the maximum laboratory density as determined by ASTM D1557. Base rock should conform to the "Standard Specifications for Public Works Construction" (green book) current edition or Caltrans Class 2 aggregate base having a minimum R-value of 78. Asphaltic concrete should be placed on compacted aggregate base and compacted to a minimum 95 percent relative compaction

The preliminary pavement sections provided in this section are meant as minimum, if thinner or highly variable pavement sections are constructed, increased maintenance and repair may be needed.

6.0 GEOTECHNICAL CONSTRUCTION SERVICES

Geotechnical review is of paramount importance in engineering practice. Poor performances of many foundation and earthwork projects have been attributed to inadequate construction review. We recommend that Leighton be provided the opportunity to review the grading plan and foundation plan(s).

Reasonably-continuous construction observation and review during site grading and foundation installation allows for evaluation of the actual soil conditions and the ability to provide appropriate revisions where required during construction. Geotechnical conclusions and preliminary recommendations should be reviewed and verified by Leighton during construction, and revised accordingly if geotechnical conditions encountered vary from our findings and interpretations. Geotechnical observation and testing should be provided:

- After completion of site demolition and clearing,
- During ground preparation, fill slope key excavations, overexcavation of surface soils and subdrain placement as described herein,
- During compaction of all fill materials,
- After excavation of all footings, and prior to placement of concrete,
- During utility trench backfilling and compaction, and
- When any unusual conditions are encountered.

Additional geotechnical exploration and analysis may be required based on final development plans, for reasons such as significant changes in proposed structure locations/footprints. We should review grading (civil) and foundation (structural) plans, and comment further on geotechnical aspects of this project.

7.0 LIMITATIONS

This report was necessarily based in part upon data obtained from a limited number of observances, site visits, soil samples, tests, analyses, histories of occurrences, spaced subsurface explorations and limited information on historical events and observations. Such information is necessarily incomplete. The nature of many sites is such that differing characteristics can be experienced within small distances and under various climatic conditions. Changes in subsurface conditions can and do occur over time. This investigation was performed with the understanding that the subject site is proposed for residential and commercial development. The client is referred to Appendix E regarding important information provided by the Geoprofessional Business Association (GBA) on geotechnical engineering studies and reports and their applicability.

This report was prepared for Pulte Home Corp., based on its needs, directions, and requirements at the time of our investigation. This report is not authorized for use by, and is not to be relied upon by any party except Pulte Home Corp., and its successors and assigns as owner of the property, with whom Leighton and Associates, Inc. has contracted for the work. Use of or reliance on this report by any other party is at that party's risk. Unauthorized use of or reliance on this report constitutes an agreement to defend and indemnify Leighton and Associates, Inc. from and against any liability which may arise as a result of such use or reliance, regardless of any fault, negligence, or strict liability of Leighton and Associates, Inc.

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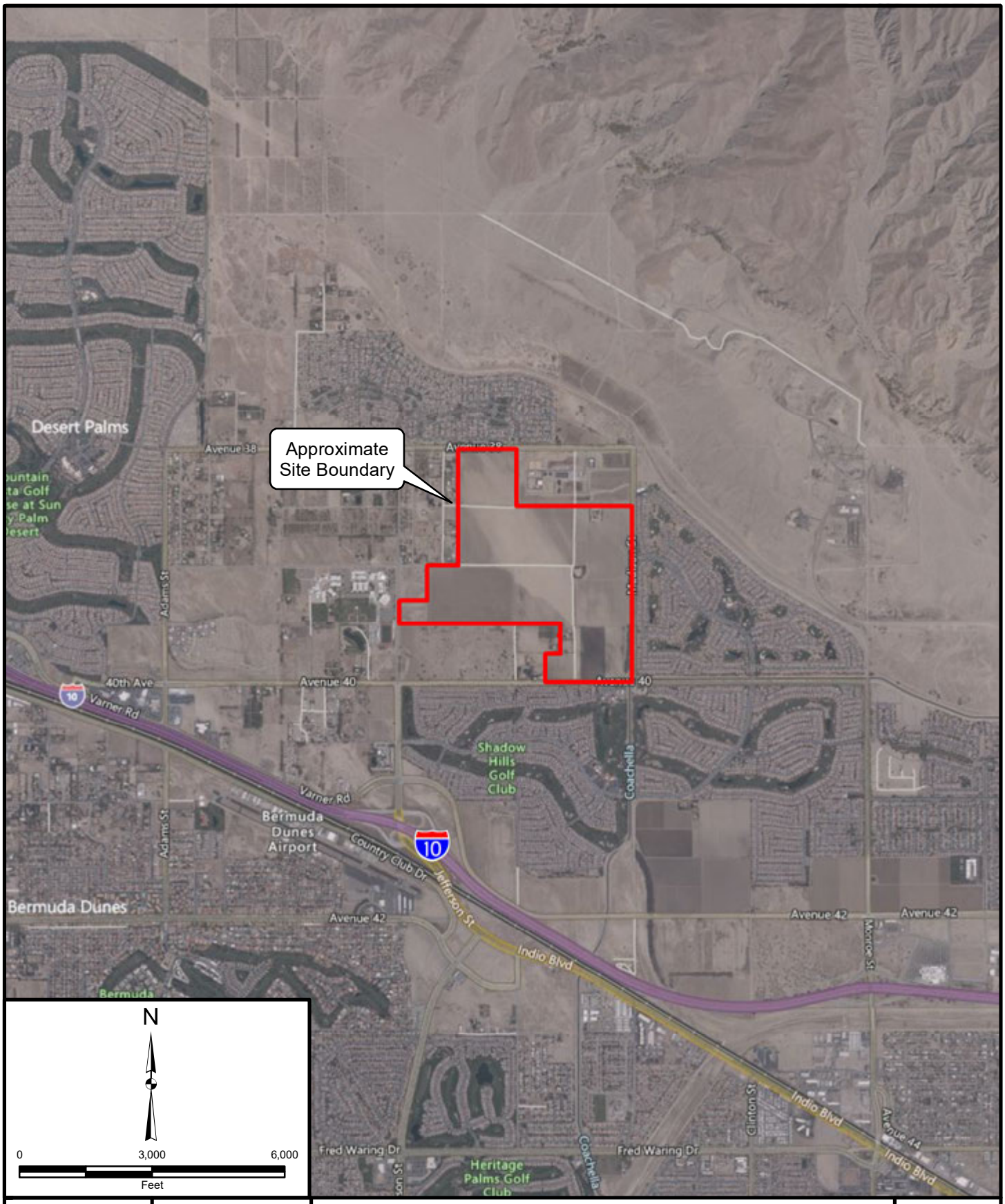

Project: 12656.001	Geol: SIS/RFR
Scale: 1 " = 3,000 '	Date: July 2021
Base Map: ESRI ArcGIS Online 2021 Author: Leighton Geomatics (mmurphy)	

SITE LOCATION MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 1

Leighton

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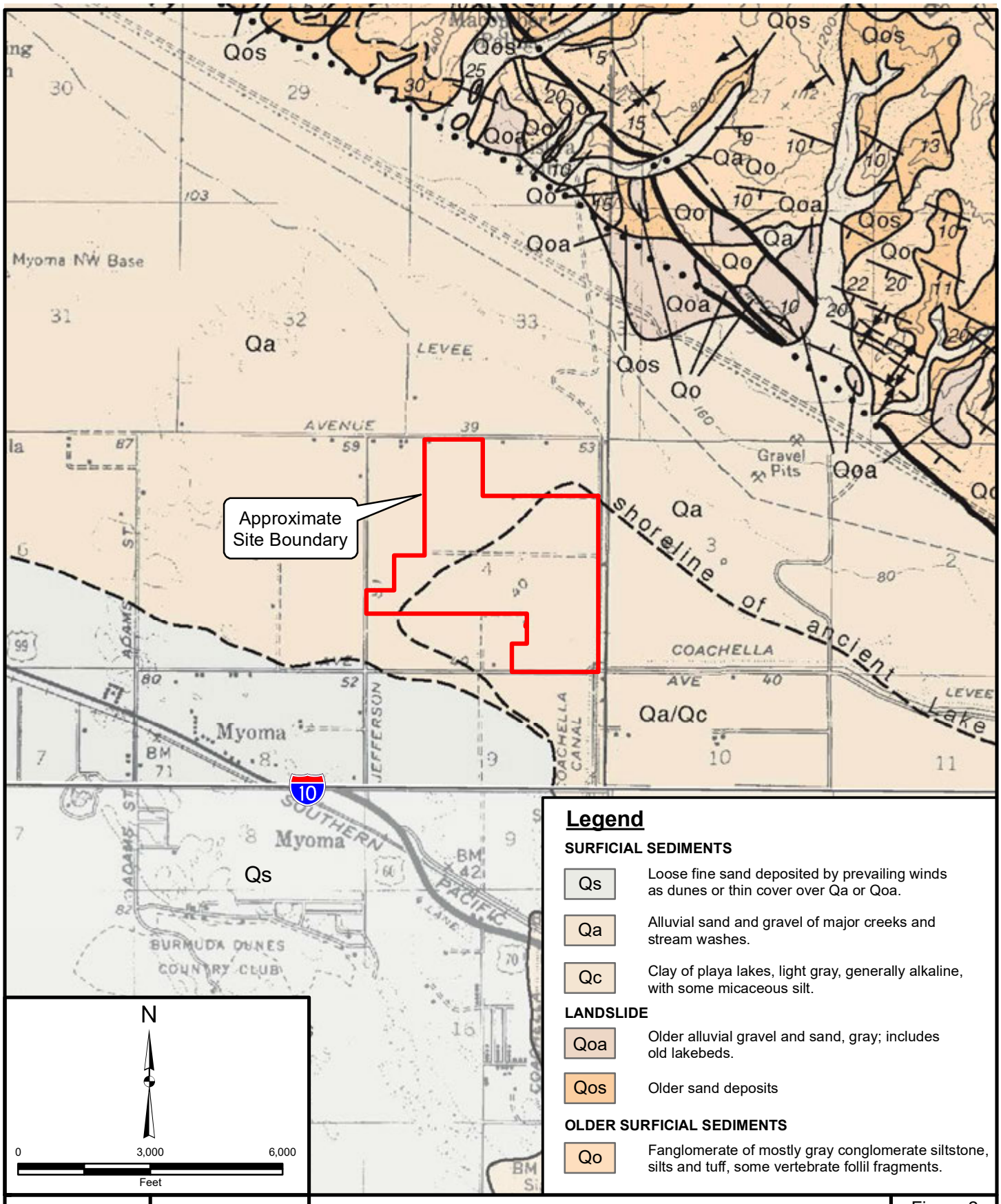

Legend

SURFICIAL SEDIMENTS

Qs	Loose fine sand deposited by prevailing winds as dunes or thin cover over Qa or Qoa.
Qa	Alluvial sand and gravel of major creeks and stream washes.
Qc	Clay of playa lakes, light gray, generally alkaline, with some micaceous silt.

LANDSLIDE

Qoa	Older alluvial gravel and sand, gray; includes old lakebeds.
Qos	Older sand deposits

OLDER SURFICIAL SEDIMENTS

Qo	Fanglomerate of mostly gray conglomerate siltstone, silts and tuff, some vertebrate follil fragments.

Project: 12656.001	Geol: SIS/RFR
Scale: 1 " = 3,000 '	Date: July 2021

Base Map: Geologic Map of the Palm Desert, Coachella, Thousands Palms & Lost Horse 15 Minute Quadrangles by Thomas W. Dibblee Jr., 2008.

Author: Leighton Geomatics (mmurphy)

REGIONAL GEOLOGIC MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 2

Leighton

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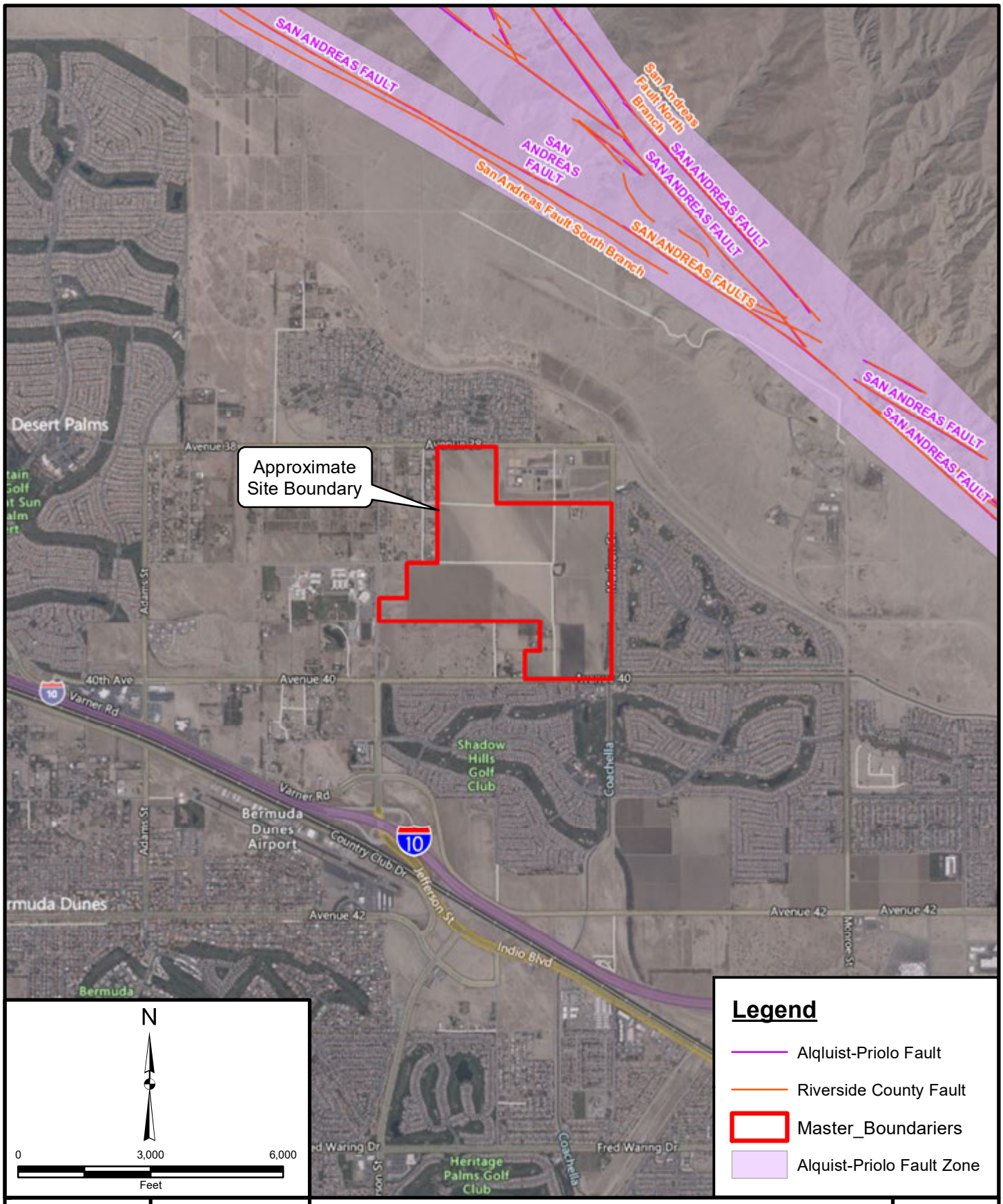

Project: 12656.001	Geol: SIS/RFR
Scale: 1 " = 3,000 '	Date: July 2021
Base Map: Bing Maps 2021 Author: Leighton Geomatics (mmurphy)	

REGIONAL FAULT MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 3

Leighton

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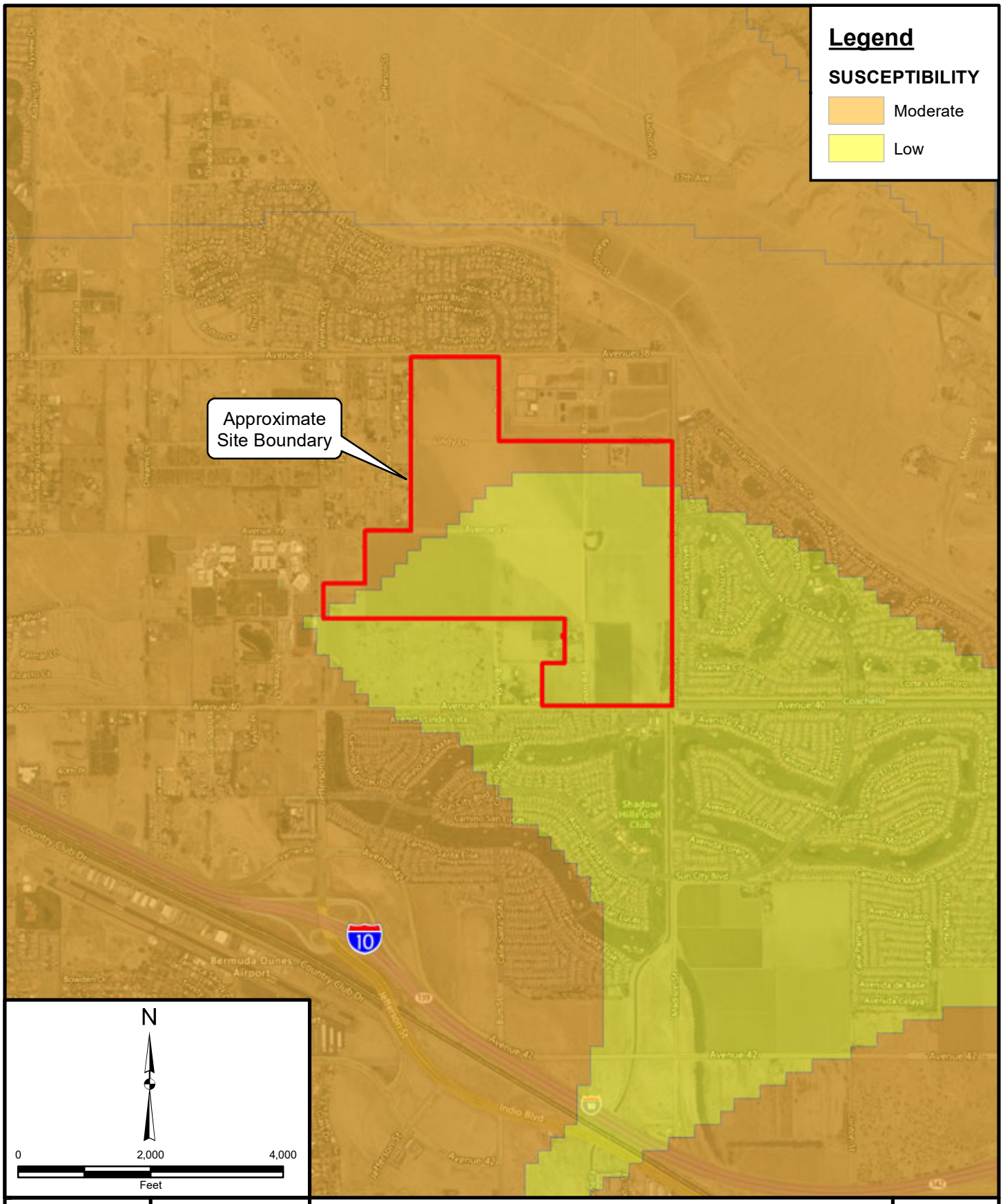

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Scale: 1 " = 2,000 '	Date: July 2021
Base Map: Bing Maps 2021 Author: Leighton Geomatics (mmurphy)	

LIQUEFACTION MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 4

Leighton

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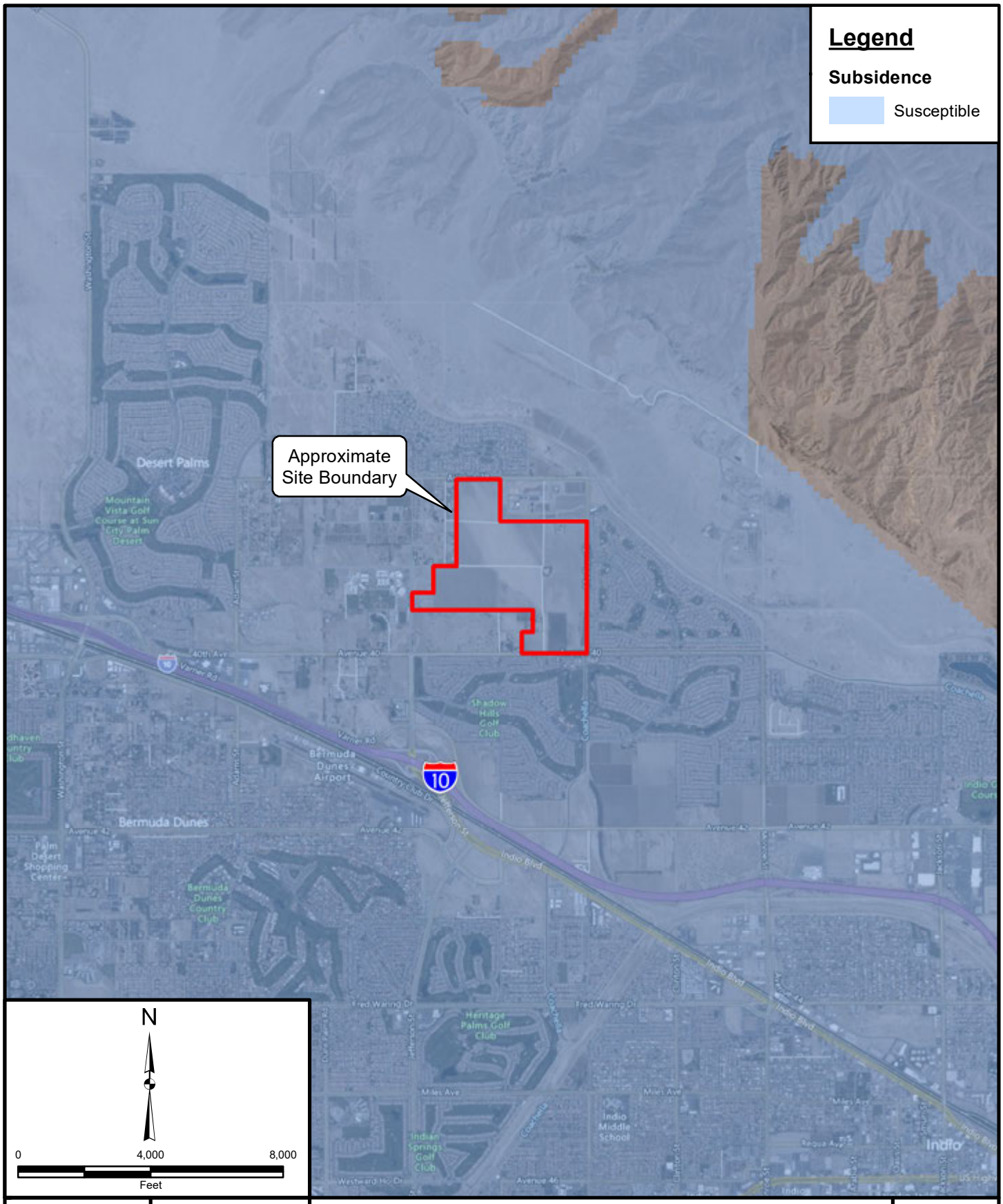

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Scale: 1 " = 4,000 '	Date: July 2021

Base Map: Bing Maps 2021

Thematic Information: Leighton, County of Riverside

Author: Leighton Geomatics (mmurphy)

SUBSIDENCE MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 5

Leighton

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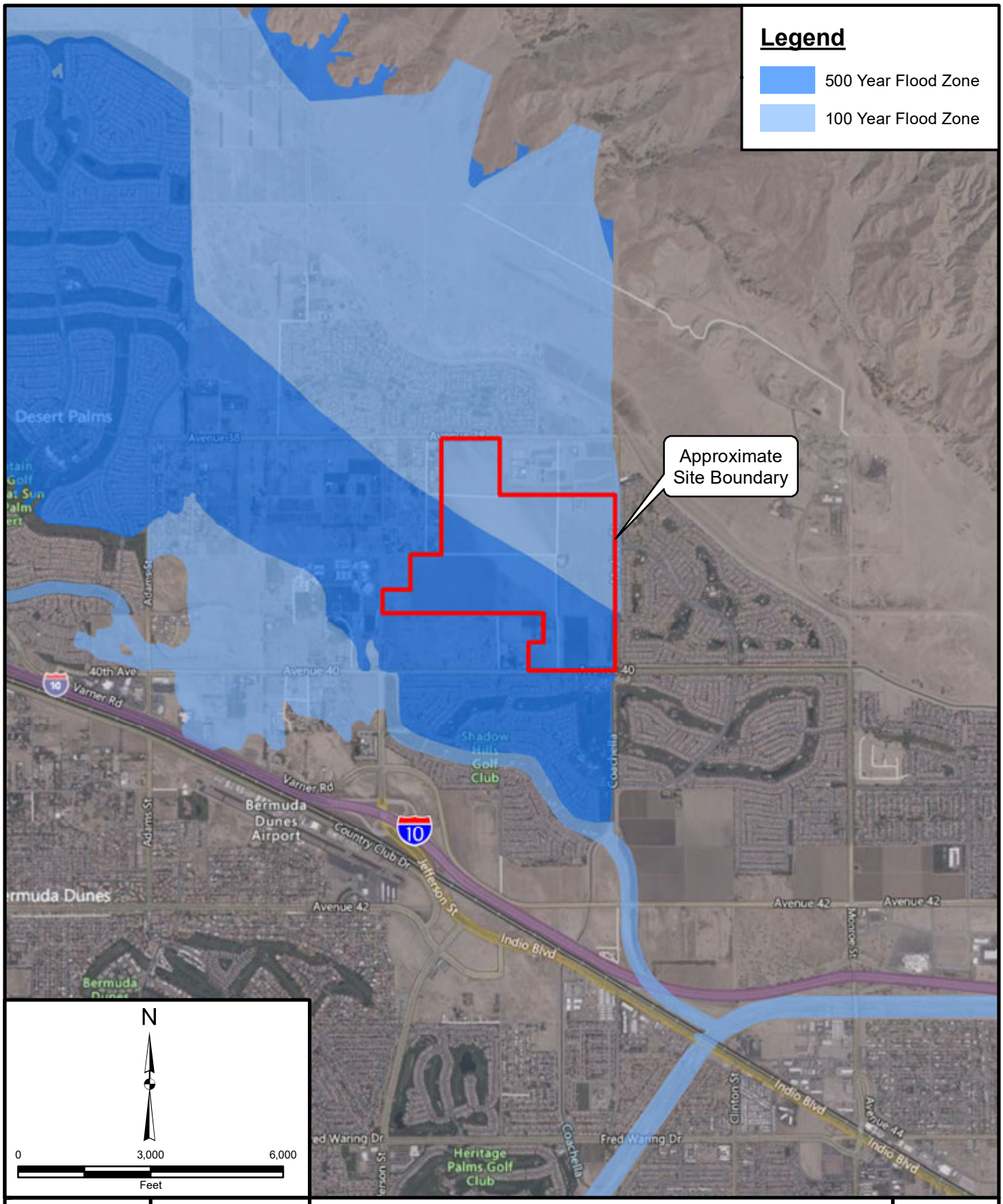

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Scale: 1 " = 3,000 '	Date: July 2021
Base Map: Bing Maps 2021 Thematic Information: Leighton, CA DWR, FEMA Author: Leighton Geomatics (mmurphy)	

FLOOD HAZARD ZONE MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Figure 6

Leighton

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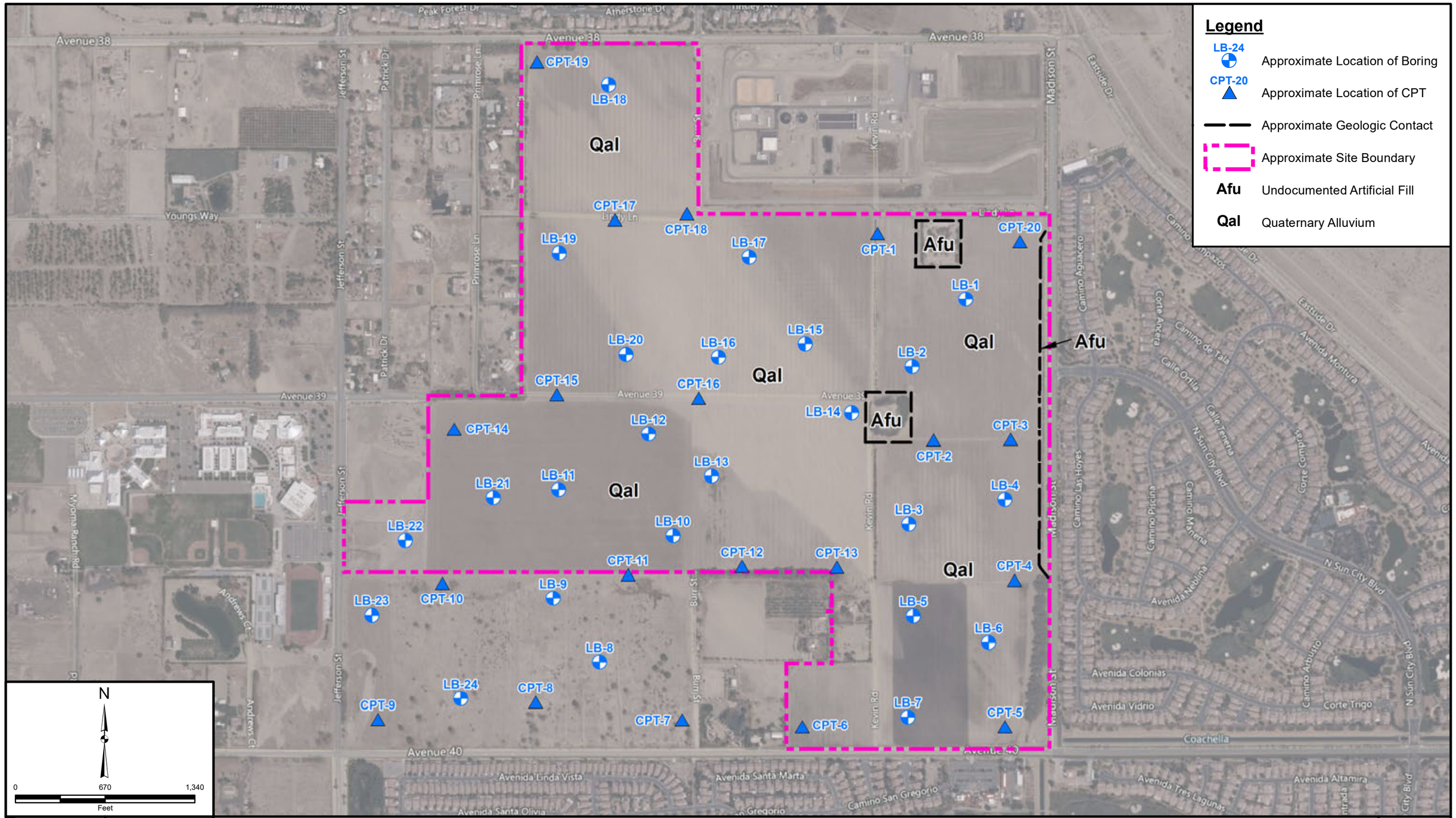

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Base Map: Bing Maps, 2016 2021	
Author: Leighton Geomatics (mmurphy)	

GEOTECHNICAL MAP

Geotechnical/Soils Due Dilligence Review
Pulte Debonne
NE of Jefferson Street and Avenue 40
City of Indio, California

Plate 1

Leighton

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APPENDIX A

Field Exploration / Geotechnical Borings and CPT

GEOTECHNICAL BORING LOG LB-1

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine to medium grained sand	
				R-1	5 5 9	101	17		SILTY SAND, loose, light gray, moist, very fine to fine grained sand	
	5			R-2 B-1	6 8 11	98	11		SILTY SAND, medium dense, light gray, moist, very fine to fine grained sand, MD = 116.9 @ 12.9%	MD, SA
				R-3	6 6 7	90	22	ML	SILTY SAND, loose, light gray, moist, very fine to fine grained sand SANDY SILT, light brownish gray, stiff, moist, very fine to fine grained sand	
	10			R-4	6 11 14	96	14		SANDY SILT, stiff, light gray, moist, very fine to fine grained sand, CO = -0.22%	CO
				R-5	7 13 24			SM	SILTY SAND, medium dense, light gray, moist, fine grained sand	
	15			R-6	11 17 21	101	8		SILTY SAND, medium dense, light gray, moist, fine grained sand	
	20			R-7	7 16 16	103	16	ML	SANDY SILT, stiff, dark gray, moist, very fine to fine grained sand	
	25			R-8	8 16 20			SM	SILTY SAND, medium dense, light gray, moist, fine grained sand, interbedded layers of poorly graded sand and clay	
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-1

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	30			R-9	18 29 40			SP	Poorly graded SAND, dense, light gray, moist, fine grained sand	
	35									
	40			R-10	20 50/6"			SM	SILTY SAND, dense, grayish brown, moist, fine grained sand	
	45									
	50			R-11	35 50/5"			SP	Poorly graded SAND, dense, light gray, moist, fine grained sand	
									Drilled to 50.92' Sampled to 50.92' Groundwater not encountered Backfilled with cuttings	
	55									
	60									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-2

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	5 9 14	100	12		SILTY SAND, medium dense, dark gray, moist, very fine to fine grained sand, with interbedded silt layers	
	5			R-2	5 9 15	102	6		SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-3	3 13 25	95	6	SP-SM	Poorly graded SAND with SILT, medium dense, light gray, moist, fine grained sand, with interbedded clay layers	
	15			R-4	11 12 12	101	15	SM	SILTY SAND, medium dense, light brownish gray, moist, fine grained sand	
	20			R-5	7 10 11			ML	SANDY SILT, stiff, dark grayish brown, moist, very fine to fine grained sand, no recovery w/ring, resample w/spt	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-3

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand, RV = 49, EI = 1	RV, SA, EI
								SC-SM	SILTY, CLAYEY SAND, dark grayish brown, moist, fine grained sand	
	5			R-1	8 12 20	111	5	SM	SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-2	6 9 15	98	23	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, very fine to fine grained sand, CO = -0.25%	CO
	15			R-3	7 11 15	98	15	SM	SILTY SAND, medium dense, dark gray, moist, fine grained sand, few clay, CO = -0.51%	CO
	20			R-4	12 22 32				SILTY SAND, dense, dark grayish brown, moist, fine grained sand	
	25			R-5	10 17 23	103	7		SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	30								Drilled to 26.5' Sampled to 26.5' Groundwater not encountered Backfilled with cuttings	

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-4

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	5 5 6	98	12	SP-SM	Poorly graded SAND with SILT, loose, light gray, moist, fine grained sand	
	5			R-2	4 6 8	101	16	SM-ML	SILTY SAND to SANDY SILT, loose to stiff, dark grayish brown, moist, very fine to fine grained sand	
				R-3	8 12 16			SM	SILTY SAND, medium dense, light brownish gray, moist, fine grained sand	
	10			R-4	6 8 20	102	22		SILTY SAND, medium dense, dark gray, moist, fine grained sand	
	15			R-5	8 16 22				SILTY SAND, medium dense, dark gray, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-5

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine to medium grained sand few cobbles @ surface to 6"	
								SC	CLAYEY SAND, dark grayish brown, moist, fine grained sand	
	5			R-1	5 8 9	99	15	CL	Lean CLAY with SAND, medium stiff, dark grayish brown, moist, very fine to fine grained sand	
				R-2	8 14 19			SM	SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-3	7 11 13	103	11		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	15			R-4	8 15 18				SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-6

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SP-SM	**Quaternary Alluvium (Qal)**; Poorly graded SAND with SILT, light gray, slightly moist, fine grained sand	
				R-1	5 7 12			SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	5			R-2	7 10 15	100	7		SILTY SAND, medium dense, grayish brown, moist, fine grained sand, iron oxide staining	
	10			R-3	9 14 14			SP	Poorly graded SAND, medium dense, light gray, slightly moist, fine grained sand	
	15			R-4	9 12 18			SM	SILTY SAND, medium dense, light gray, moist, fine grained sand, iron oxide staining	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-7

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine to medium grained sand	
									SILTY SAND, grayish brown, moist, fine grained sand	
	5			R-1	4 8 12	103	6		SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-2	8 15 18	101	16		SILTY SAND, medium dense, light gray, moist, fine grained sand	
	15			R-3	6 16 22				SILTY SAND, medium dense, grayish brown, moist, fine grained sand, trace clay	
	20			R-4	9 14 20			CL	Lean CLAY with SAND, stiff, dark gray, moist, very fine to fine grained sand	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-8

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				ML	**Quaternary Alluvium (Qal)**; SANDY SILT, light brownish gray, slightly moist, fine to medium grained sand, MD = 116.7 @ 13.5%, RV = 25	MD, RV, SA
				R-1	8 15 19	102	8	SM	SILTY SAND, medium dense, light brownish gray, slightly moist, fine grained sand	
	5			R-2	12 18 22				SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-3	9 11 15	95	10	SP-SM	Poorly graded SAND with SILT, medium dense, light gray, moist, fine grained sand	
	15			R-4	8 13 15			SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

The Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-9

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine to medium grained sand	
									SILTY SAND, light gray, slightly moist, very fine to fine grained sand	
	5			R-1	7 9 13	103	2	SP	Poorly graded SAND, medium dense, light brownish gray, slightly moist, fine grained sand	
				R-2	7 8 10			SM	SILTY SAND, medium dense, light brownish gray, slightly moist, fine grained sand	
	10			R-3	6 10 15	95	8	SP-SM	Poorly graded SAND with SILT, medium dense, grayish brown, moist, fine grained sand	
	15			R-4	7 10 13	92	7		Poorly graded SAND with SILT, medium dense, grayish brown, moist, fine grained sand, CO = -0.62%	CO
	20			R-5	10 15 19				SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-10

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	11 12 16	97	18	SP	Poorly graded SAND, medium dense, light gray, slightly moist, fine grained sand	
	5			R-2	5 6 10	106	2	SM	SILTY SAND, loose, dark grayish brown, moist, fine grained sand, trace clay	
	10			R-3	7 8 14	111	13	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	15			R-4	8 12 15			SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-11

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
									SILTY SAND, grayish brown, moist, fine grained sand	
	5			R-1	4 6 10	97	18		SILTY SAND, loose, grayish brown, moist, fine grained sand	
	10			R-2	4 7 11	96	16	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand, CO = -0.33%	CO
	15			R-3	4 9 14	91	21		CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	20			R-4	9 15 22			SM	SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	25			R-5	11 19 36				SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	30								Drilled to 26.5' Sampled to 26.5' Groundwater not encountered Backfilled with cuttings	

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-12

Project No.	12656.001	**Date Drilled**	1-30-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
									SILTY SAND, grayish brown, moist, fine grained sand	
	5			R-1	6 9 15	105	10		SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	10			R-2	7 10 13	103	16	ML	SANDY SILT, stiff, dark grayish brown, moist, very fine to fine grained sand	
	15			R-3	3 4 6	84	38	CL	Lean CLAY with SAND, medium stiff, dark grayish brown, moist, very fine to fine grained sand	
	20			R-4	7 11 14			SM	SILTY SAND, medium dense, dark grayish brown, moist, very fine to fine grained sand	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-13

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	6 7 8	95	7		SILTY SAND, loose, grayish brown, moist, fine grained sand	
	5			R-2	4 4 4	90	28	ML	SANDY SILT, medium stiff, dark grayish brown, moist, very fine to fine grained sand	
	10			R-3	4 14 19	100	11	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	15			R-4	9 13 12			CL-ML	SANDY SILTY CLAY, stiff, dark grayish brown, moist, very fine to fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-14

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
									SILTY SAND, grayish brown, moist, fine grained sand	
	5			R-1	7 10 13	102	13		SILTY SAND, medium dense, dark grayish brown, moist, very fine to fine grained sand	
				R-2	4 8 10	99	18	CL	SANDY Lean CLAY, stiff, dark grayish brown, moist, very fine to fine grained sand	
	10			R-3	9 12 17	99	16	SC-SM	SILTY, CLAYEY SAND, medium dense, grayish brown, moist, fine grained sand	
	15			R-4	6 11 12			SC	CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-15

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SP-SM	**Quaternary Alluvium (Qal)**; Poorly graded SAND with SILT, light gray, slightly moist, fine grained sand	
								SM	SILTY SAND, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
	5			R-1	5 6 10	99	15	SP-SM	Poorly graded SAND with SILT, loose, grayish brown, moist, fine grained sand	
	10			R-2	6 11 16	100	17	SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	15			R-3	10 15 18	101	13		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
	20			R-4	12 20 21				SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-16

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SP	**Quaternary Alluvium (Qal)**; Poorly graded SAND, light gray, slightly moist, fine grained sand	
				R-1	4 4 4	85	14	SM	SILTY SAND, loose, dark grayish brown, moist, fine grained sand	
	5			R-2	1 2 3	84	31	ML	SANDY SILT, soft, dark grayish brown, moist, very fine to fine grained sand	
				R-3	6 10 14	102	12	SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	10			R-4	4 9 15	102	17	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand, CO = -0.40%	CO
	15			R-5	5 7 15			SC-CL	CLAYEY SAND to SANDY CLAY, medium dense to stiff, dark grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-17

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0							SP-SM	**Quaternary Alluvium (Qal)**; Poorly graded SAND with SILT, light gray, slightly moist, fine grained sand	
	5			R-1 B-1	6 12 15	105	8	SM	SILTY SAND, stiff, grayish brown, moist, fine grained sand, MD = 115.2 @ 12.9%, SE = 13	MD, SE, SA, CR
				R-2	4 8 12	89	23		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
	10			R-3	11 12 16				SILTY SAND, medium dense, grayish brown, moist, fine grained sand, with interbedded clay layers	
	15			R-4	9 9 11			SC-SM	SILTY, CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

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GEOTECHNICAL BORING LOG LB-18

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light gray, slightly moist, fine grained sand, RV = 53, EI = 6	RV, SA, EI
								SC	CLAYEY SAND, grayish brown, moist, fine grained sand	
	5			R-1	9 10 9	104	4	SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
	10			R-2	4 5 9	88	34	CL	Lean CLAY with SAND, medium stiff, dark grayish brown, moist, very fine to fine grained sand, CO = -0.31%	CO
	15			R-3	10 11 14	95	13	SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	20			R-4	7 10 17			SC-SM	SILTY, CLAYEY SAND, medium dense, dark grayish brown, moist, fine grained sand	
									Drilled to 21.5' Sampled to 21.5' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-19

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	3 7 10	101	16	SC	CLAYEY SAND, medium dense, dark grayish brown, moist, very fine to fine grained sand, with interbedded clay layers	
	5			R-2	5 6 7	99	13	SM	SILTY SAND, loose, dark grayish brown, moist, fine grained sand	
	10			R-3	7 13 14	100	17		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
	15			R-4	5 8 12			CL	SANDY Lean CLAY, stiff, dark grayish brown, moist, very fine to fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-20

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0							SP-SM	**Quaternary Alluvium (Qal)**; Poorly graded SAND with SILT, light gray, slightly moist, fine grained sand	
								SM	SILTY SAND, grayish brown, moist, fine grained sand	
	5			R-1	5 8 11	100	12		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
				R-2	5 10 12				SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	10			R-3	8 7 10	97	17		SILTY SAND, medium dense, grayish brown, moist, fine grained sand	
	15			R-4	6 9 13	93	30	CL	SANDY Lean CLAY, stiff, dark gray, moist, very fine to fine grained sand	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-21

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light brownish gray, slightly moist, fine grained sand	
				R-1	5 8 11	101	6		SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	5			R-2	6 7 7	105	13		SILTY SAND, loose, dark grayish brown, moist, fine grained sand, with interbedded clay layers	
				R-3	3 5 8	97	27	CL	SANDY Lean CLAY, medium stiff, dark grayish brown, moist, very fine to fine grained sand, CO = -0.46%	CO
	10			R-4	8 11 13	107	12	SM	SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand	
	15			R-5	7 13 17				SILTY SAND, medium dense, dark grayish brown, moist, fine grained sand, iron oxide staining	
									Drilled to 16.5' Sampled to 16.5' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-22

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0							SM	**Quaternary Alluvium (Qal)**; SILTY SAND, light gray, slightly moist, fine to medium grained sand	
									SILTY SAND, light gray, slightly moist, fine grained sand	
	5			R-1 B-1	8 18 25	104	1	SP-SM	Poorly graded SAND with SILT, medium dense, light brownish gray, slightly moist, fine grained sand	
								SM	SILTY SAND, grayish brown, slightly moist, fine grained sand	
	10			B-2						
								SP-SM	Poorly graded SAND with SILT, grayish brown, moist, fine grained sand	
	15									
	20									
	25								Drilled to 25' Sampled to 25' Groundwater not encountered Backfilled with cuttings	
	30									

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-23

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1			1	SM	**Quaternary Alluvium (Qal)**; SILTY SAND, grayish brown, slightly moist, fine to coarse grained sand, SE = 53	SE, CR
	5			B-2					SILTY SAND, grayish brown, slightly moist, fine grained sand	
	10									
	15								Drilled to 15' Sampled to 15' Groundwater not encountered Backfilled with cuttings	
	20									
	25									
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LB-24

Project No.	12656.001	**Date Drilled**	1-31-20
Project	Pulte Debonne Indio	**Logged By**	JTD
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Boring Location Map	**Sampled By**	JTD

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1			2	SM	**Quaternary Alluvium (Qal)**; SILTY SAND, lighty brownish gray, slightly moist, fine to medium grained sand	
	5								SILTY SAND, light gray, slightly moist, fine grained sand, trace clay	
									SILTY SAND, light brownish gray, slightly moist, fine grained sand	
	10			B-2			4		SILTY SAND, grayish brown, moist, fine grained sand, trace clay, 26% -200	-200
	15									
	20								Drilled to 20' Sampled to 20' Groundwater not encountered Backfilled with cuttings	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

SUMMARY

OF

CONE PENETRATION TEST DATA

Project:

Pulte Del Webb Indio
Indio, CA
January 30, 2020

Prepared for:

Mr. Bob Riha
Leighton & Associates
41715 Enterprise Circle North, Ste 103
Temecula, CA 92590
Office (951) 296-0530 / Fax (951) 296-0534

Prepared by:

KEHOE TESTING & ENGINEERING
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2. **SUMMARY OF FIELD WORK**
3. **FIELD EQUIPMENT & PROCEDURES**
4. **CONE PENETRATION TEST DATA & INTERPRETATION**

APPENDIX

- CPT Plots
- CPT Classification/Soil Behavior Chart
- CPT Data Files (sent via email)

SUMMARY

OF

CONE PENETRATION TEST DATA

1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the Pulte Del Webb Indio project located in Indio, California. The work was performed by Kehoe Testing & Engineering (KTE) on January 30, 2020. The scope of work was performed as directed by Leighton & Associates personnel.

2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at 20 locations to determine the soil lithology. A summary is provided in **TABLE 2.1**.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	20	
CPT-2	20	
CPT-3	20	
CPT-4	20	
CPT-5	20	
CPT-6	20	
CPT-7	20	
CPT-8	20	
CPT-9	20	
CPT-10	50	
CPT-11	20	
CPT-12	20	
CPT-13	20	
CPT-14	20	
CPT-15	20	
CPT-16	20	
CPT-17	20	
CPT-18	20	
CPT-19	20	
CPT-20	20	

TABLE 2.1 - Summary of CPT Soundings

3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 15 cm^2 cone and recorded the following parameters at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for up to 2 years for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

4. CONE PENETRATION TEST DATA & INTERPRETATION

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil behavior type on the CPT plots is derived from the attached CPT SBT plot (Robertson, "Interpretation of Cone Penetration Test…", 2009) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance (qc), sleeve friction (fs), and penetration pore pressure (u). The friction ratio (Rf), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

The CPT data files have also been provided. These files can be imported in CPeT-IT (software by GeoLogismiki) and other programs to calculate various geotechnical parameters. It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and u. In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

KEHOE TESTING & ENGINEERING

Steven P. Kehoe
President

APPENDIX

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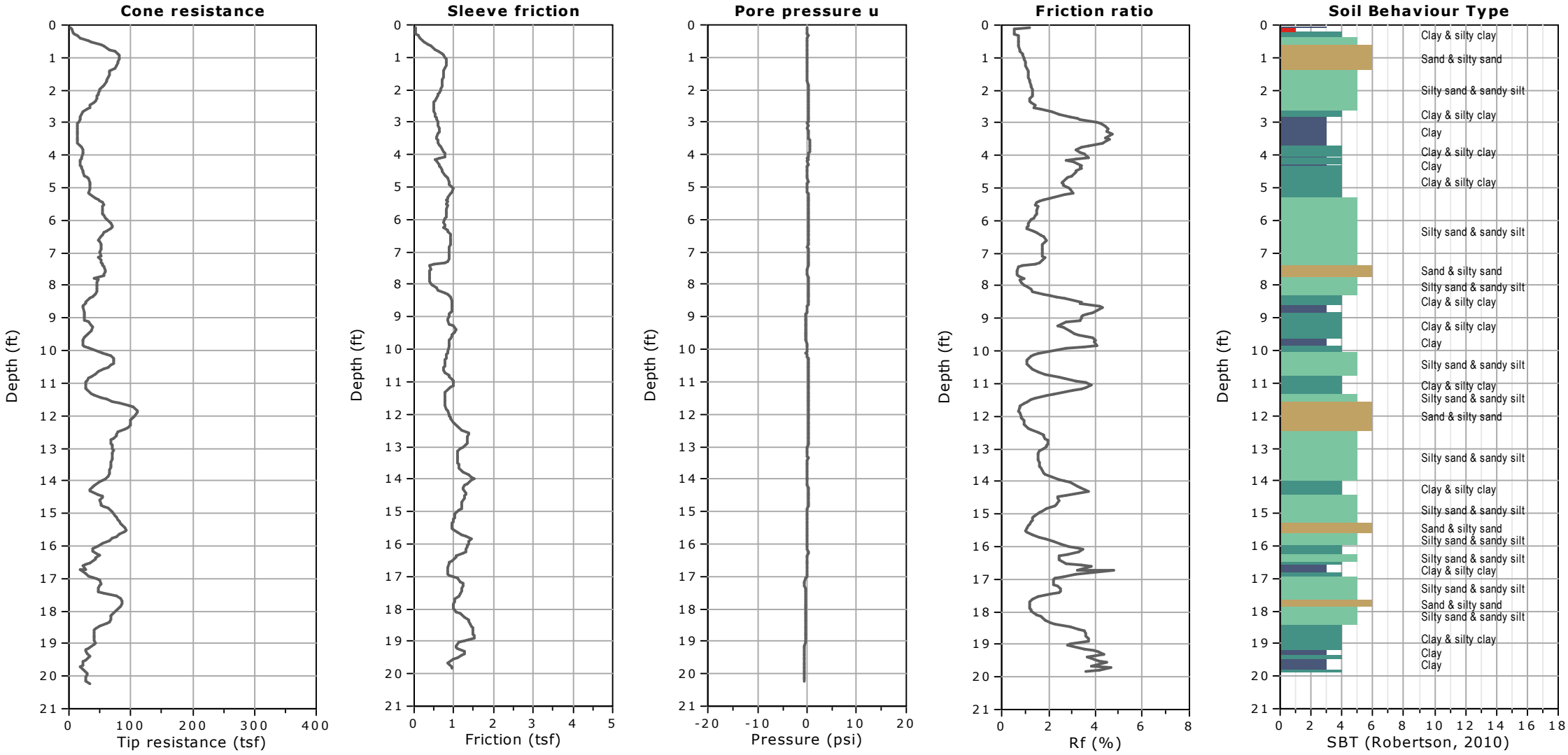
www.kehoetesting.com

Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-1
Total depth: 20.23 ft, Date: 1/30/2020



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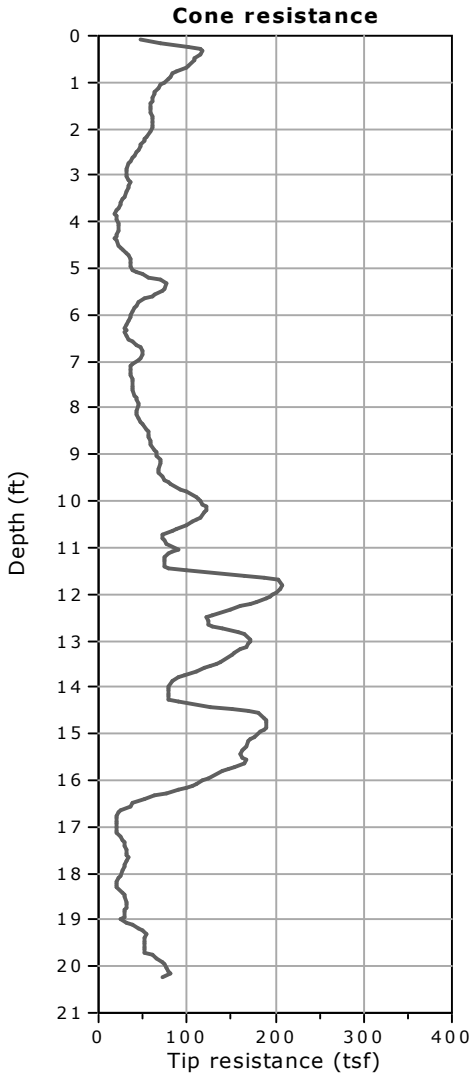
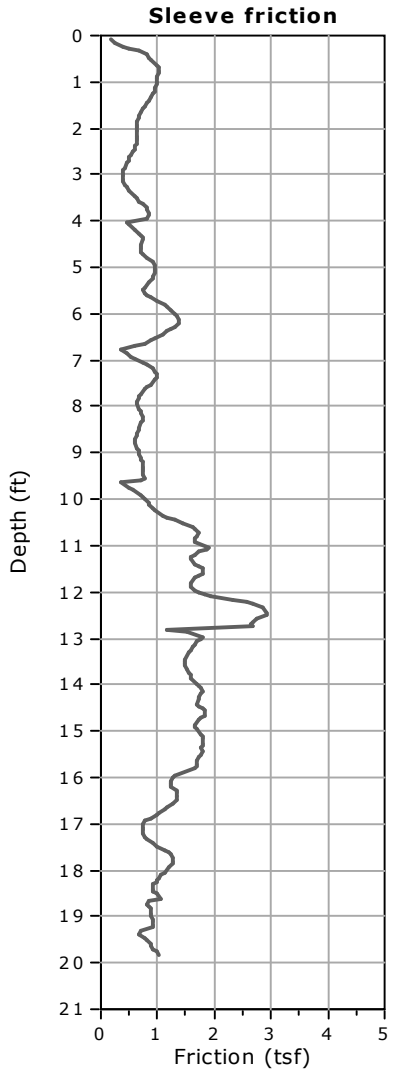
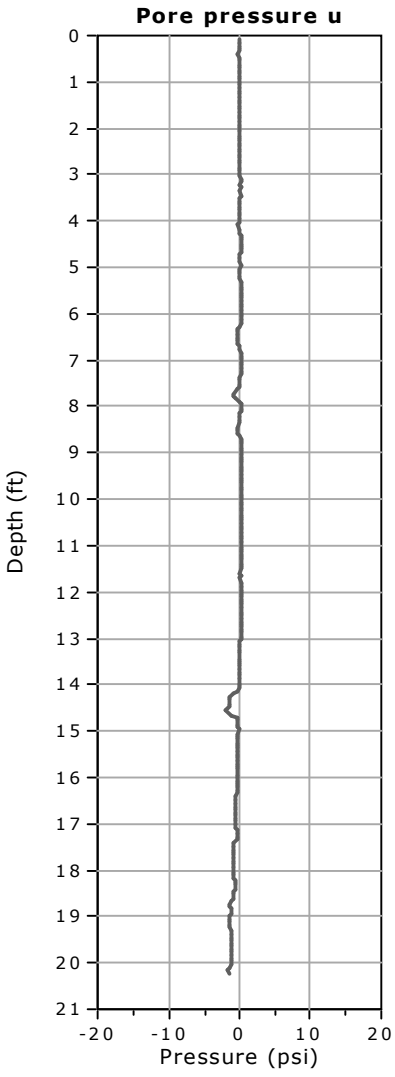
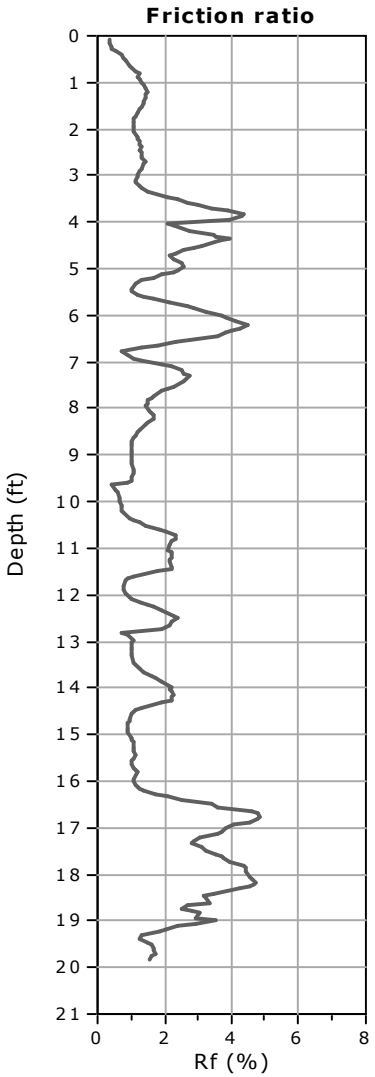
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

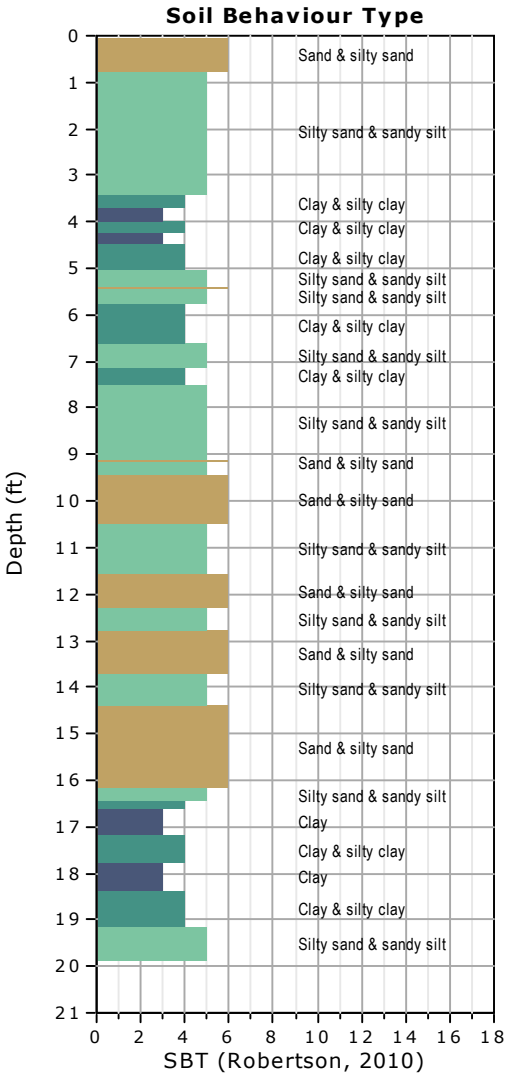
CPT-2
Total depth: 20.24 ft, Date: 1/30/2020











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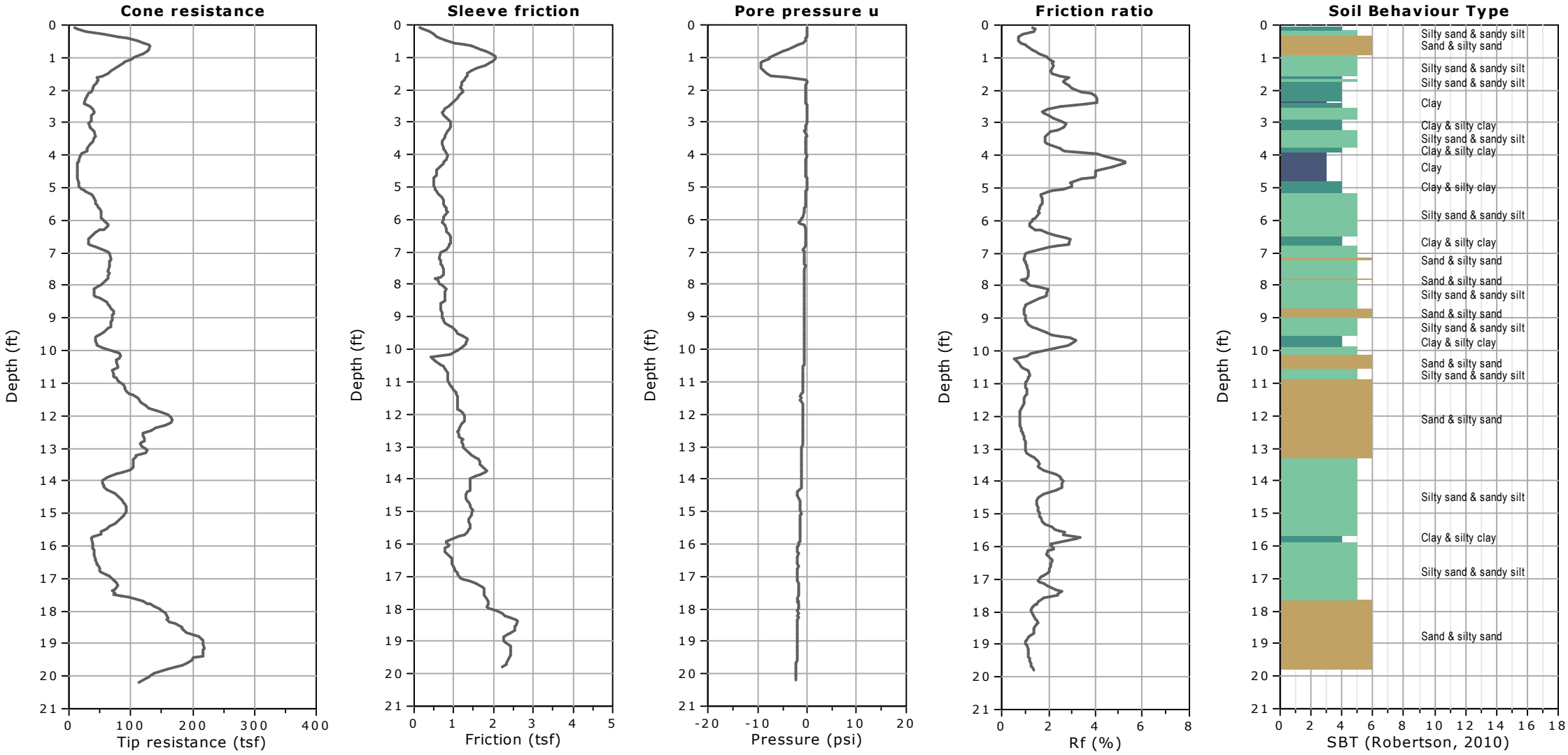
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-3
Total depth: 20.18 ft, Date: 1/30/2020



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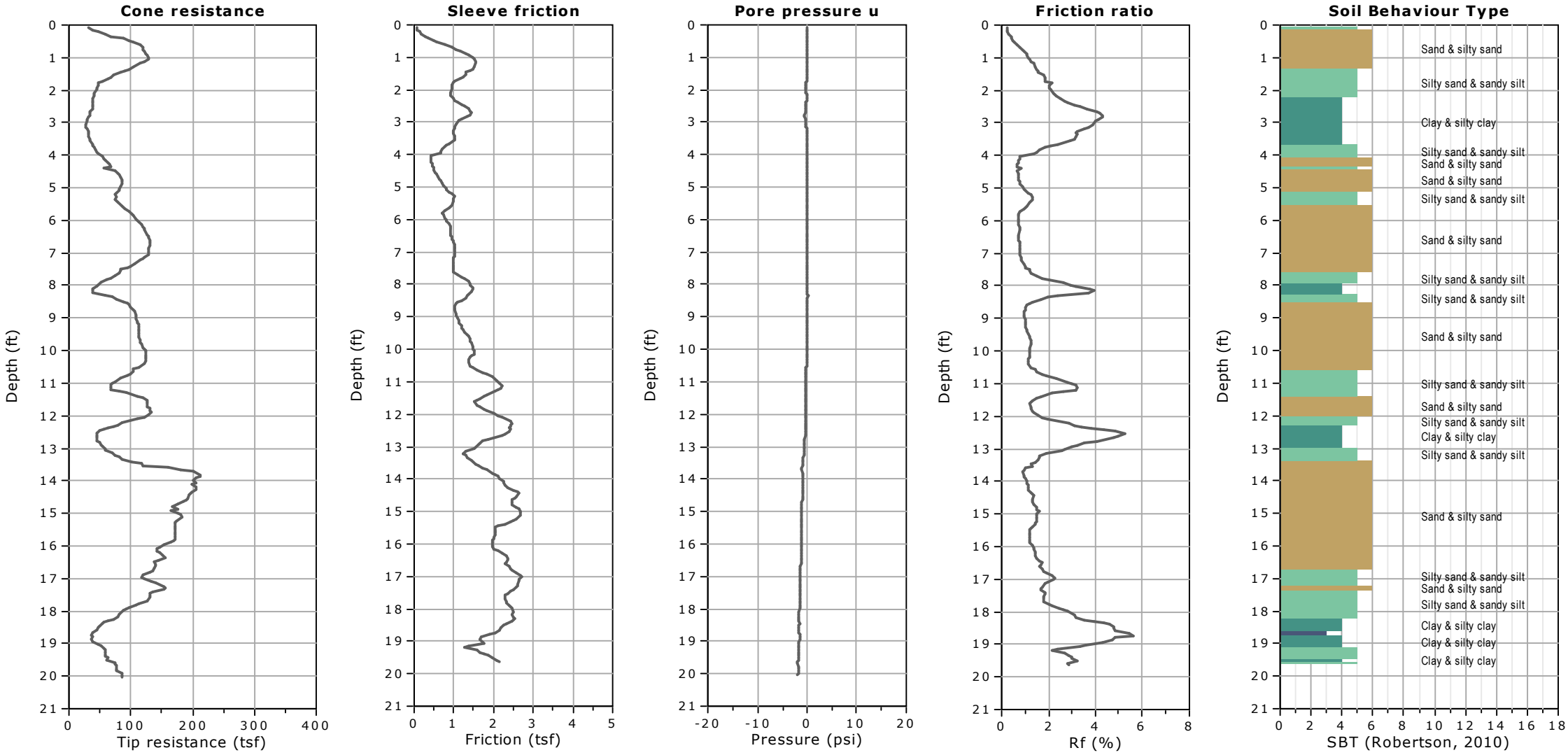
Location: **Indio, CA**

CPT-4
Total depth: 20.02 ft, Date: 1/30/2020



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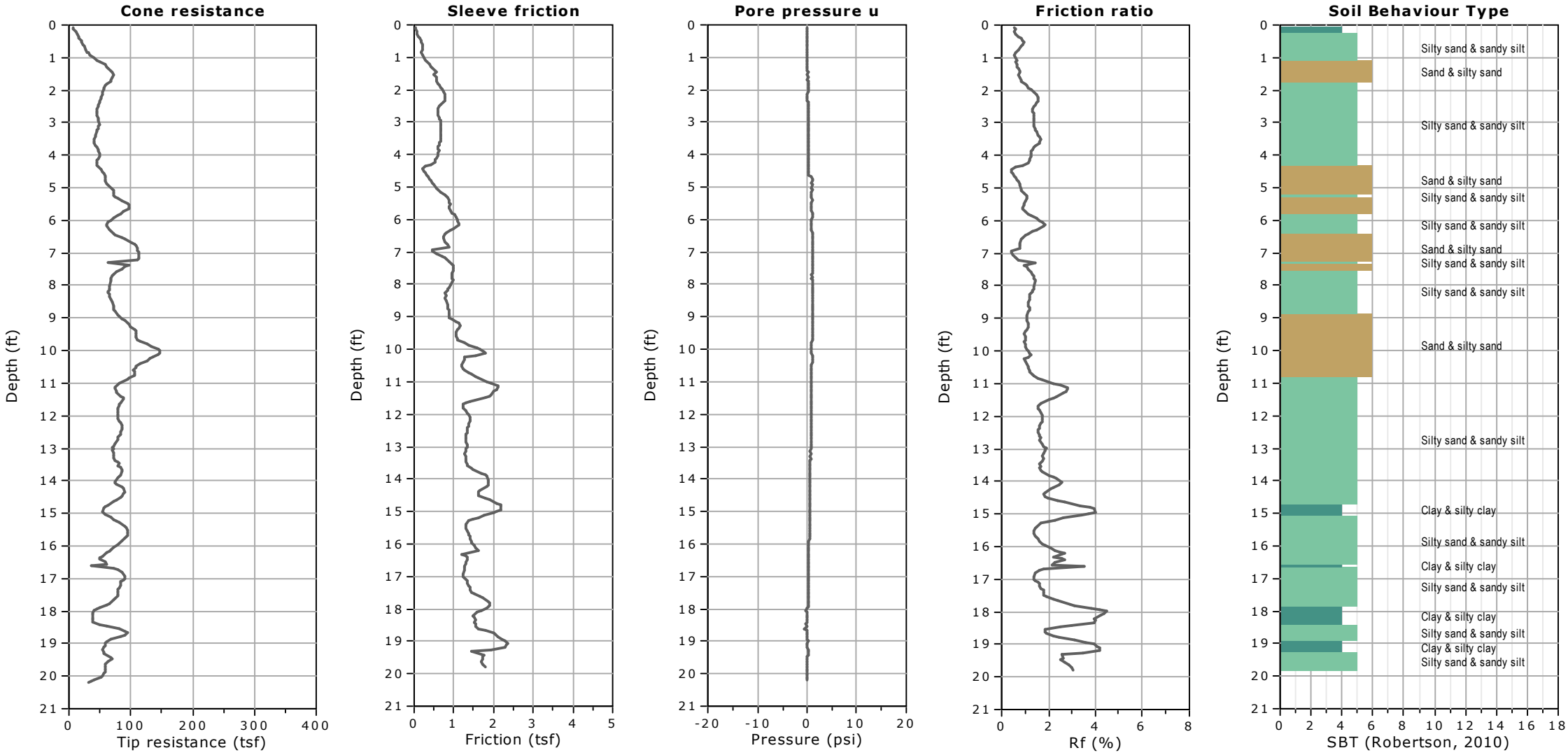
Location: **Indio, CA**

CPT-5
Total depth: 20.21 ft, Date: 1/30/2020



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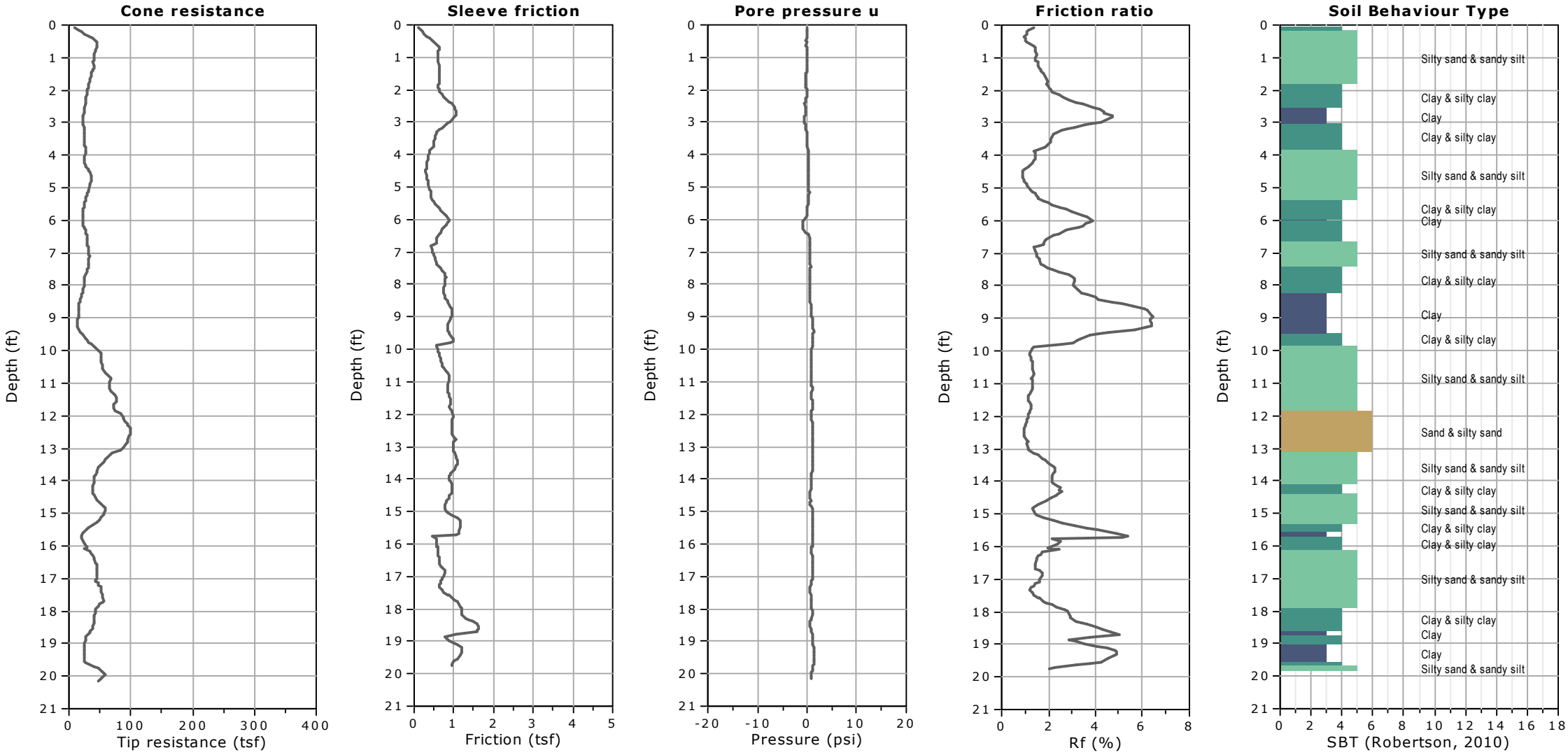
Location: **Indio, CA**

CPT-6
Total depth: 20.15 ft, Date: 1/30/2020



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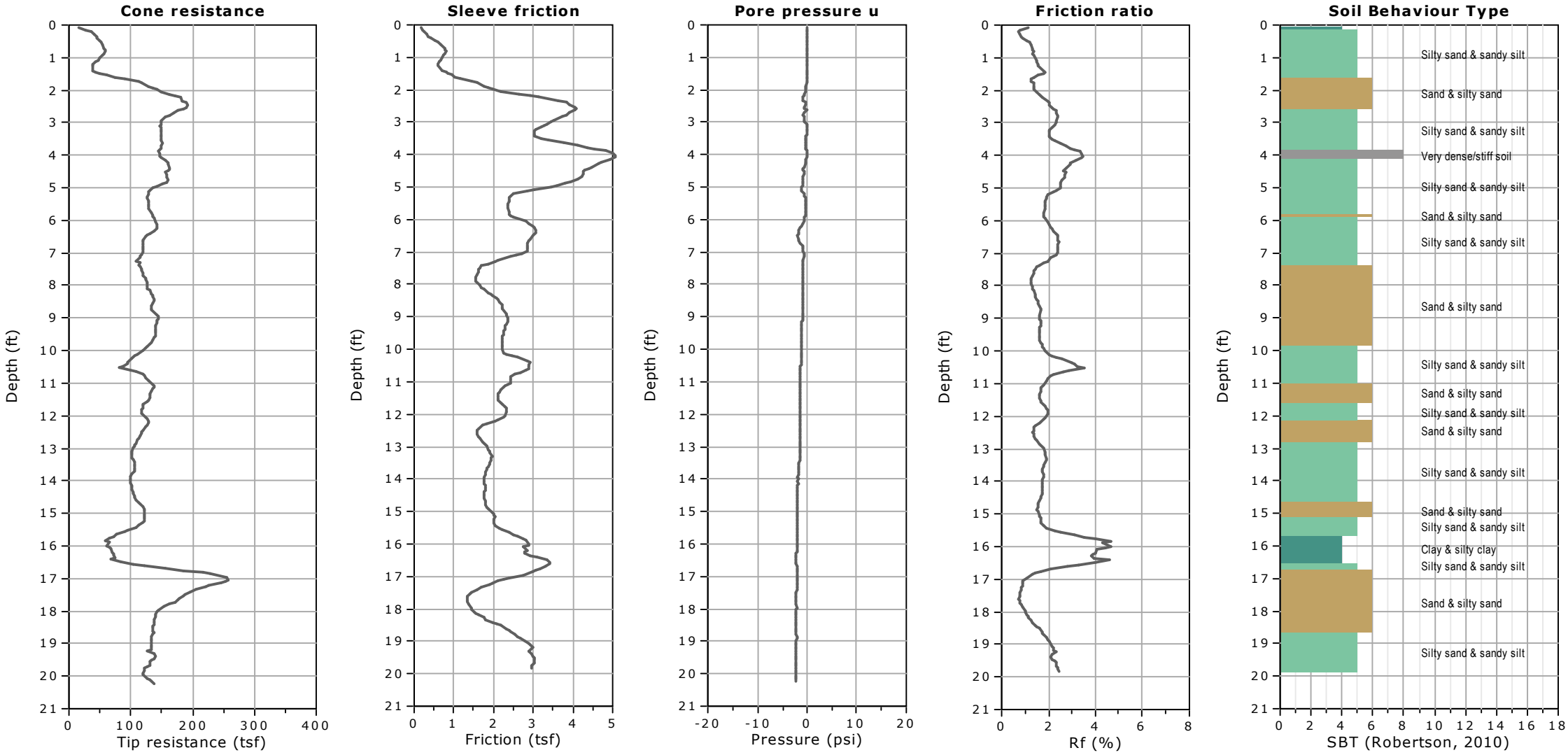
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-7
Total depth: 20.22 ft, Date: 1/30/2020



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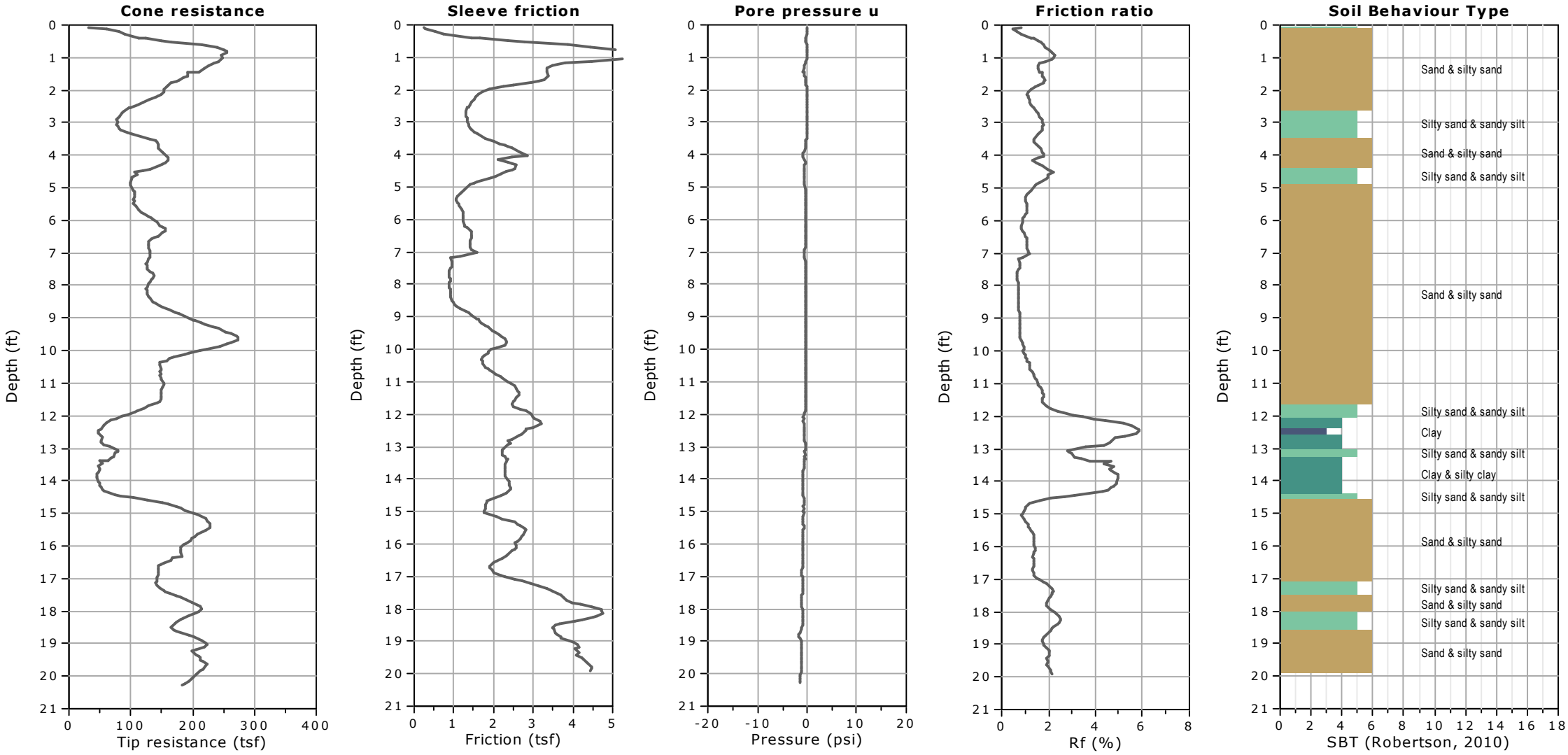
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-8
Total depth: 20.29 ft, Date: 1/30/2020



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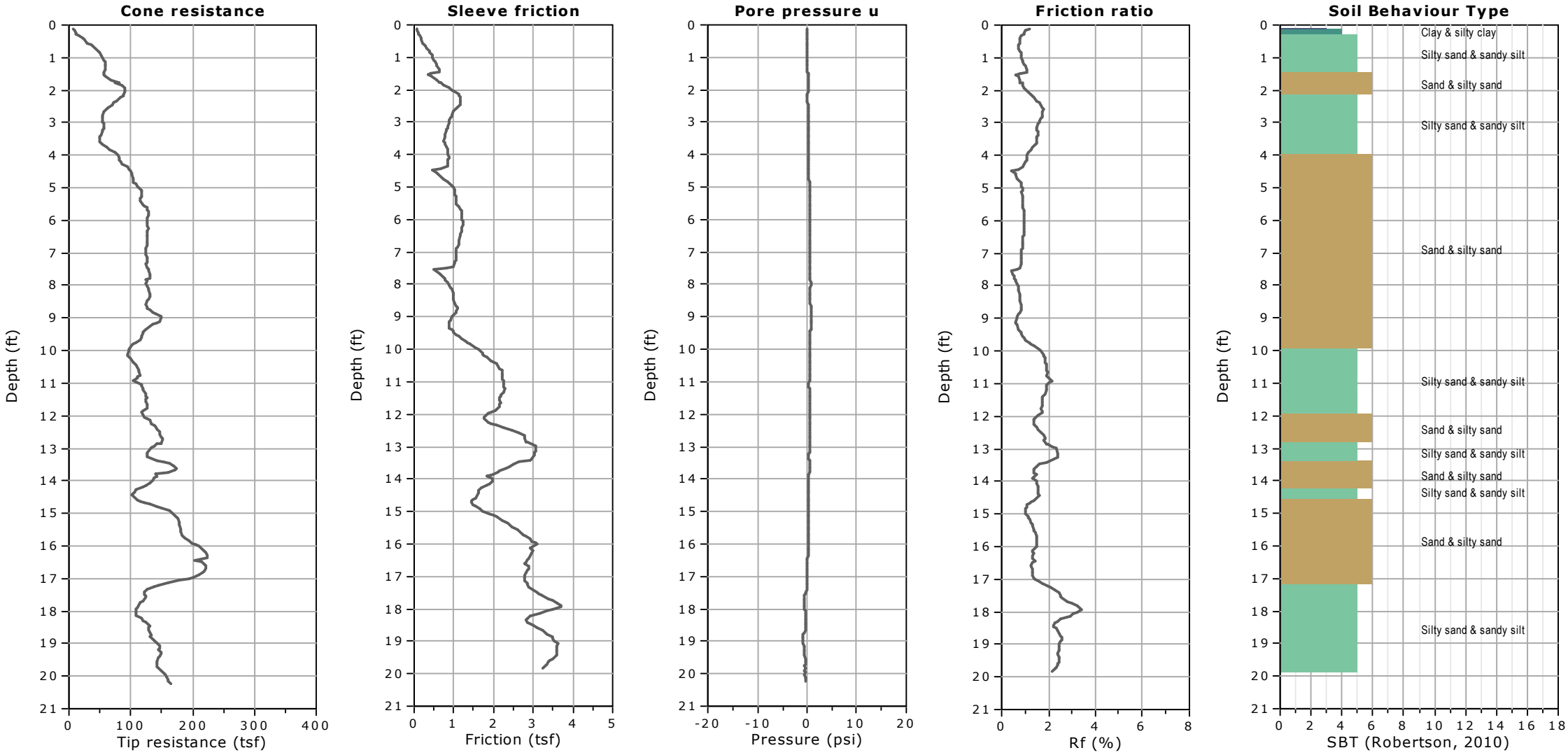
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-9
Total depth: 20.24 ft, Date: 1/30/2020



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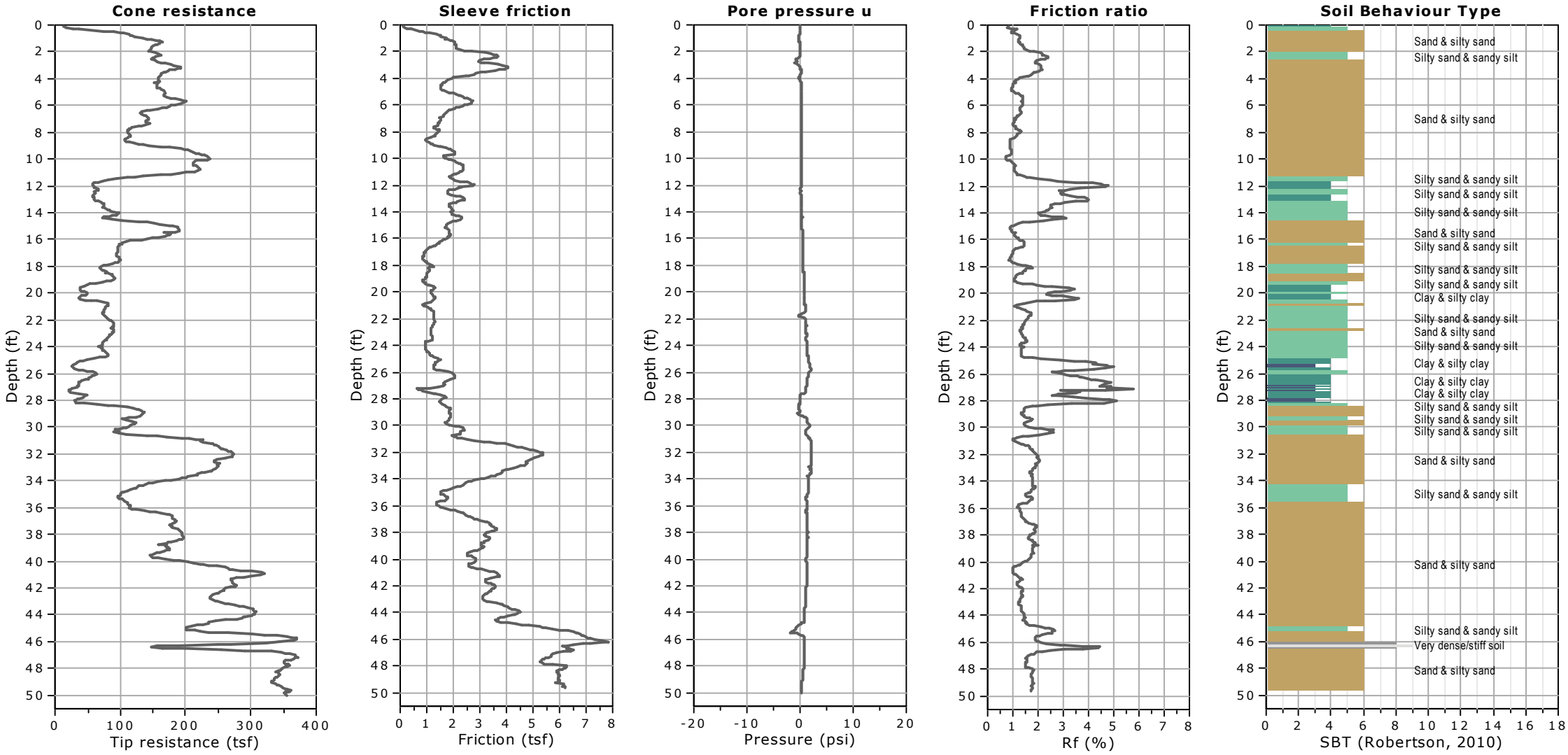
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-10
Total depth: 50.01 ft, Date: 1/30/2020



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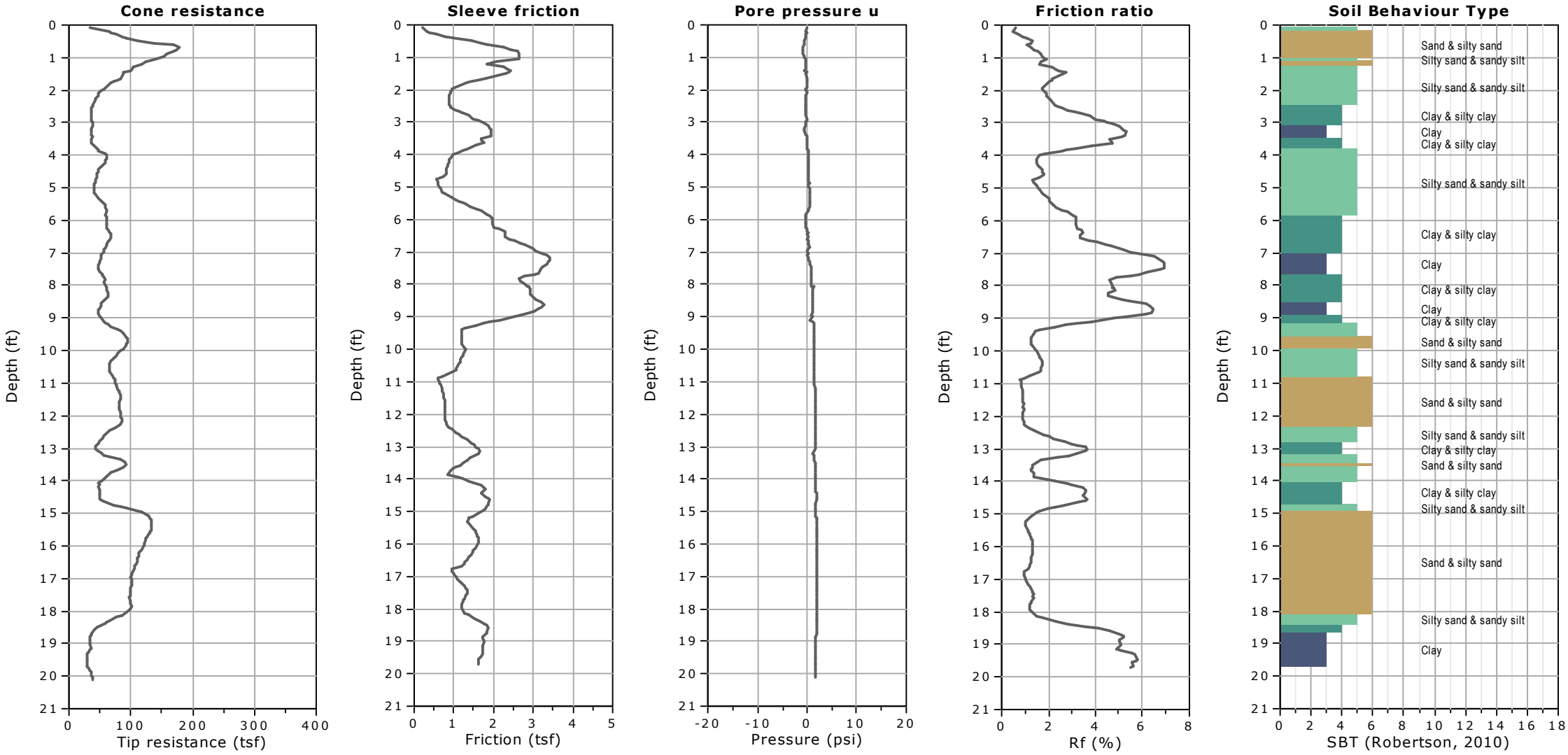
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-11
Total depth: 20.11 ft, Date: 1/30/2020



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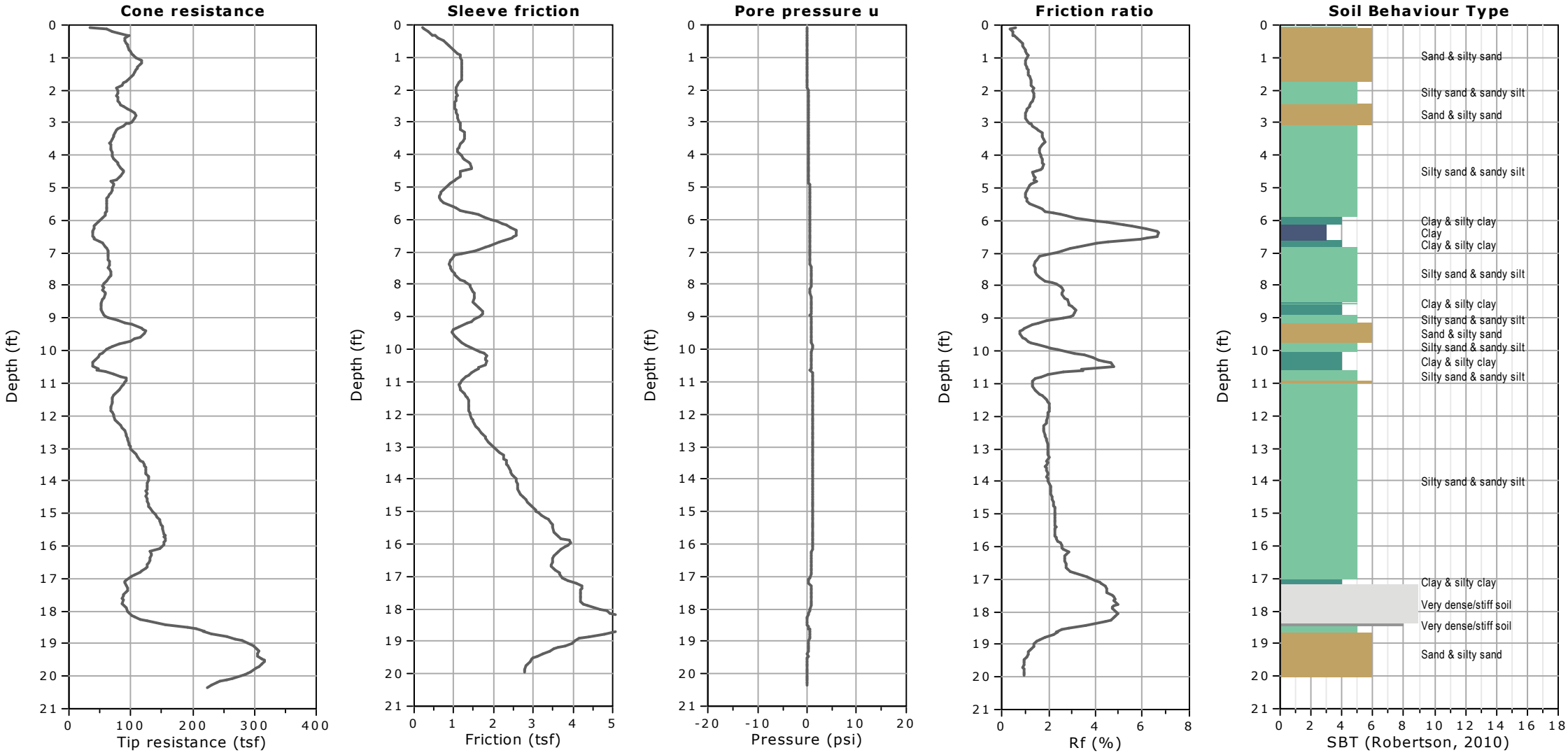
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-12
Total depth: 20.34 ft, Date: 1/30/2020



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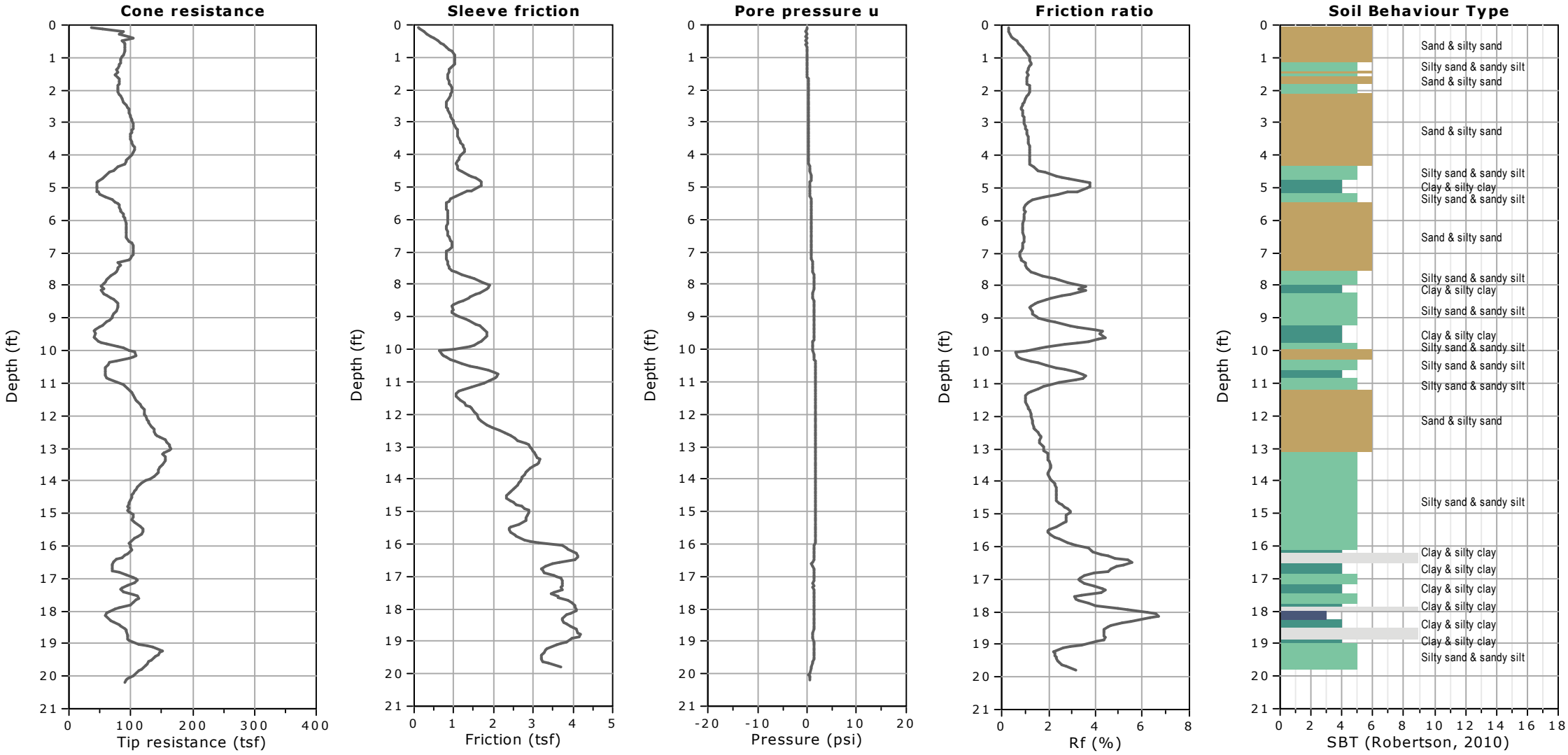
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-13
Total depth: 20.18 ft, Date: 1/30/2020



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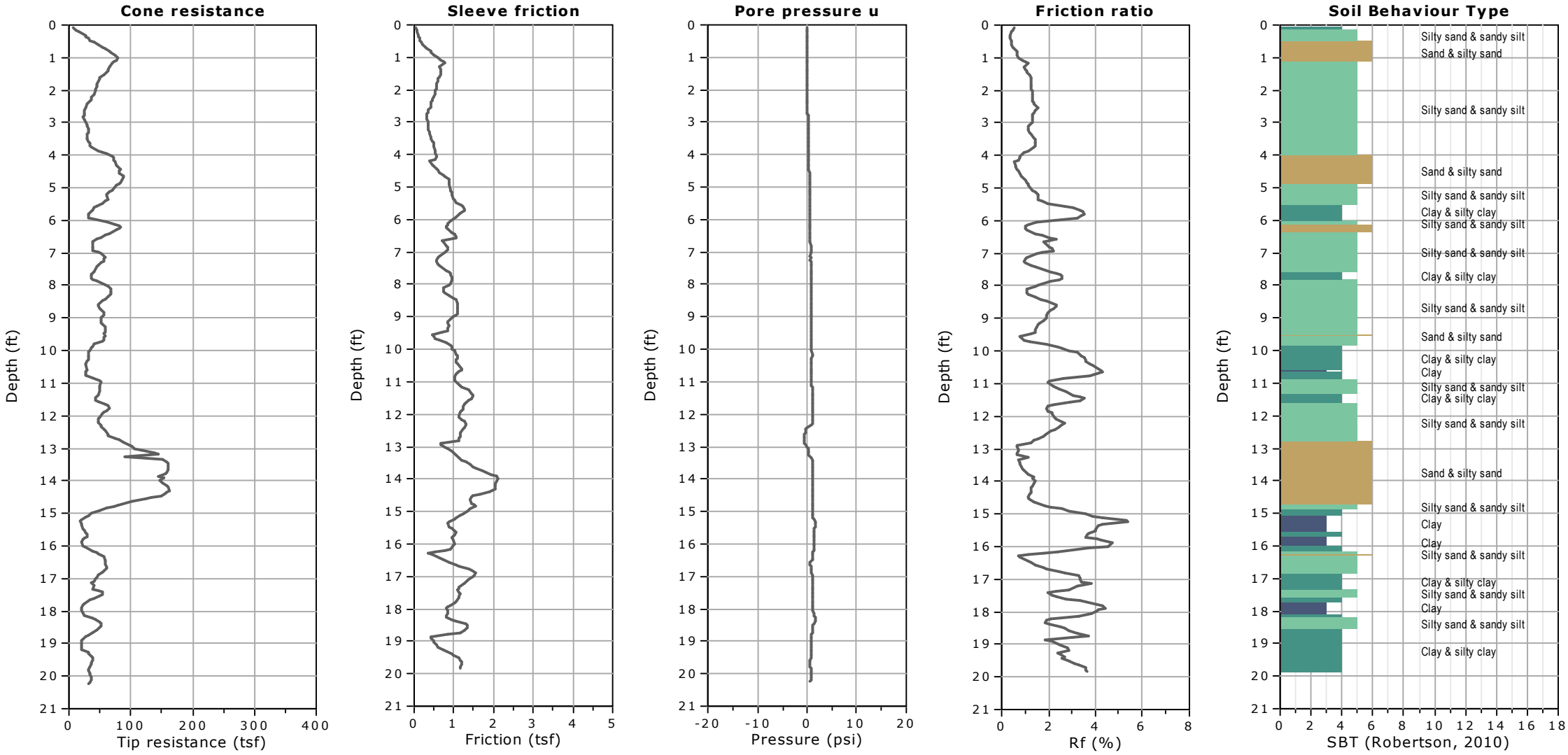
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-14
Total depth: 20.24 ft, Date: 1/31/2020



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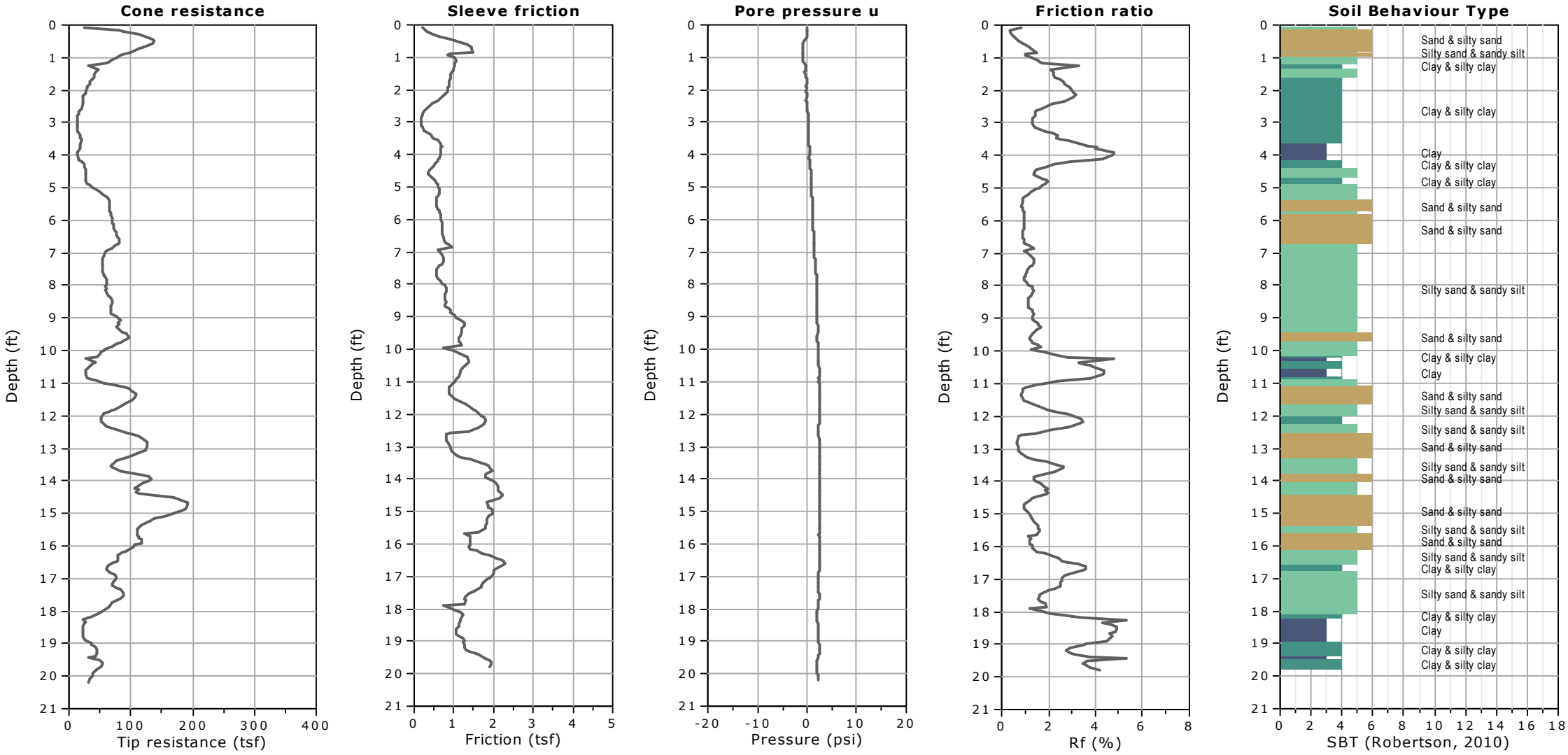
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-15
Total depth: 20.18 ft, Date: 1/30/2020



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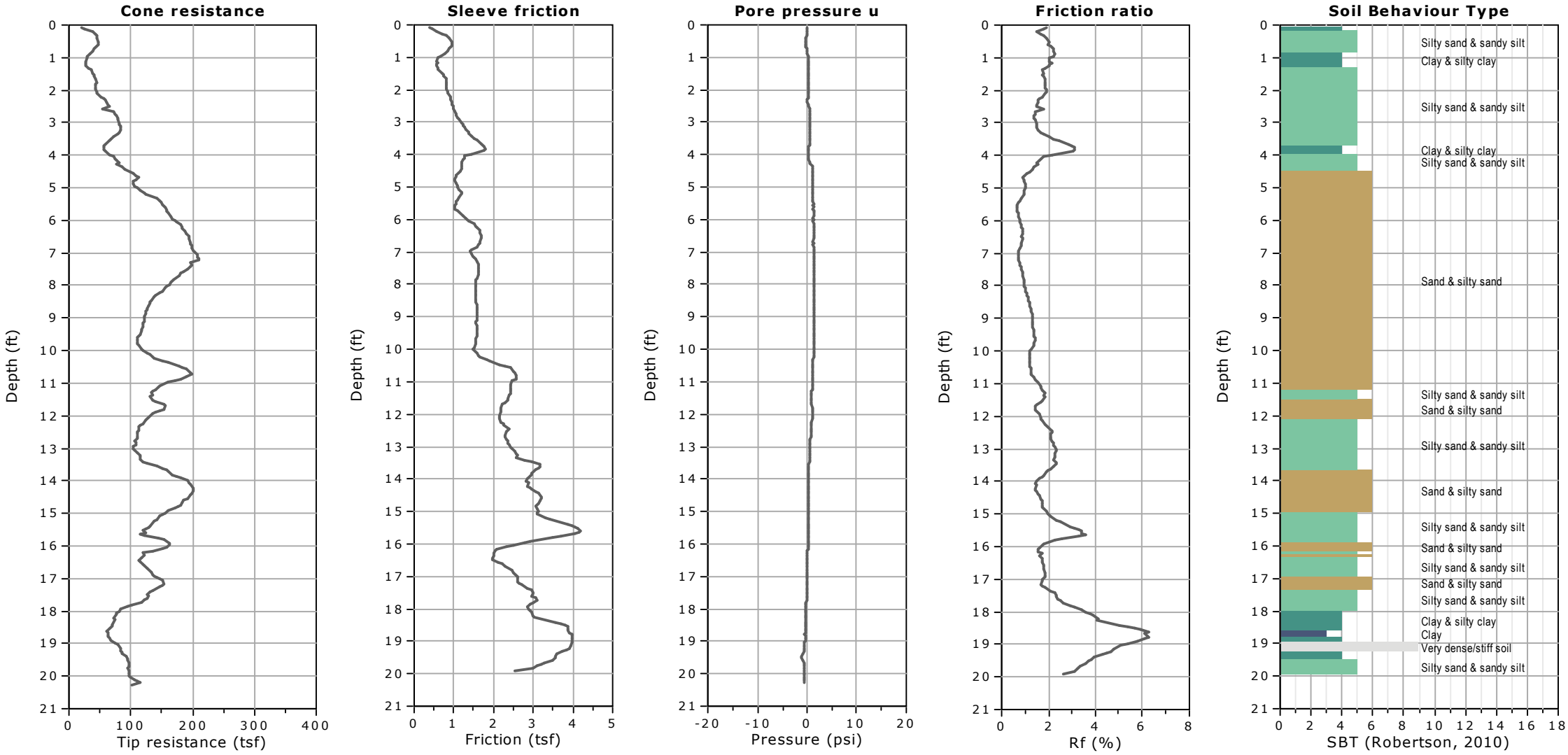
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-16
Total depth: 20.28 ft, Date: 1/30/2020



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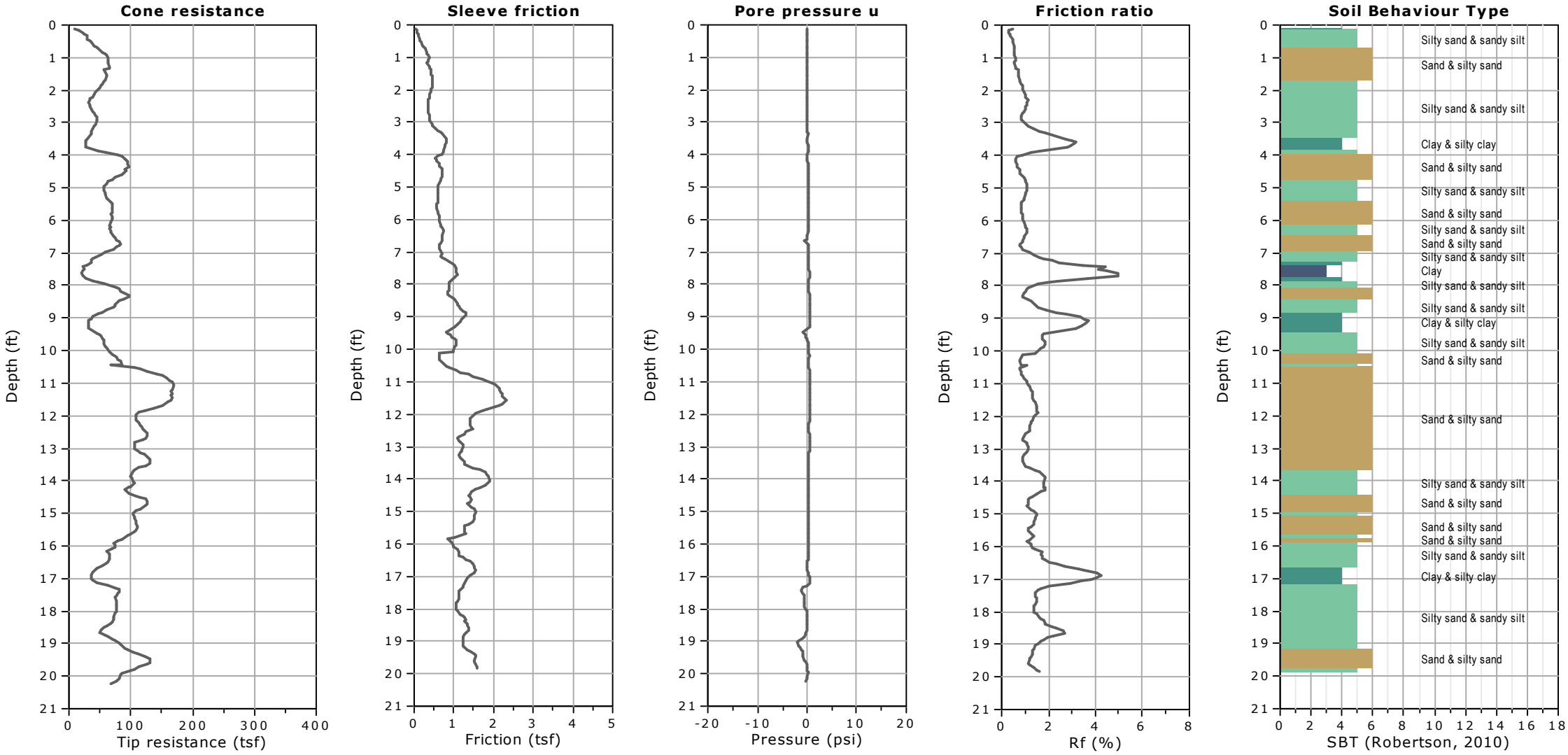
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-17
Total depth: 20.23 ft, Date: 1/31/2020



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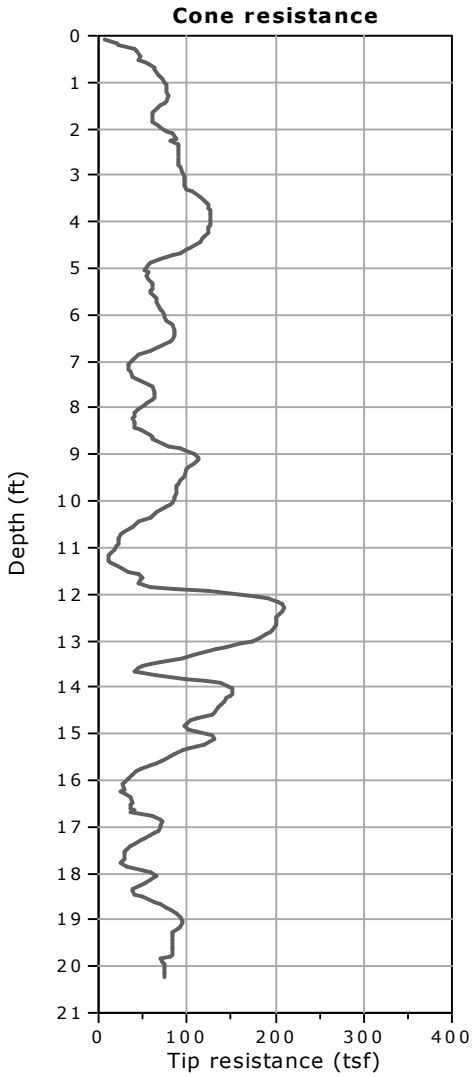
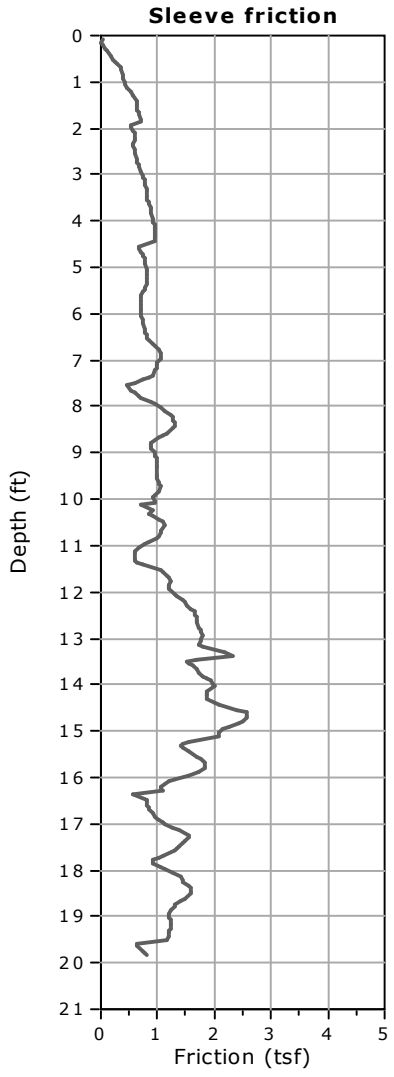
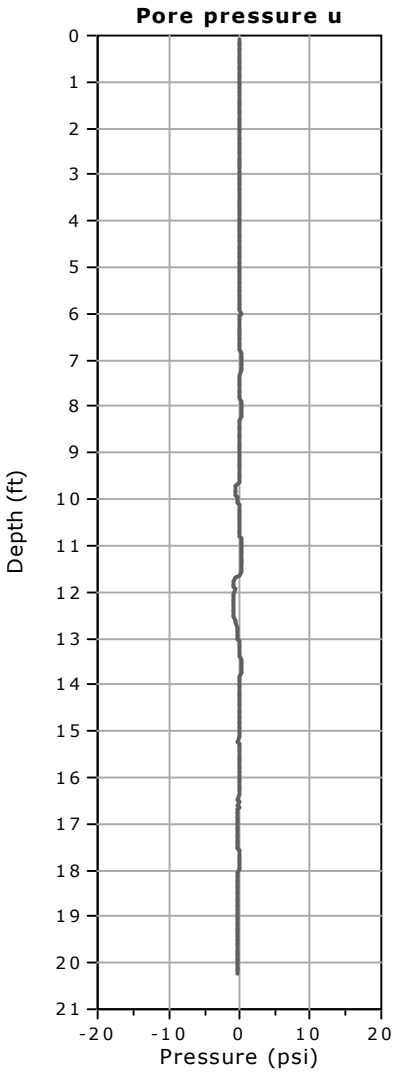
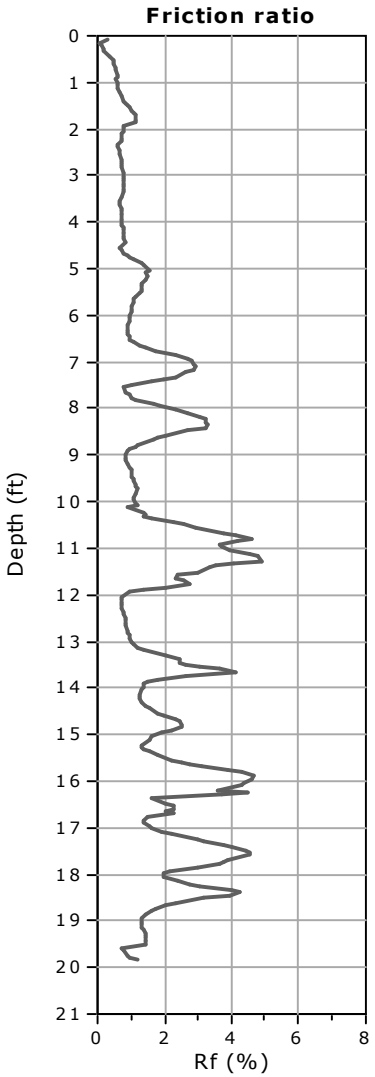
Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

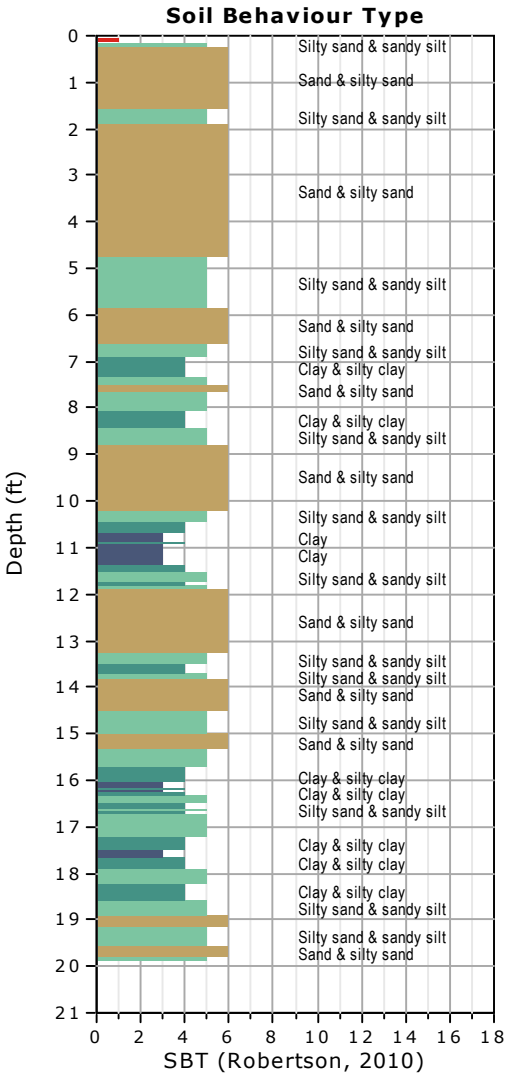
CPT-18
Total depth: 20.23 ft, Date: 1/31/2020











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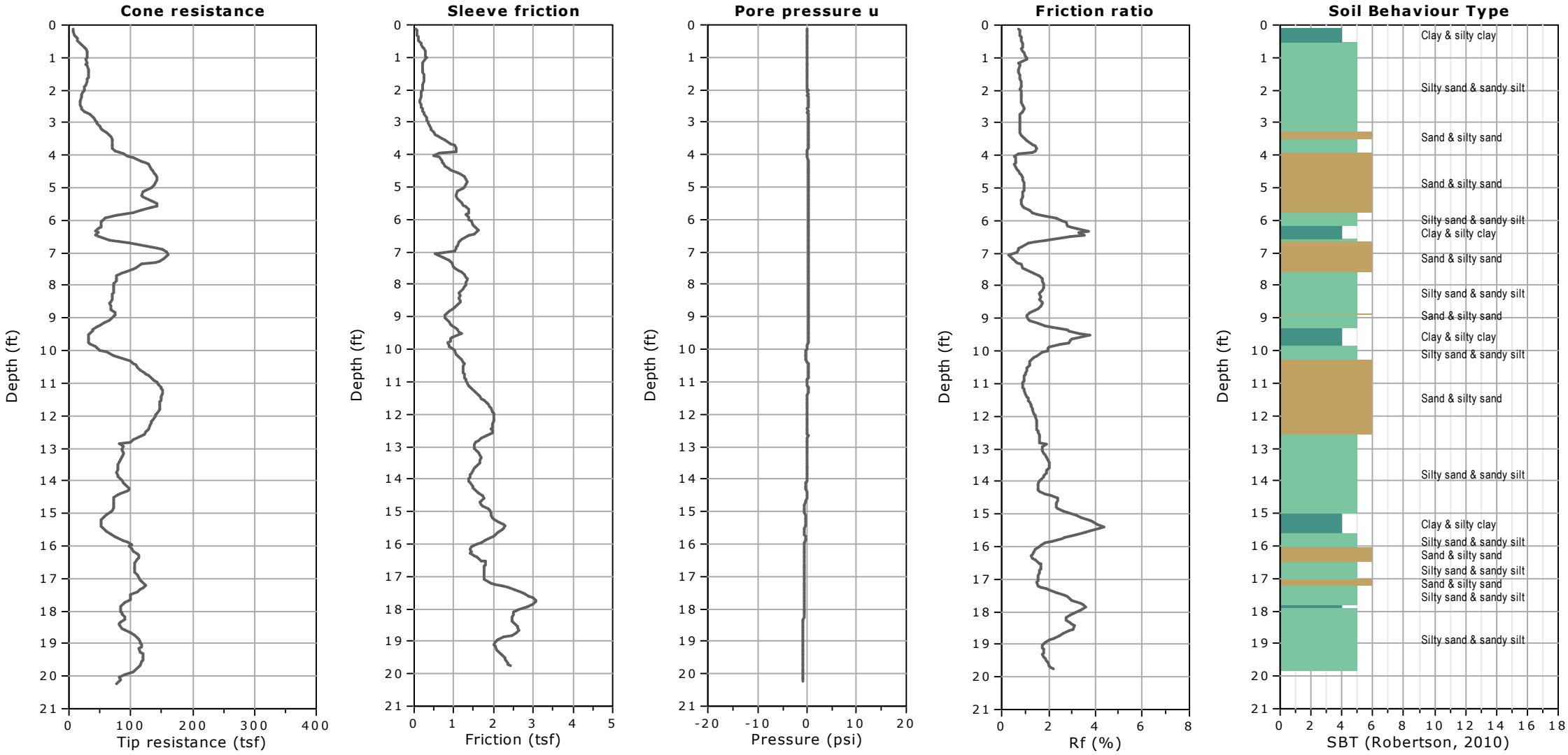
steve@kehoetesting.com
www.kehoetesting.com

Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

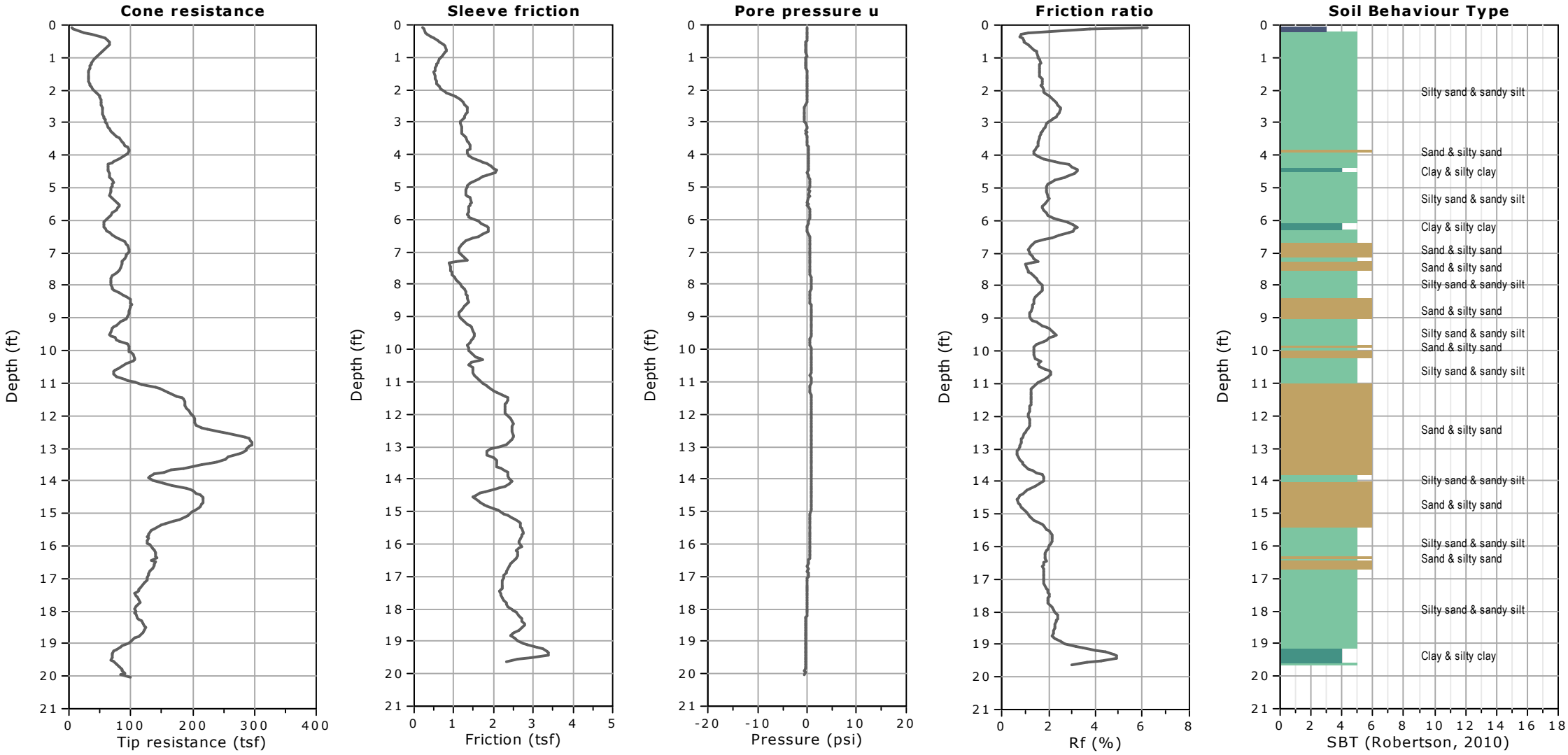
CPT-19
Total depth: 20.22 ft, Date: 1/31/2020



Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Leighton & Associates / Pulte Del Webb**
Location: **Indio, CA**

CPT-20
Total depth: 20.03 ft, Date: 1/31/2020



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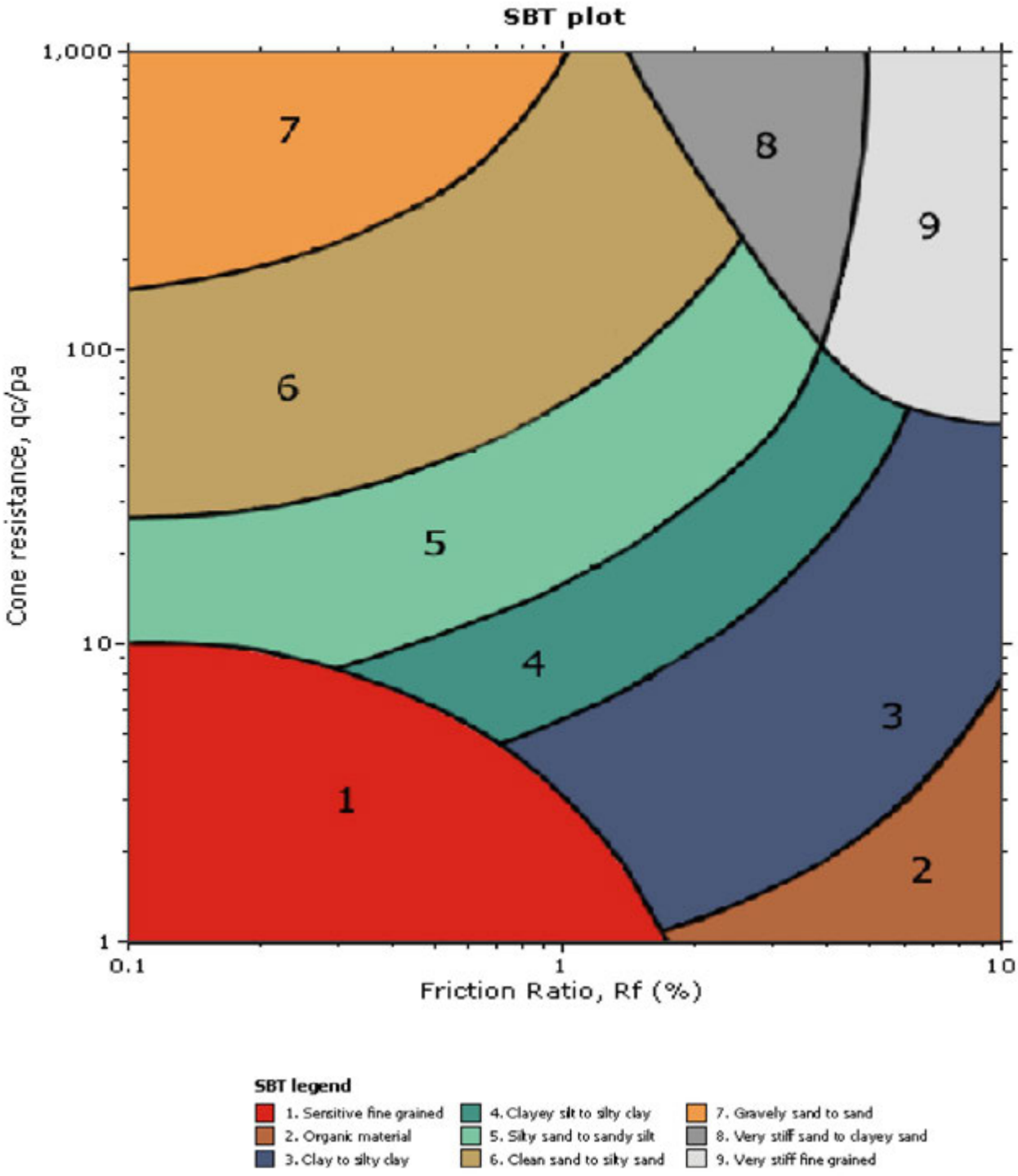
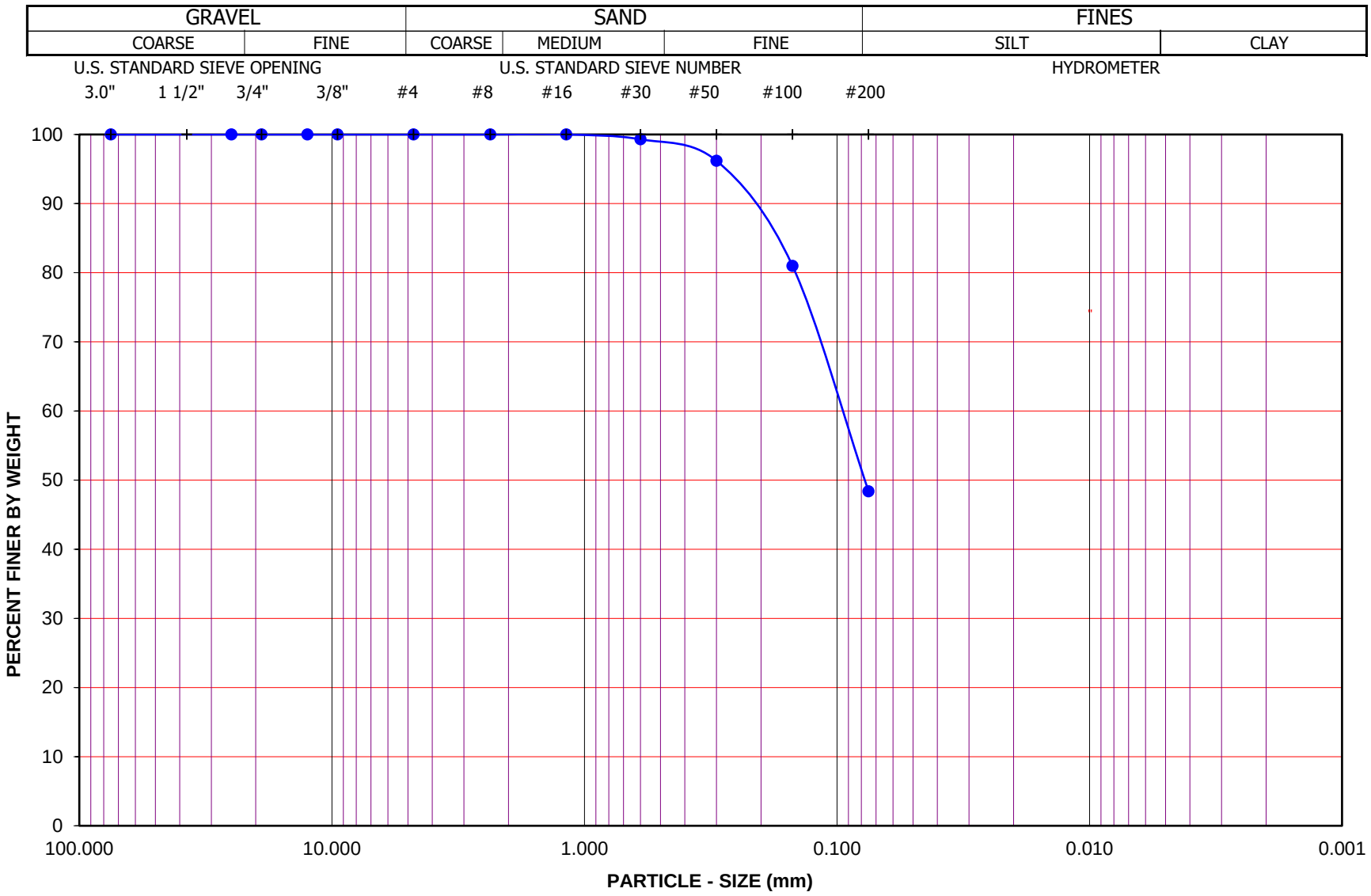


APPENDIX B

Results of Geotechnical Laboratory Testing



Project Name: Pulte Del Webb Indio DD

Project No.: 12656.001

Boring No.: LB-1 Sample No.: B-1

Depth (feet): 5.0 - 10.0 Soil Type : SM

Soil Identification: Silty Sand (SM), Dark Olive Brown.

GR:SA:FI : (%) 0 : 52 : 48

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Feb-20

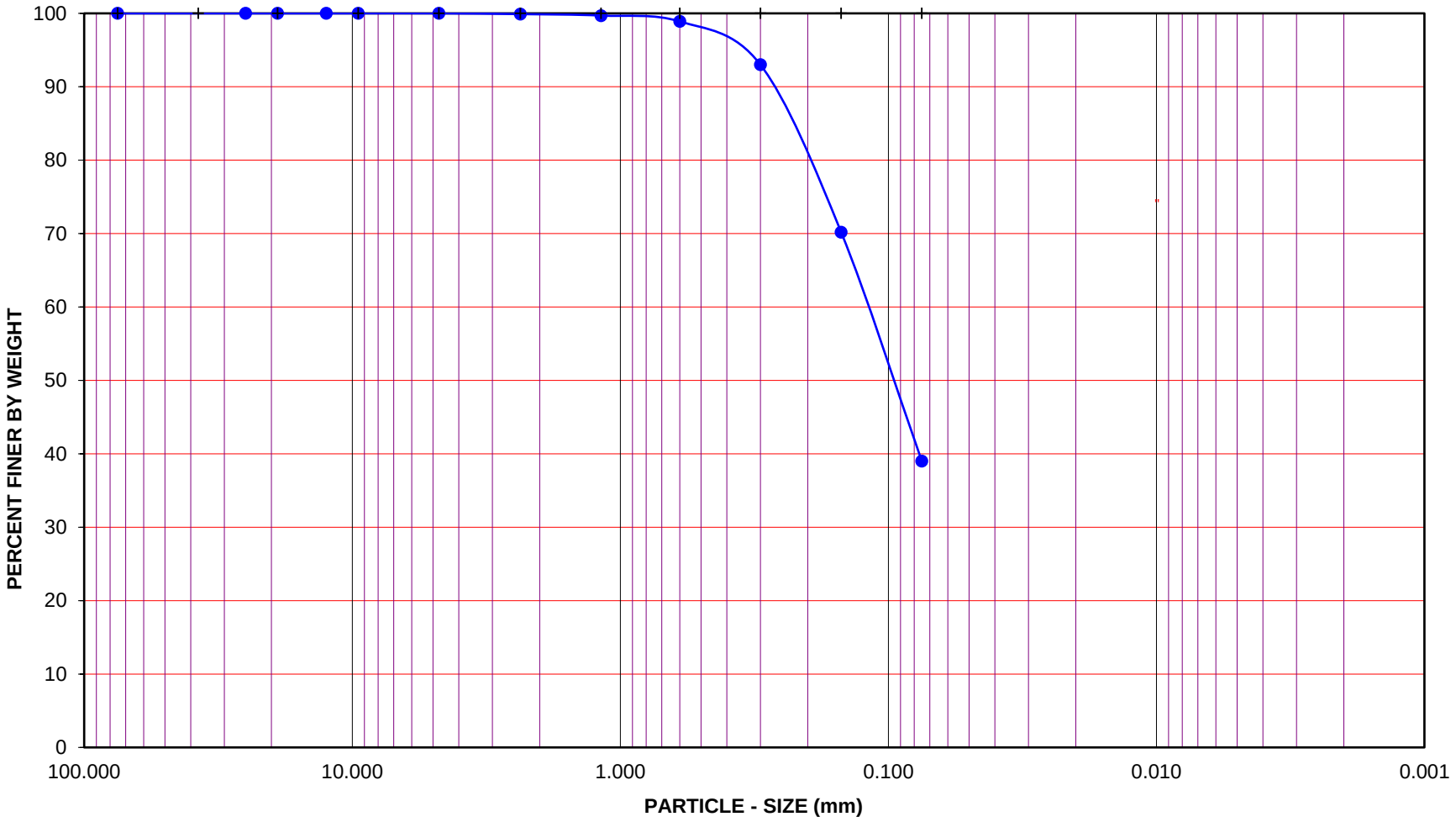
Sieve; LB-1, B-1 (01-30 & 01-31-20)

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING: 3.0" 1 1/2" 3/4" 3/8"

U.S. STANDARD SIEVE NUMBER: #4 #8 #16 #30 #50 #100 #200

HYDROMETER



Project Name: Pulte Del Webb Indio DD

Project No.: 12656.001

Boring No.: LB-3 Sample No.: B-1

Depth (feet): 0 - 5.0 Soil Type : SM

Soil Identification: Silty Sand (SM), Yellowish Brown.

GR:SA:FI : (%) 0 : 61 : 39

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

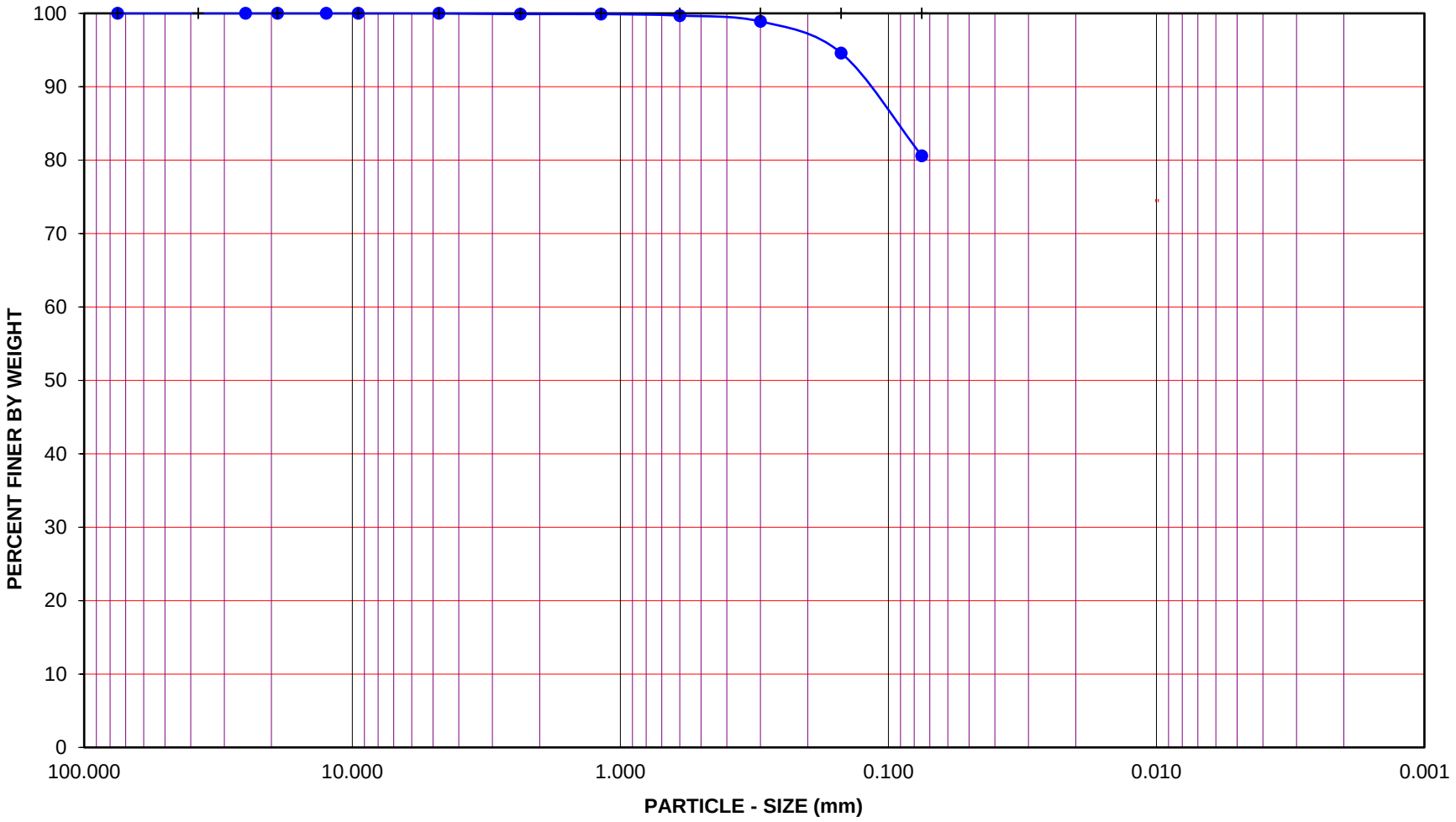
Feb-20

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING: 3.0" 1 1/2" 3/4" 3/8"

U.S. STANDARD SIEVE NUMBER: #4 #8 #16 #30 #50 #100 #200

HYDROMETER



Project Name: Pulte Del Webb Indio DD

Project No.: 12656.001

Boring No.: LB-8 Sample No.: B-1

Depth (feet): 0 - 5.0 Soil Type : (ML)s

Soil Identification: Silt with Sand (ML)s, Dark Yellowish Brown.

GR:SA:FI : (%) 0 : 19 : 81

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Feb-20

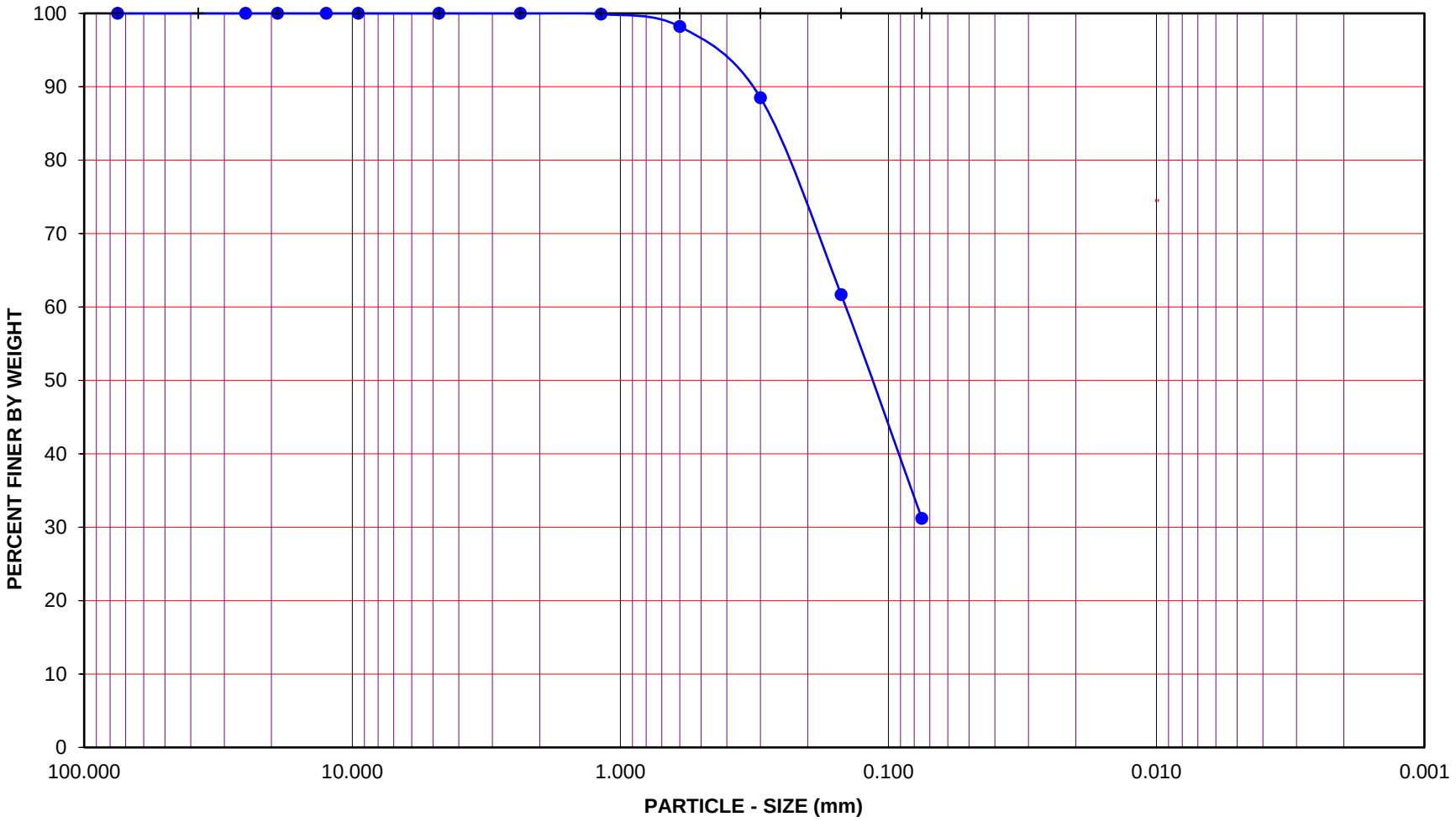
Sieve; LB-8, B-1 (01-30 & 01-31-20)

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING: 3.0" 1 1/2" 3/4" 3/8"

U.S. STANDARD SIEVE NUMBER: #4 #8 #16 #30 #50 #100 #200

HYDROMETER



Project Name: Pulte Del Webb Indio DD

Project No.: 12656.001

Boring No.: LB-17 Sample No.: B-1

Depth (feet): 5.0 - 10.0 Soil Type : SM

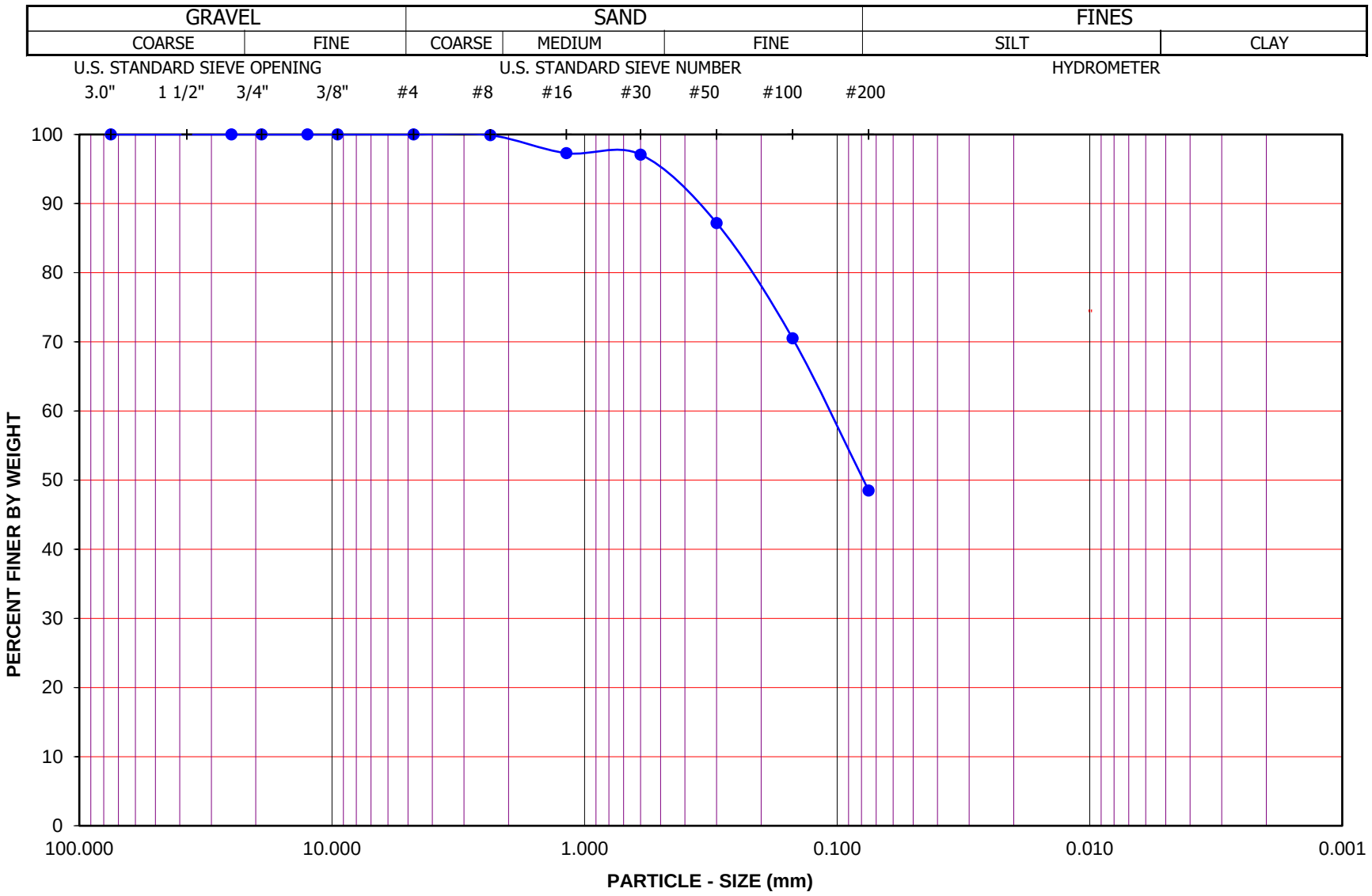
Soil Identification: Silty Sand (SM), Yellowish Brown.

GR:SA:FI : (%) 0 : 69 : 31

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Feb-20



Project Name: Pulte Del Webb Indio DD

Project No.: 12656.001

Boring No.: LB-18 Sample No.: B-1

Depth (feet): 0 - 5.0 Soil Type : SM

Soil Identification: Silty Sand (SM), Yellowish Brown.

GR:SA:FI : (%) 0 : 51 : 49

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Feb-20

Boring No.	LB-24							
Sample No.	B-2							
Depth (ft.)	10.0 - 15.0							
Sample Type	BULK							
Visual Soil Classification	SM							
Soak Time (min)	10							
Moisture Correction								
Wet Weight of Soil + Container (gm.)	658.2							
Dry Weight of Soil + Container (gm.)	642.0							
Weight of Container (gm)	277.2							
Moisture Content (%)	4.4							
Container No.:	ABC							
Sample Dry Weight Determination								
Weight of Sample + Container (gm.)	642.0							
Weight of Container (gm.)	277.2							
Weight of Dry Sample (gm.)	364.8							
Container No.:	ABC							
After Wash								
Dry Weight of Sample + Container (gm)	548.7							
Weight of Container (gm)	277.2							
Dry Weight of Sample (gm)	271.5							
% Passing No. 200 Sieve	**26**							
% Retained No. 200 Sieve	74							

PERCENT PASSING No. 200 SIEVE
ASTM D 1140

Leighton

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Client Name: Pulte Home Company, LLC
Tested By: G. Davila Date: 02/12/20

Rev. 08-04

Leighton

SAND EQUIVALENT TEST

ASTM D 2419 / DOT CA Test 217

Project Name:	Pulte Del Webb Indio DD	Tested By:	G. Davila	Date:	2/13/20
Project No. :	12656.001	Computed By:	G. Davila	Date:	2/13/20
Client:	Pulte Home Company, LLC	Checked By:	M. Vinet	Date:	2/20/20

Boring No.	Sample No.	Depth (ft.)	Soil Description	T1	T2	T3	T4	R1	R2	SE	Average SE
LB-17	B-1	5.0 - 10.0	Silty Sand (SM), Yellowish Brown.	08:00	08:10	08:12	08:32	10.9	1.5	14	**13**
				08:02	08:12	08:14	08:34	11.0	1.3	12	

T1 = Starting Time

T2 = (T1 + 10 min) Begin Agitation

T3 = Settlement Starting Time

T4 = (T3 + 20 min) Take Clay Reading (R1)

Sand Equivalent = R2 / R1 * 100

Record SE as Next Higher Integer

Leighton

SAND EQUIVALENT TEST

ASTM D 2419 / DOT CA Test 217

Project Name:	Pulte Del Webb Indio DD	Tested By:	G. Davila	Date:	2/13/20
Project No. :	12656.001	Computed By:	G. Davila	Date:	2/13/20
Client:	Pulte Home Company, LLC	Checked By:	M. Vinet	Date:	2/20/20

Boring No.	Sample No.	Depth (ft.)	Soil Description	T1	T2	T3	T4	R1	R2	SE	Average SE
LB-23	B-1	0 - 5.0	Silty Sand (SM)	08:04	08:14	08:16	08:36	6.0	3.3	55	**53**
				08:06	08:16	08:18	08:38	5.9	3.0	51	

T1 = Starting Time

T2 = (T1 + 10 min) Begin Agitation

T3 = Settlement Starting Time

T4 = (T3 + 20 min) Take Clay Reading (R1)

Sand Equivalent = R2 / R1 * 100

Record SE as Next Higher Integer

MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Pulte Del Webb Indio DD	Tested By:	F. Mina	Date:	02/17/20
Project No.:	12656.001	Input By:	M. Vinet	Date:	02/20/20
Boring No.:	LB-1	Depth (ft.):	5.0 - 10.0		
Sample No.:	B-1				
Soil Identification:	Silty Sand (SM), Dark Olive Brown.				

Preparation Method: [X] Moist [ ] Dry

[X] Mechanical Ram [ ] Manual Ram

Mold Volume (ft³) 0.03340 *Ram Weight = 10 lb.; Drop = 18 in.*

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	5484	5556	5586	5575		
Weight of Mold (g)	3572	3572	3572	3572		
Net Weight of Soil (g)	1912	1984	2014	2003		
Wet Weight of Soil + Cont. (g)	1214.2	1310.2	1265.6	1175.9		
Dry Weight of Soil + Cont. (g)	1127.2	1203.6	1147.7	1055.6		
Weight of Container (g)	277.8	328.7	327.9	326.0		
Moisture Content (%)	10.2	12.2	14.4	16.5		
Wet Density (pcf)	126.2	131.0	132.9	132.2		
Dry Density (pcf)	114.5	116.7	116.2	113.5		

Maximum Dry Density (pcf) **116.9** **Optimum Moisture Content (%)** **12.9**

PROCEDURE USED

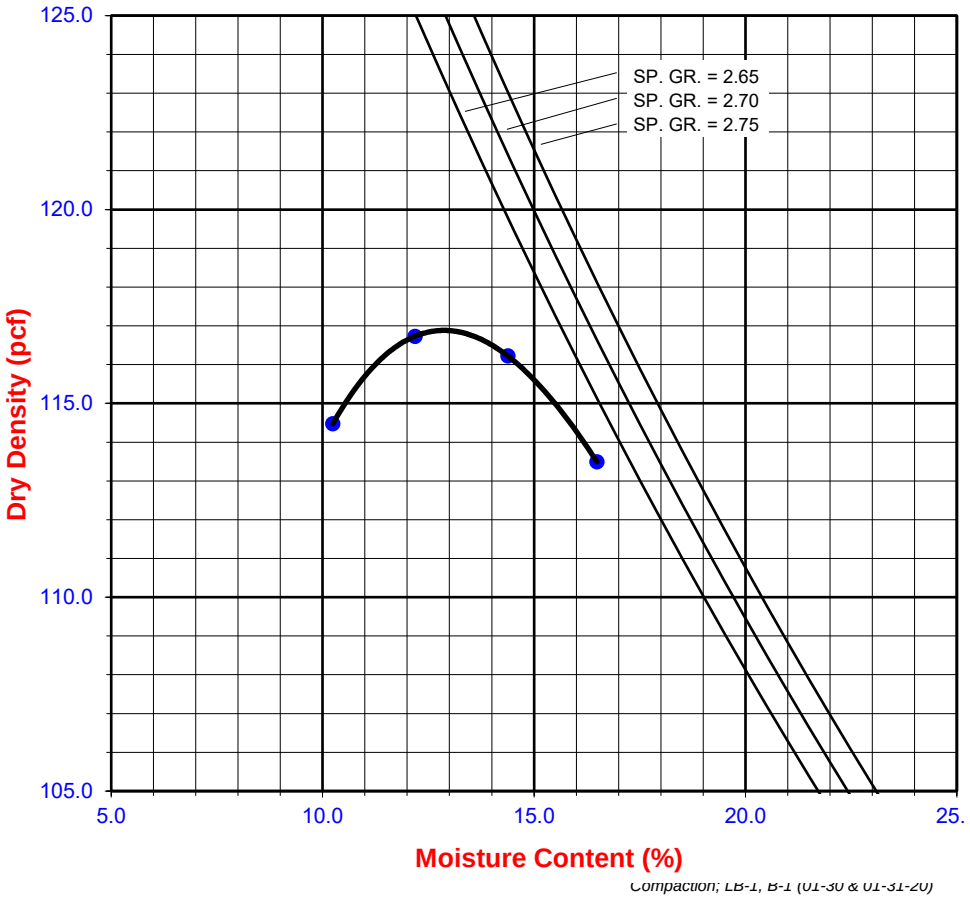
[X] **Procedure A**
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] **Procedure B**
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

[ ] **Procedure C**
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:
0:52:48
GR:SA:FI

Atterberg Limits:
LL,PL,PI



MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Pulte Del Webb Indio DD	Tested By:	F. Mina	Date:	02/17/20
Project No.:	12656.001	Input By:	M. Vinet	Date:	02/20/20
Boring No.:	LB-8	Depth (ft.):	0 - 5.0		
Sample No.:	B-1				
Soil Identification:	Silt with Sand (ML)s, Dark Yellowish Brown.				

Preparation Method: [X] Moist [ ] Dry

[X] Mechanical Ram [ ] Manual Ram

Mold Volume (ft³) 0.03340 *Ram Weight = 10 lb.; Drop = 18 in.*

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	5502	5575	5586	5543		
Weight of Mold (g)	3572	3572	3572	3572		
Net Weight of Soil (g)	1930	2003	2014	1971		
Wet Weight of Soil + Cont. (g)	1322.3	1453.8	1315.0	1116.7		
Dry Weight of Soil + Cont. (g)	1214.1	1331.4	1182.7	998.7		
Weight of Container (g)	279.1	415.1	327.8	332.6		
Moisture Content (%)	11.6	13.4	15.5	17.7		
Wet Density (pcf)	127.4	132.2	132.9	130.1		
Dry Density (pcf)	114.2	116.6	115.1	110.5		

Maximum Dry Density (pcf) **116.7** **Optimum Moisture Content (%)** **13.5**

PROCEDURE USED

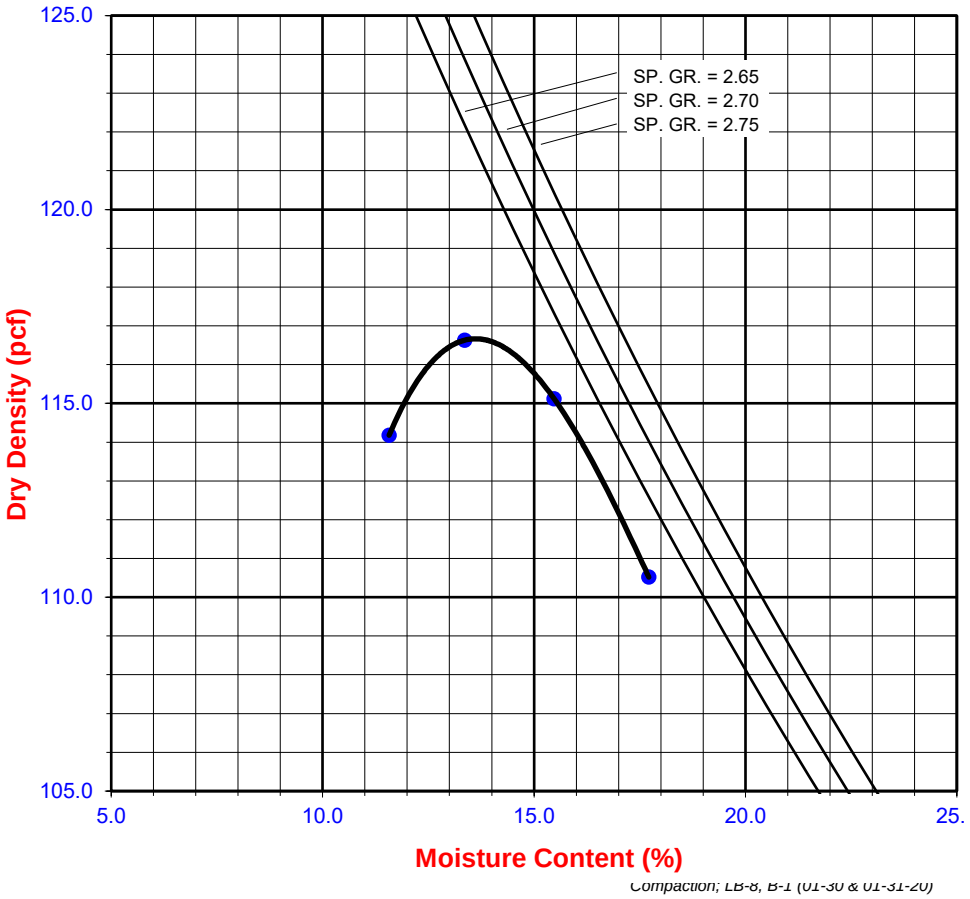
[X] **Procedure A**
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] **Procedure B**
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

[ ] **Procedure C**
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:
0:19:81
GR:SA:FI

Atterberg Limits:
LL,PL,PI



Leighton

MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Pulte Del Webb Indio DD	Tested By:	G. Davila	Date:	02/12/20
Project No.:	12656.001	Input By:	M. Vinet	Date:	02/20/20
Boring No.:	LB-17	Depth (ft.):	5.0 - 10.0		
Sample No.:	B-1				
Soil Identification:	Silty Sand (SM), Yellowish Brown.				

Preparation Method: [X] Moist [ ] Dry

[X] Mechanical Ram [ ] Manual Ram

Mold Volume (ft³) 0.03340 *Ram Weight = 10 lb.; Drop = 18 in.*

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	5444	5544	5555	5469		
Weight of Mold (g)	3572	3572	3572	3572		
Net Weight of Soil (g)	1872	1972	1983	1897		
Wet Weight of Soil + Cont. (g)	614.4	940.3	1118.8	836.6		
Dry Weight of Soil + Cont. (g)	585.9	864.7	999.6	748.1		
Weight of Container (g)	278.8	280.5	277.9	279.0		
Moisture Content (%)	9.3	12.9	16.5	18.9		
Wet Density (pcf)	123.6	130.2	130.9	125.2		
Dry Density (pcf)	113.1	115.2	112.3	105.3		

Maximum Dry Density (pcf) **115.2** **Optimum Moisture Content (%)** **12.9**

PROCEDURE USED

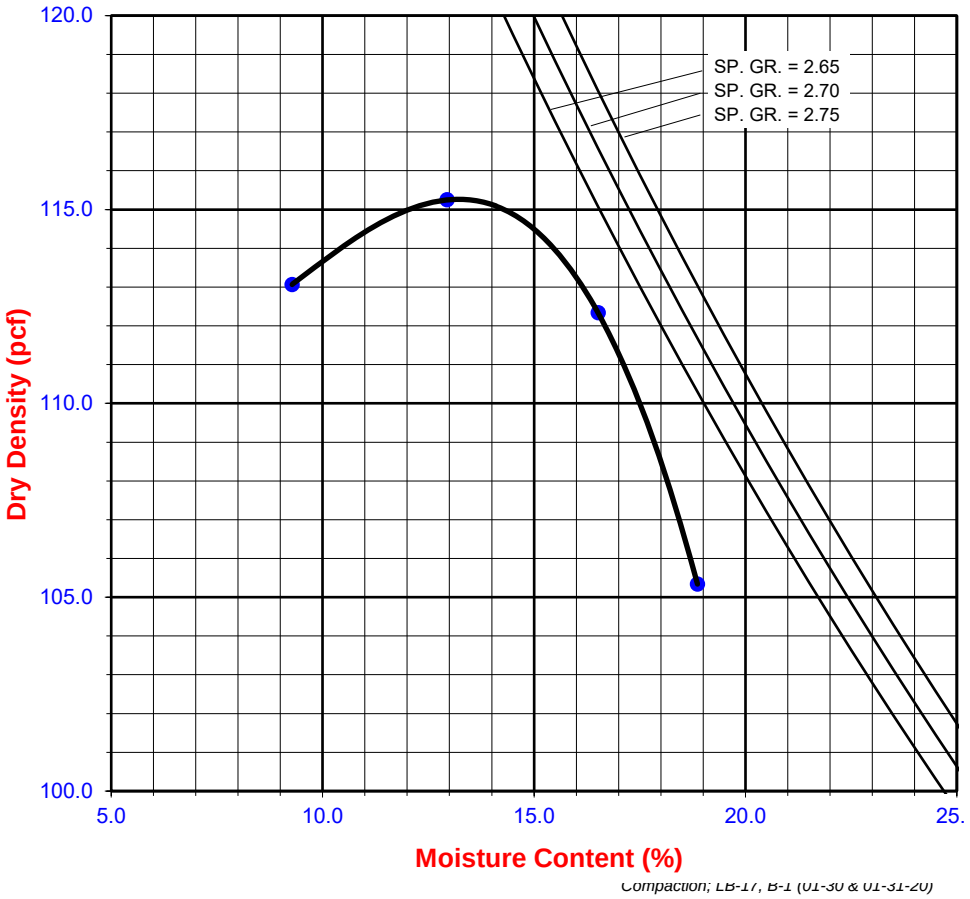
[X] **Procedure A**
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] **Procedure B**
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

[ ] **Procedure C**
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:
0:69:31
GR:SA:FI

Atterberg Limits:
LL,PL,PI



R-VALUE TEST RESULTS

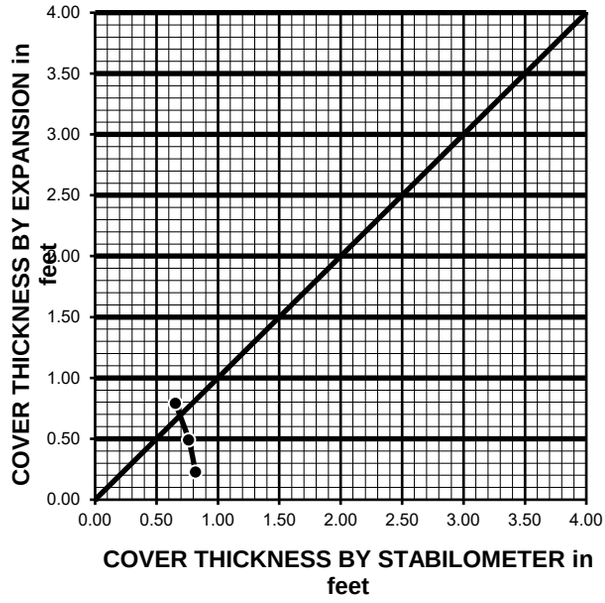
ASTM D 2844

Project Name:	Pulte Del Webb Indio DD	Date:	2/13/20
Project Number:	12656.001	Technician:	F. Mina
Boring Number:	LB-3	Depth (ft.):	0 - 5.0
Sample Number:	B-1	Sample Location:	N/A
Sample Description:	Silty Sand (SM), Yellowish Brown		

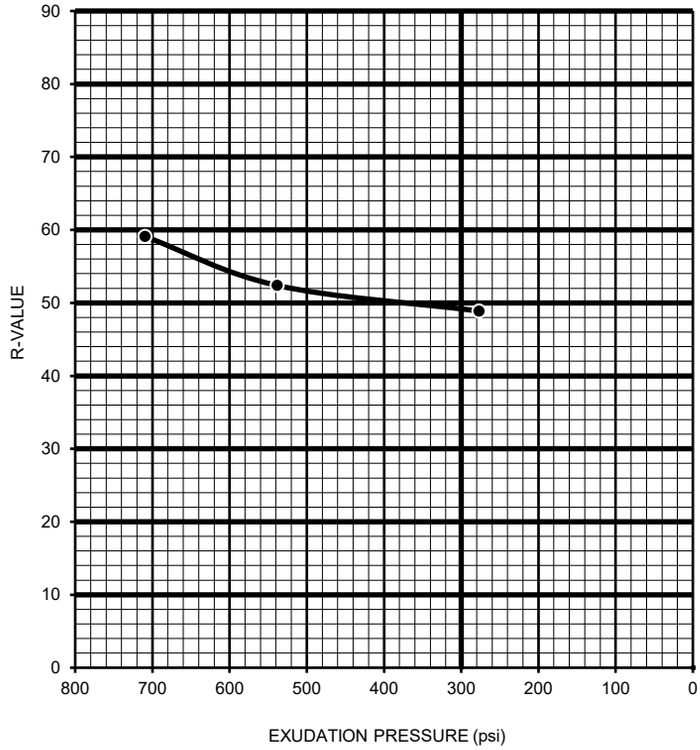
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	12.5	13.6	14.7
HEIGHT OF SAMPLE, Inches	2.50	2.52	2.47
DRY DENSITY, pcf	103.8	105.6	101.3
COMPACTOR AIR PRESSURE, psi	350	350	350
EXUDATION PRESSURE, psi	710	539	277
EXPANSION, Inches x 10exp-4	21	13	6
STABILITY Ph 2,000 lbs (160 psi)	40	48	52
TURNS DISPLACEMENT	5.19	5.30	5.43
R-VALUE UNCORRECTED	59	52	49
R-VALUE CORRECTED	59	52	49

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.65	0.76	0.82
EXPANSION PRESSURE THICKNESS, ft.	0.79	0.49	0.23

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	56
R-VALUE BY EXUDATION:	49
EQUILIBRIUM R-VALUE:	49

Leighton

R-VALUE TEST RESULTS

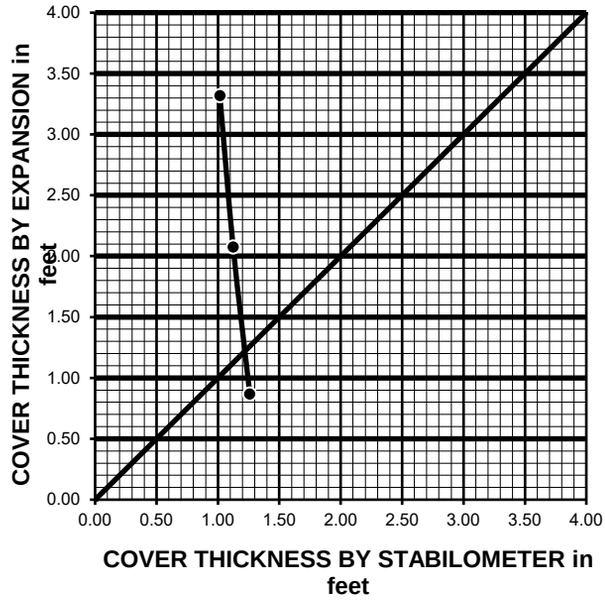
ASTM D 2844

Project Name:	Pulte Del Webb Indio DD	Date:	2/13/20
Project Number:	12656.001	Technician:	F. Mina
Boring Number:	LB-8	Depth (ft.):	0 - 5.0
Sample Number:	B-1	Sample Location:	N/A
Sample Description:	Silt with Sand (ML)s, Dark Yellowish Brown.		

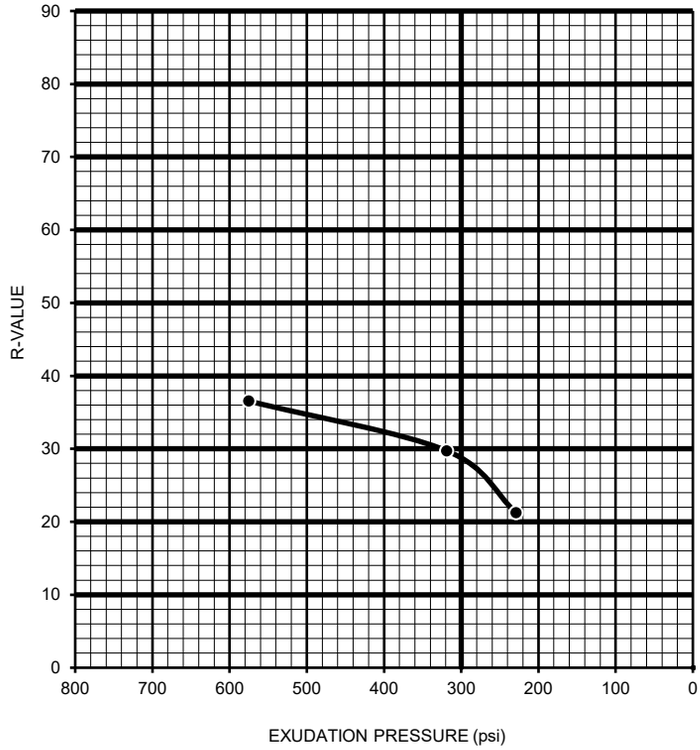
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	15.4	17.0	18.6
HEIGHT OF SAMPLE, Inches	2.49	2.52	2.55
DRY DENSITY, pcf	104.2	102.2	101.2
COMPACTOR AIR PRESSURE, psi	225	200	175
EXUDATION PRESSURE, psi	575	319	229
EXPANSION, Inches x 10exp-4	88	55	23
STABILITY Ph 2,000 lbs (160 psi)	70	78	94
TURNS DISPLACEMENT	5.58	6.21	6.50
R-VALUE UNCORRECTED	37	30	21
R-VALUE CORRECTED	37	30	21

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	1.02	1.12	1.26
EXPANSION PRESSURE THICKNESS, ft.	3.32	2.07	0.87

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	25
R-VALUE BY EXUDATION:	29
EQUILIBRIUM R-VALUE:	25

R-VALUE TEST RESULTS

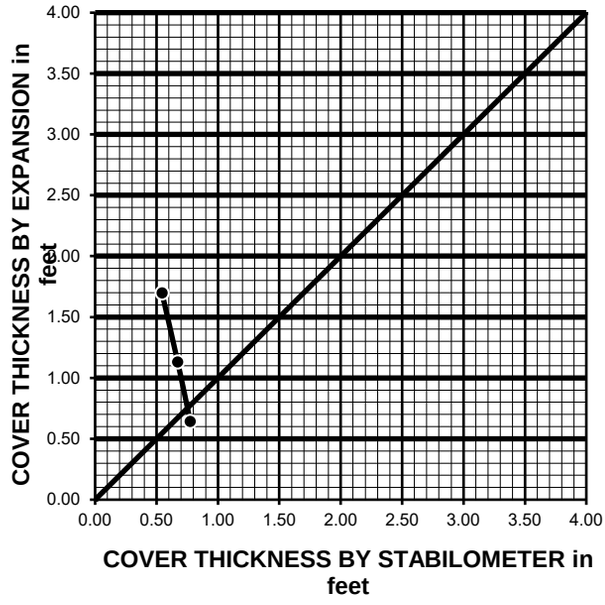
ASTM D 2844

Project Name:	Pulte Del Webb Indio DD	Date:	2/13/20
Project Number:	12656.001	Technician:	F. Mina
Boring Number:	LB-18	Depth (ft.):	0 - 5.0
Sample Number:	B-1	Sample Location:	N/A
Sample Description:	Silty Sand (SM), Yellowish Brown.		

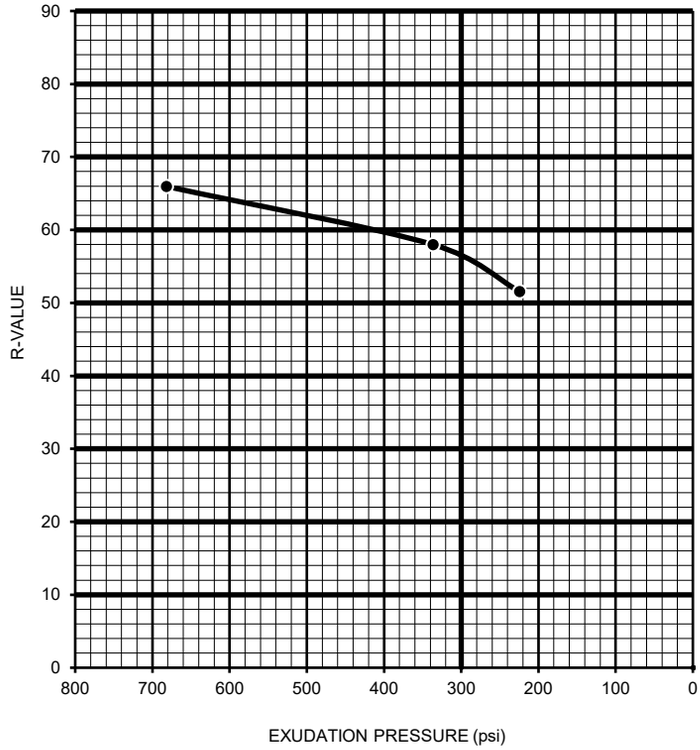
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	11.5	12.0	13.0
HEIGHT OF SAMPLE, Inches	2.47	2.50	2.52
DRY DENSITY, pcf	107.5	118.4	106.8
COMPACTOR AIR PRESSURE, psi	175	150	125
EXUDATION PRESSURE, psi	682	337	224
EXPANSION, Inches x 10exp-4	45	30	17
STABILITY Ph 2,000 lbs (160 psi)	30	39	47
TURNS DISPLACEMENT	5.59	5.62	5.65
R-VALUE UNCORRECTED	66	58	52
R-VALUE CORRECTED	66	58	52

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.54	0.67	0.78
EXPANSION PRESSURE THICKNESS, ft.	1.70	1.13	0.64

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	53
R-VALUE BY EXUDATION:	57
EQUILIBRIUM R-VALUE:	53

Leighton

EXPANSION INDEX of SOILS

ASTM D 4829

Project Name:	Pulte Del Webb Indio DD	Tested By:	M. Vinet	Date:	2/20/20
Project No. :	12656.001	Checked By:	M. Vinet	Date:	2/21/20
Boring No.:	LB-3	Depth:	0 - 5.0		
Sample No. :	B-1	Location:	N/A		
Sample Description:	Silty Sand (SM), Yellowish Brown.				

Dry Wt. of Soil + Cont. (gm.)	408.9
Wt. of Container No. (gm.)	0.0
Dry Wt. of Soil (gm.)	408.9
Weight Soil Retained on #4 Sieve	0.0
Percent Passing # 4	100.0

MOLDED SPECIMEN	Before Test	After Test
Specimen Diameter (in.)	4.01	4.01
Specimen Height (in.)	1.0000	1.0010
Wt. Comp. Soil + Mold (gm.)	580.0	612.5
Wt. of Mold (gm.)	208.4	208.4
Specific Gravity (Assumed)	2.70	2.70
Container No.	10	10
Wet Wt. of Soil + Cont. (gm.)	578.0	612.5
Dry Wt. of Soil + Cont. (gm.)	544.7	330.3
Wt. of Container (gm.)	278.0	208.4
Moisture Content (%)	12.5	22.3
Wet Density (pcf)	112.1	121.8
Dry Density (pcf)	99.6	99.5
Void Ratio	0.692	0.694
Total Porosity	0.409	0.410
Pore Volume (cc)	84.7	84.9
Degree of Saturation (%) [S meas]	**48.8**	**87.0**

SPECIMEN INUNDATION in distilled water for the period of 24 h or expansion rate < 0.0002 in./h.

Date	Time	Pressure (psi)	Elapsed Time (min.)	Dial Readings (in.)
2/20/20	11:40	1.0	0	0.5000
2/20/20	11:50	1.0	10	0.5000
	Add Distilled Water to the Specimen			
2/21/20	8:00	1.0	1210	0.5010
2/21/20	9:00	1.0	1270	0.5010

Expansion Index (EI meas) = ((Final Rdg - Initial Rdg) / Initial Thick.) x 1000	1.0
Expansion Index (Report) = Nearest Whole Number or Zero (0) if Initial Height is > than Final Height	**1**

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EXPANSION INDEX of SOILS

ASTM D 4829

Project Name:	Pulte Del Webb Indio DD	Tested By:	G. Davila	Date:	2/14/20
Project No. :	12656.001	Checked By:	M. Vinet	Date:	2/21/20
Boring No.:	LB-18	Depth:	0 - 5.0		
Sample No. :	B-1	Location:	N/A		
Sample Description:	Silty Sand (SM), Yellowish Brown.				

Dry Wt. of Soil + Cont. (gm.)	321.3
Wt. of Container No. (gm.)	0.0
Dry Wt. of Soil (gm.)	321.3
Weight Soil Retained on #4 Sieve	0.0
Percent Passing # 4	100.0

MOLDED SPECIMEN	Before Test	After Test
Specimen Diameter (in.)	4.01	4.01
Specimen Height (in.)	1.0000	1.0060
Wt. Comp. Soil + Mold (gm.)	572.5	602.9
Wt. of Mold (gm.)	190.3	190.3
Specific Gravity (Assumed)	2.70	2.70
Container No.	12	12
Wet Wt. of Soil + Cont. (gm.)	577.7	602.9
Dry Wt. of Soil + Cont. (gm.)	546.8	342.8
Wt. of Container (gm.)	277.7	190.3
Moisture Content (%)	11.5	20.4
Wet Density (pcf)	115.3	123.7
Dry Density (pcf)	103.4	102.8
Void Ratio	0.630	0.640
Total Porosity	0.387	0.390
Pore Volume (cc)	80.0	81.3
Degree of Saturation (%) [S meas]	**49.3**	**85.9**

SPECIMEN INUNDATION in distilled water for the period of 24 h or expansion rate < 0.0002 in./h.

Date	Time	Pressure (psi)	Elapsed Time (min.)	Dial Readings (in.)
2/14/20	6:30	1.0	0	0.5000
2/14/20	6:40	1.0	10	0.5000
	Add Distilled Water to the Specimen			
2/15/20	6:30	1.0	1430	0.5060
2/15/20	7:30	1.0	1490	0.5060

Expansion Index (EI meas) = ((Final Rdg - Initial Rdg) / Initial Thick.) x 1000	6.0
Expansion Index (Report) = Nearest Whole Number or Zero (0) if Initial Height is > than Final Height	**6**

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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-1**
Sample No.: **R-4**
Sample Description: Sandy Silt s(ML), Olive Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 10.0

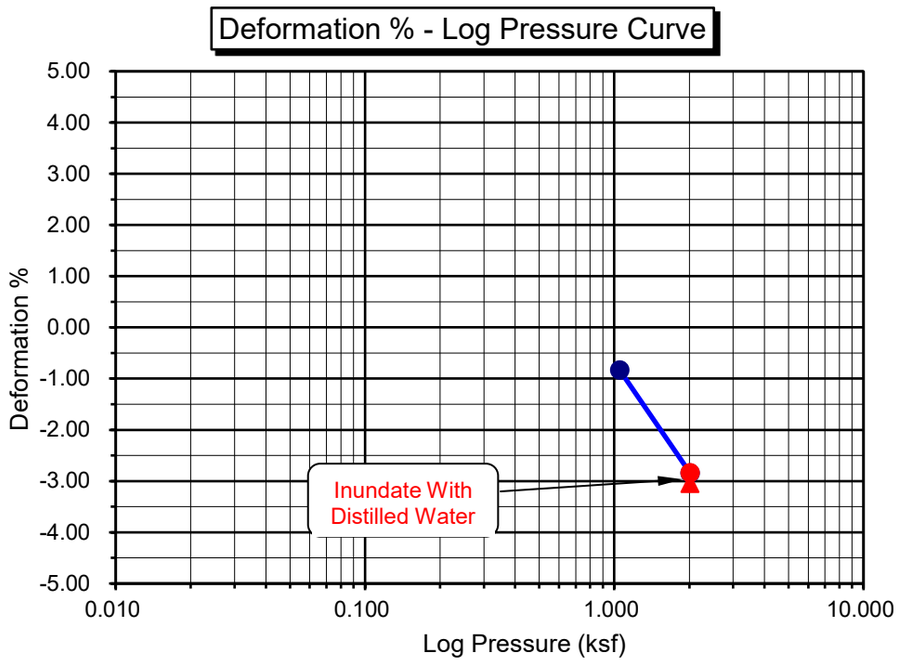
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	90.7
Initial Moisture (%):	26.0
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	93.5
Final Moisture (%) :	28.3
Initial Void ratio:	0.8592
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	81.8

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0083	0.9917	0.00	-0.83	0.8438	-0.83
2.013	0.0284	0.9716	0.00	-2.84	0.8064	-2.84
H2O	0.0305	0.9695	0.00	-3.05	0.8025	-3.05

Percent Swell / Settlement After Inundation = -0.22



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: LB-3
Sample No.: R-2
Sample Description: Clayey Sand (SC), Dark Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 10.0

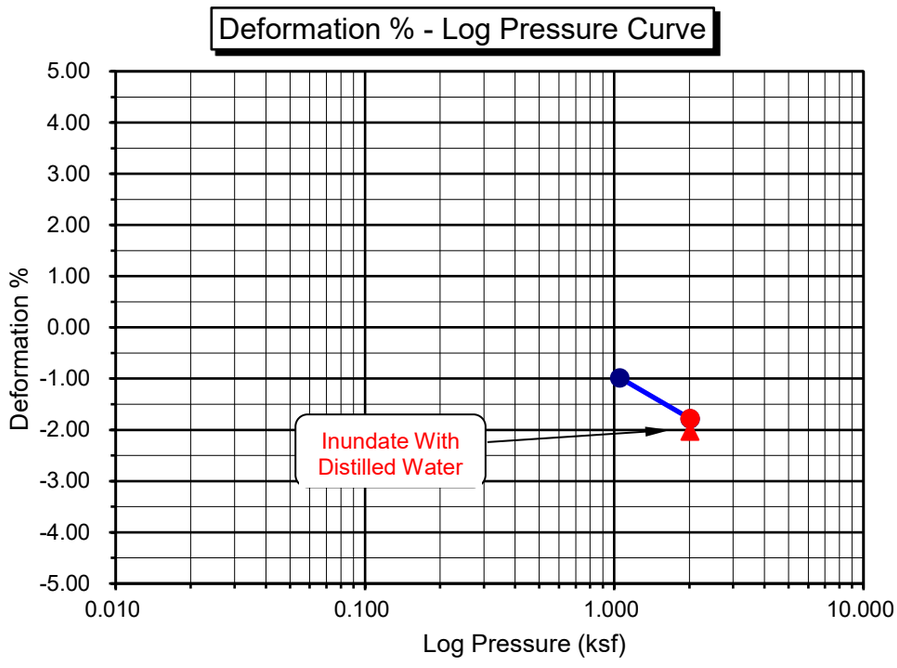
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	96.6
Initial Moisture (%):	14.8
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	98.6
Final Moisture (%) :	25.5
Initial Void ratio:	0.7441
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	53.7

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0098	0.9902	0.00	-0.98	0.7270	-0.98
2.013	0.0178	0.9822	0.00	-1.78	0.7131	-1.78
H2O	0.0203	0.9797	0.00	-2.03	0.7087	-2.03

Percent Swell / Settlement After Inundation = -0.25



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-3**
Sample No.: **R-3**
Sample Description: Silty Sand (SM), Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 15.0

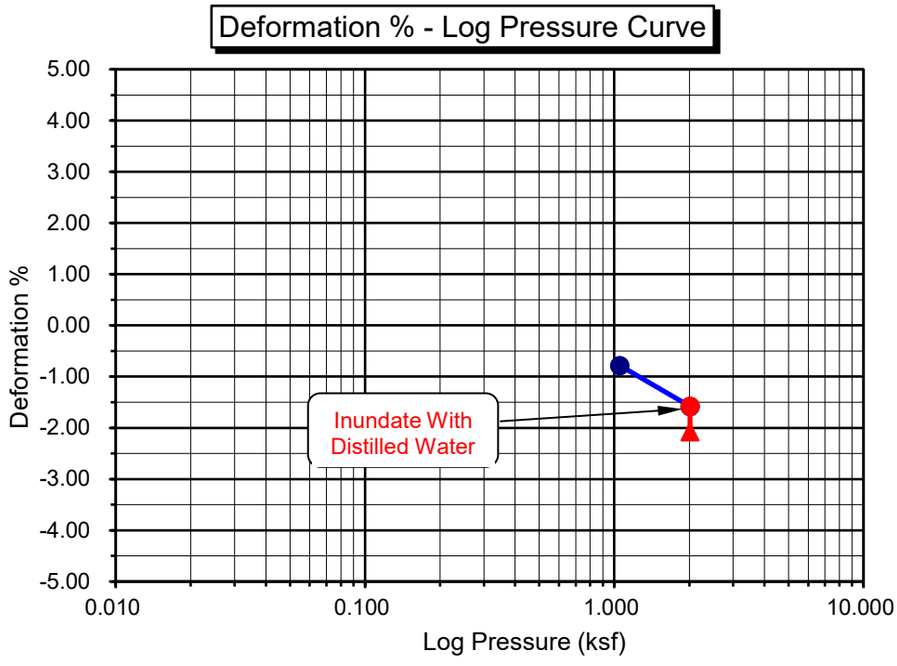
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	97.9
Initial Moisture (%):	10.4
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	100.0
Final Moisture (%) :	22.9
Initial Void ratio:	0.7219
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	38.7

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0078	0.9922	0.00	-0.78	0.7085	-0.78
2.013	0.0158	0.9842	0.00	-1.58	0.6947	-1.58
H2O	0.0208	0.9792	0.00	-2.08	0.6861	-2.08

Percent Swell / Settlement After Inundation = -0.51



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

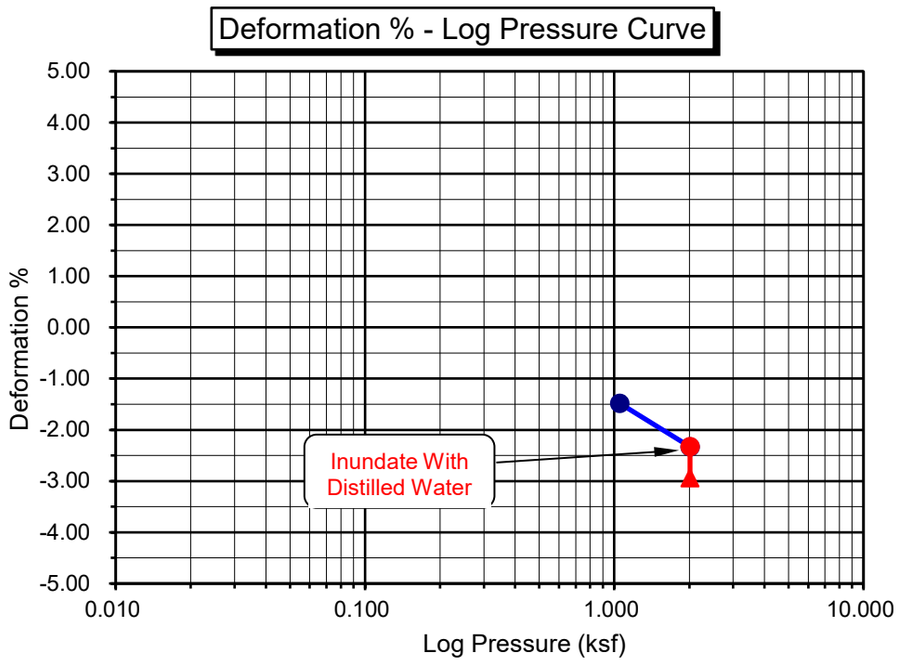
(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD | Tested By: M. Vinet | Date: 2/17/20
Project No.: 12656.001 | Checked By: M. Vinet | Date: 2/20/20
Boring No.: **LB-9** | Sample Type: IN SITU
Sample No.: **R-4** | Depth (ft.) 15
Sample Description: Poorly Graded Sand with Silt (SP-SM, Yellowish Brown.
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	86.2	Final Dry Density (pcf):	88.8
Initial Moisture (%):	7.1	Final Moisture (%) :	31.1
Initial Height (in.):	1.0000	Initial Void ratio:	0.9560
Initial Dial Reading (in):	0.0000	Specific Gravity (assumed):	2.70
Inside Diameter of Ring (in):	2.416	Initial Degree of Saturation (%):	20.2

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0148	0.9852	0.00	-1.48	0.9271	-1.48
2.013	0.0233	0.9767	0.00	-2.33	0.9105	-2.33
H2O	0.0294	0.9706	0.00	-2.94	0.8985	-2.94

Percent Swell / Settlement After Inundation = -0.62



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-11**
Sample No.: **R-2**
Sample Description: Clayey Sand (SC), Yellowish Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 10.0

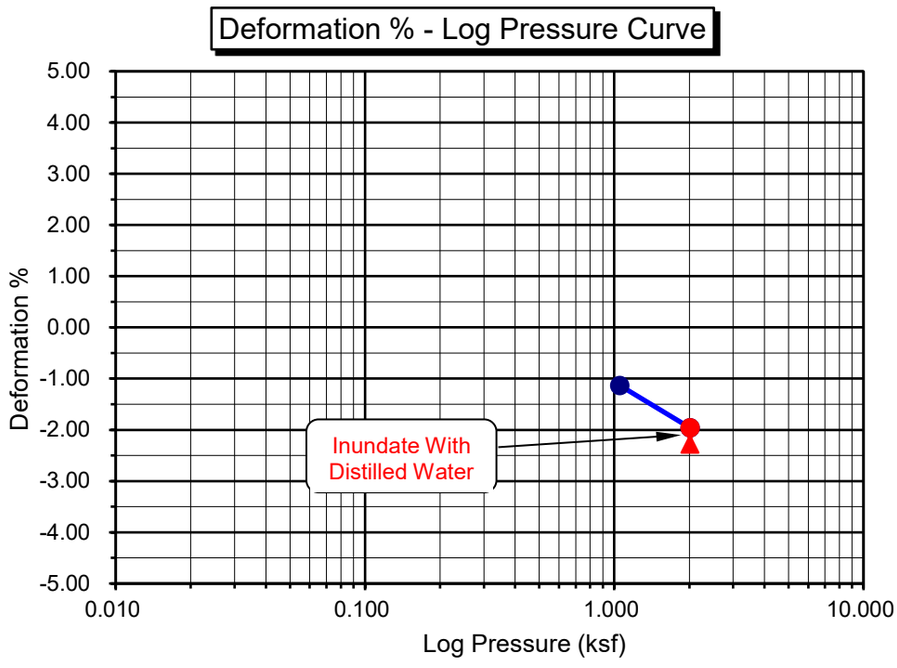
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	91.8
Initial Moisture (%):	15.8
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	94.0
Final Moisture (%) :	27.1
Initial Void ratio:	0.8357
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	51.2

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0113	0.9887	0.00	-1.13	0.8149	-1.13
2.013	0.0196	0.9804	0.00	-1.96	0.7997	-1.96
H2O	0.0228	0.9772	0.00	-2.28	0.7938	-2.28

Percent Swell / Settlement After Inundation = -0.33



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-16**
Sample No.: **R-4**
Sample Description: Clayey Sand (SC), Yellowish Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 10.0

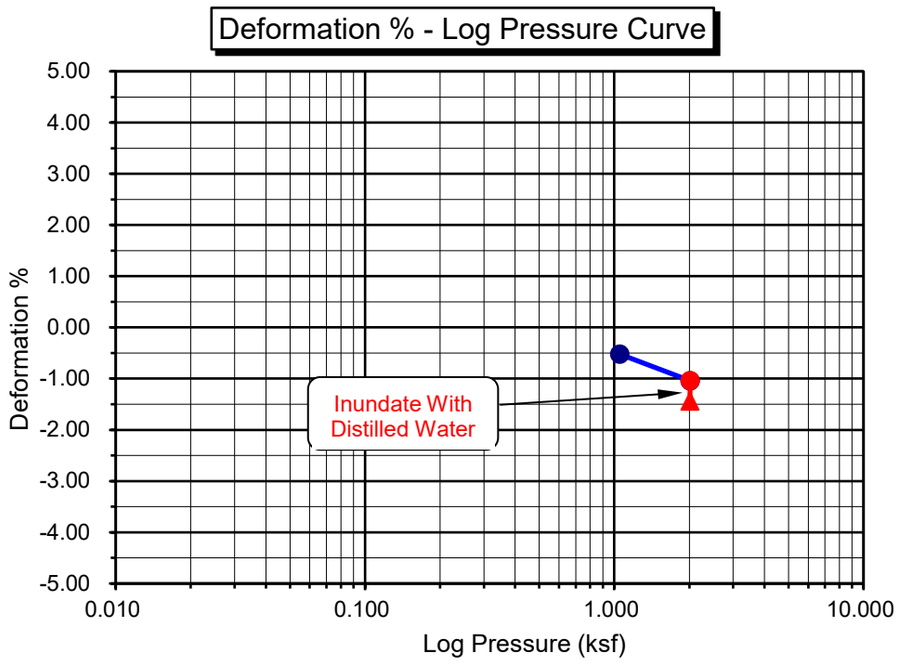
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	98.5
Initial Moisture (%):	11.1
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	99.9
Final Moisture (%) :	22.4
Initial Void ratio:	0.7117
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	42.3

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0052	0.9948	0.00	-0.52	0.7028	-0.52
2.013	0.0104	0.9896	0.00	-1.04	0.6939	-1.04
H2O	0.0144	0.9856	0.00	-1.44	0.6871	-1.44

Percent Swell / Settlement After Inundation = -0.40



Rev. 01-10

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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-18**
Sample No.: **R-2**
Sample Description: Sandy Lean Clay s(CL), Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 10.0

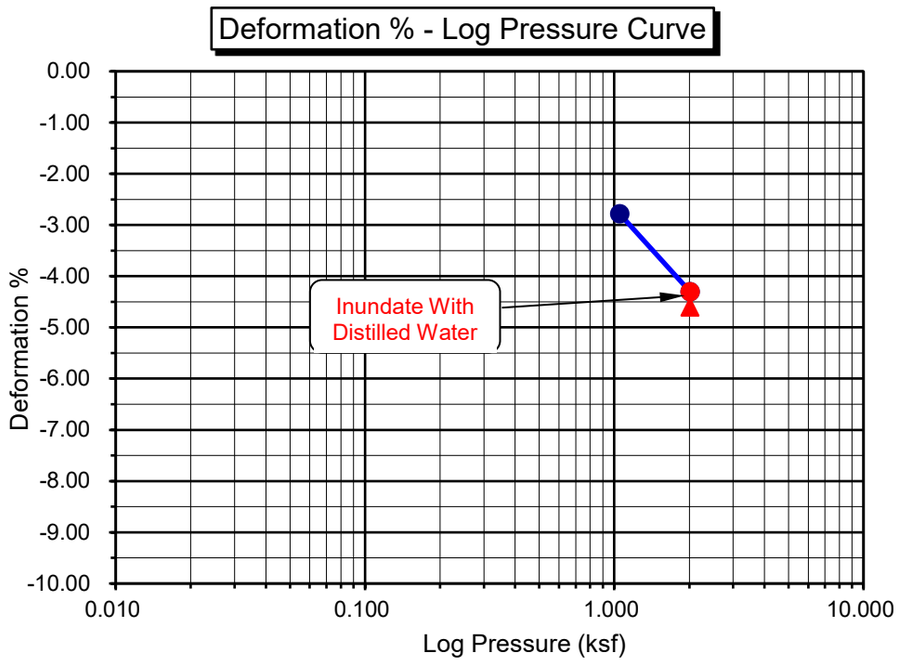
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	86.0
Initial Moisture (%):	34.8
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	90.2
Final Moisture (%) :	33.6
Initial Void ratio:	0.9598
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	97.8

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0278	0.9722	0.00	-2.78	0.9053	-2.78
2.013	0.0430	0.9570	0.00	-4.30	0.8755	-4.30
H2O	0.0460	0.9540	0.00	-4.60	0.8697	-4.60

Percent Swell / Settlement After Inundation = -0.31



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One-Dimensional Swell or Settlement Potential of Cohesive Soils

(ASTM D 4546) -- Method 'B'

Project Name: Pulte Del Webb Indio DD
Project No.: 12656.001
Boring No.: **LB-21**
Sample No.: **R-3**
Sample Description: Sandy Lean Clay s(CL), Brown.

Tested By: M. Vinet Date: 2/17/20
Checked By: M. Vinet Date: 2/20/20
Sample Type: IN SITU
Depth (ft.) 7.5

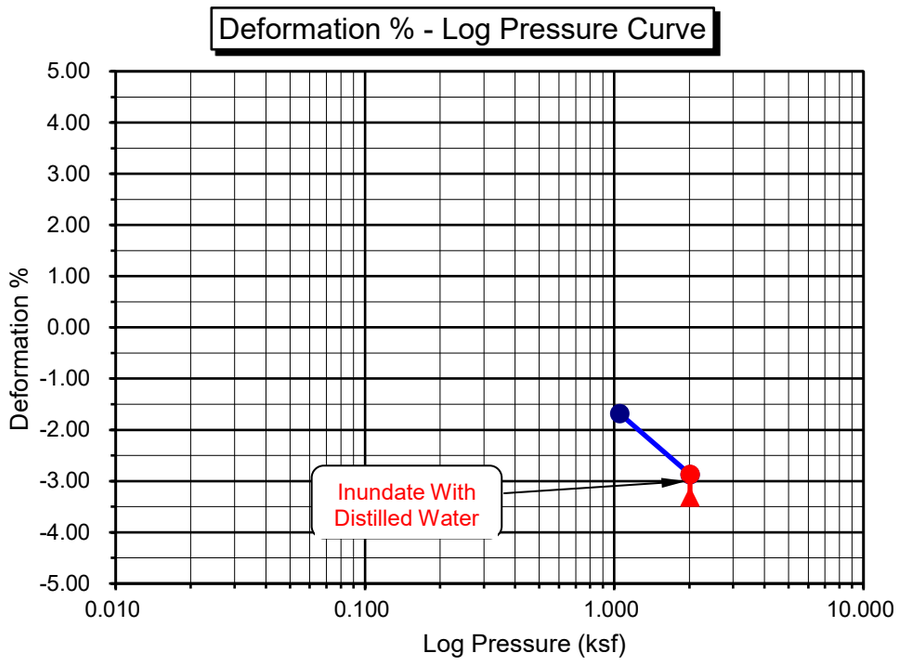
Source and Type of Water Used for Inundation: Arrowhead (Distilled)
** Note: Loading After Wetting (Inundation) not Performed Using this Test Method.

Initial Dry Density (pcf):	97.8
Initial Moisture (%):	25.7
Initial Height (in.):	1.0000
Initial Dial Reading (in):	0.0000
Inside Diameter of Ring (in):	2.416

Final Dry Density (pcf):	101.2
Final Moisture (%) :	27.0
Initial Void ratio:	0.7234
Specific Gravity (assumed):	2.70
Initial Degree of Saturation (%):	96.1

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
1.050	0.0168	0.9832	0.00	-1.68	0.6944	-1.68
2.013	0.0287	0.9713	0.00	-2.87	0.6739	-2.87
H2O	0.0332	0.9668	0.00	-3.32	0.6662	-3.32

Percent Swell / Settlement After Inundation = -0.46



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SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Pulte Del Webb Indio DD		Tested By :	M. Vinet	Date: 02/19/20
Project No. :	12656.001		Data Input By:	M. Vinet	Date: 02/20/20
Boring No.:	LB-17		Depth (ft.) :	5.0 - 10.0	
Sample No. :	B-1				

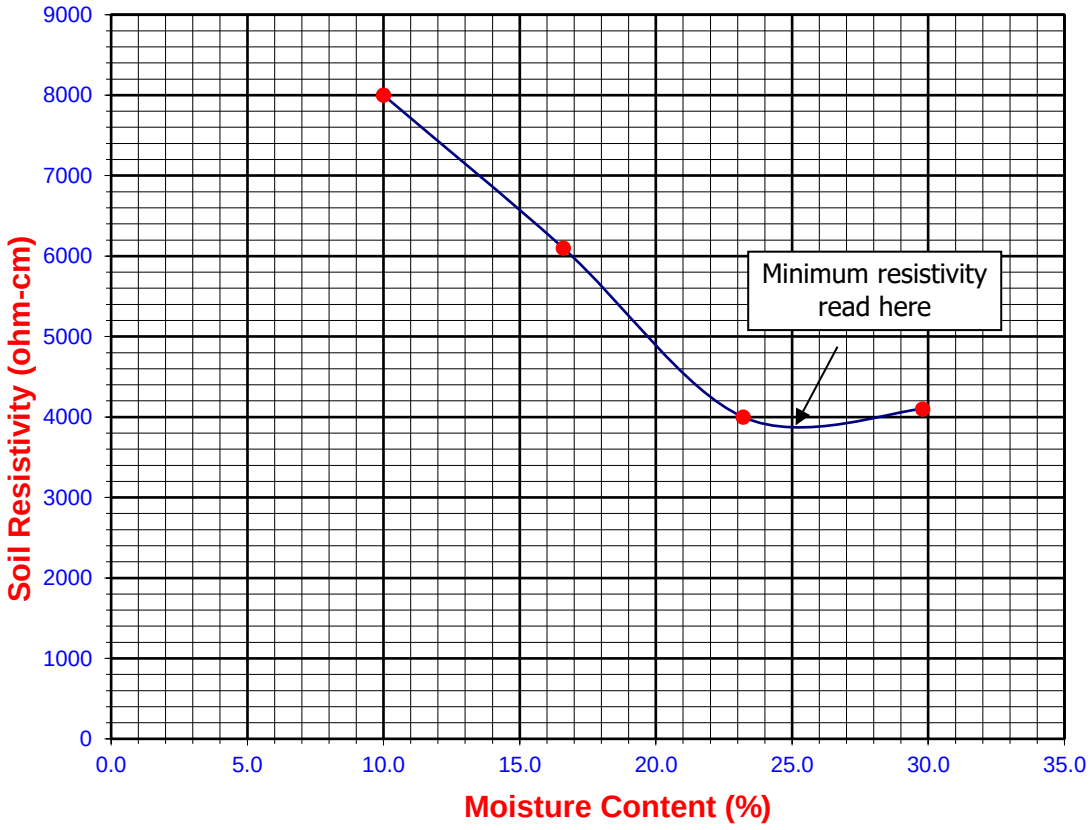
Soil Identification:* Silty Sand (SM)

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	50	10.00	8000	8000
2	83	16.60	6100	6100
3	116	23.20	4000	4000
4	149	29.80	4100	4100
5				

Moisture Content (%) (MCi)	0.00
Wet Wt. of Soil + Cont. (g)	100.00
Dry Wt. of Soil + Cont. (g)	100.00
Wt. of Container (g)	0.00
Container No.	A
Initial Soil Wt. (g) (Wt)	500.00
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
3900	**25.0**	**86**	**40**	**6.91**	**21.0**



APPENDIX C

Site Specific Seismic Analysis and Settlement

SUMMARY TABLE

Site-Specific Seismic Analysis (per ASCE 7-16)

Site Seismic Coefficients / Coordinates		Value
Latitude		33.76564
Longitude		-116.26024
Mapped Spectra (OSHPD)	Spectral Response – Class D (short), S_S	2.47
	Spectral Response – Class D (1 sec), S_1	0.95
	Site Modified Peak Ground Acceleration, PGA_M	1.12
Site-Specific Response Spectra	Max. Considered Earthquake Spectral Response Acceleration (short), S_{MS}	2.14
	Max. Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}	1.97
	5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.43
	5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	1.31
	Site-Specific Peak Ground Acceleration, PGA	1.07

Exhibit S-1

Probabilistic Response Spectrum					
Period (S)	**UHGM (g)**	**RTGM (g)**	**Max Dir SF**	**Max Dir RTGM (g)**	**Probabilistic Response (g)**
0.01	1.066	0.982	1.1	1.080	1.080
0.10	1.635	1.554	1.1	1.709	1.709
0.20	2.204	2.071	1.1	2.278	2.278
0.30	2.598	2.402	1.124	2.700	2.700
0.50	2.793	2.502	1.175	2.940	2.940
0.75	2.461	2.177	1.2375	2.694	2.694
1.00	2.194	1.906	1.3	2.478	2.478
2.00	1.311	1.141	1.35	1.540	1.540
3.00	0.901	0.782	1.4	1.095	1.095
4.00	0.640	0.553	1.45	0.802	0.802
5.00	0.474	0.412	1.5	0.618	0.618

Peak Sa	**Fa**	**1.2Fa**	**Peak Sa < 1.2Fa**	**Deterministic Needed?**
2.940	1.0	1.2	NO	YES

UHGM - Obtained from Unified Hazard Maps
RTGM - Risk Target Ground Motion
DO NOT EDIT

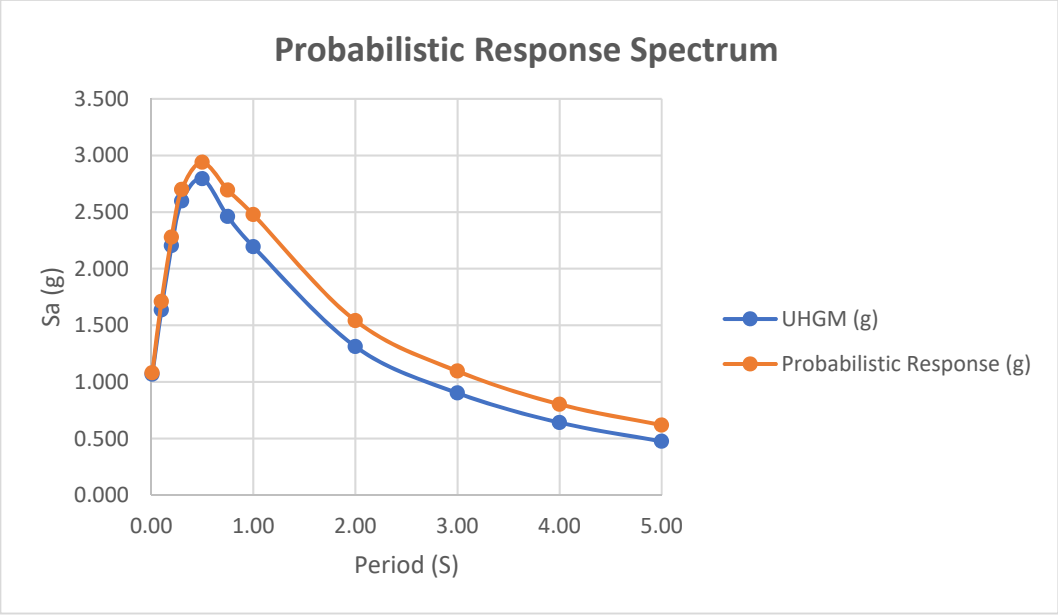


Exhibit S-2

Deterministic Response Spectrum				
Period (S)	**84th Percentile for 5% Damping**	**Max Dir SF**	**Max Dir Deterministic Sa**	**Scaled Max Dir Deterministic Sa**
0.01	0.824	1.1	0.906	0.906
0.1	1.187	1.1	1.306	1.306
0.2	1.573	1.1	1.730	1.730
0.3	1.902	1.124	2.138	2.138
0.5	2.025	1.175	2.380	2.380
0.75	1.723	1.2375	2.132	2.132
1	1.418	1.3	1.843	1.843
2	0.693	1.35	0.935	0.935
3	0.424	1.4	0.594	0.594
4	0.283	1.45	0.410	0.410
5	0.203	1.5	0.305	0.305

Obatined from NGA West 2 GMPE Worksheet - UCERF3 fault

DO NOT EDIT

Peak Sa	Fa	1.5Fa	Peak Sa < 1.5Fa	Scaling Factor
2.380	1.0	1.5	NO	1.000

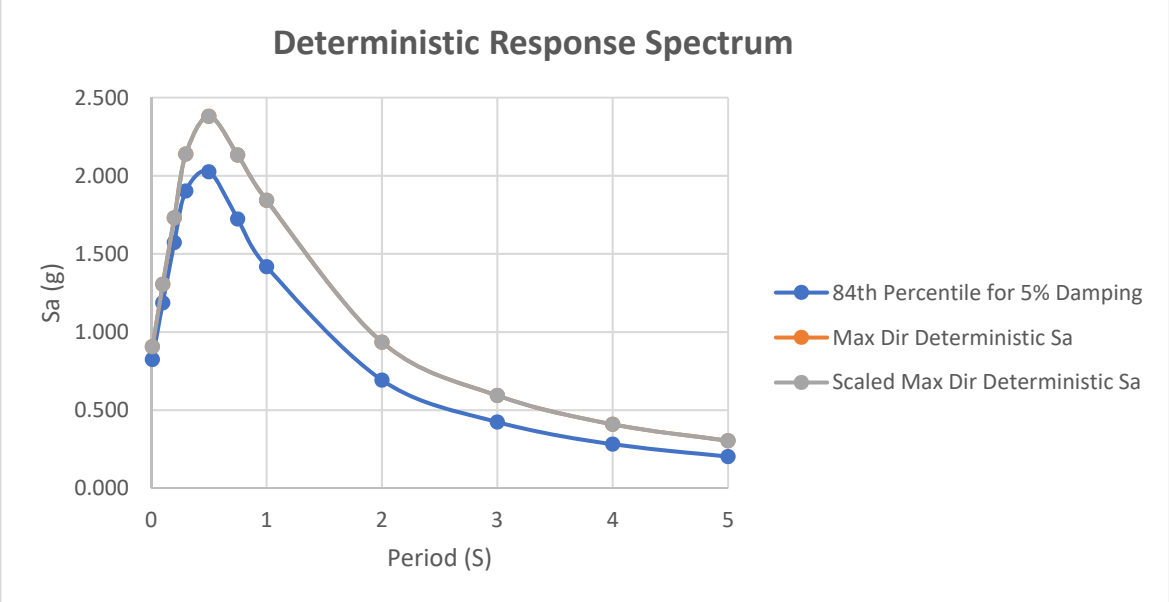


Exhibit S-3

SPECTRA COMPARISION				
Period (s)	**Probabilistic Response (g)**	**Scaled Max Dir Deterministic Sa (g)**	**MCE_{R*} Response Spectra S_{aM} (g)**	**2/3 MCER Response Spectra Sa (g)**
0.01	1.080	0.906	0.906	0.604
0.1	1.709	1.306	1.306	0.870
0.2	2.278	1.730	1.730	1.153
0.3	2.700	2.138	2.138	1.425
0.5	2.940	2.380	2.380	1.587
0.75	2.694	2.132	2.132	1.422
1	2.478	1.843	1.843	1.229
2	1.540	0.935	0.935	0.623
3	1.095	0.594	0.594	0.396
4	0.802	0.410	0.410	0.273
5	0.618	0.305	0.305	0.203

MCER* is the lesser of the prbabilitic and deterministic spectra

DO NOT EDIT

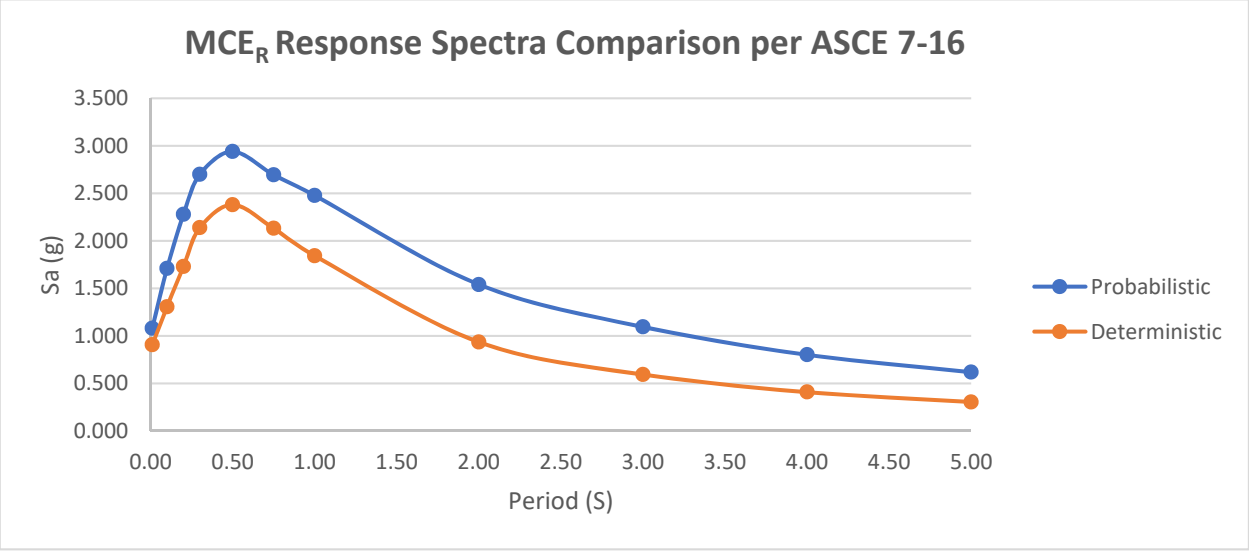


Exhibit S-4

S_s	2.465
S_1	0.951
Fa	1
Fv	2.5
S_{MS}	2.465
S_{M1}	2.378
S_{DS}	1.643
S_{D1}	1.585

since S_1 >0.2

T_0	0.2
T_S	1

PGA	1.018
PGA_M	1.120

Period (S)	Code-Based Sa (g)	80% Code-Based Sa (g)	2/3 MCER Response Spectra Sa (g)	Design Response Spectra Sa (g)
0.01	0.707	0.565	0.604	0.604
0.10	1.150	0.920	0.870	0.920
0.20	1.643	1.315	1.153	1.315
0.30	1.643	1.315	1.425	1.425
0.50	1.643	1.315	1.587	1.587
0.75	1.643	1.315	1.422	1.422
1.00	1.643	1.315	1.229	1.315
2.00	0.793	0.634	0.623	0.634
3.00	0.528	0.423	0.396	0.423
4.00	0.396	0.317	0.273	0.317
5.00	0.317	0.254	0.203	0.254

FROM SEISMIC MAPS (ATC OR OSHPD)
DO NOT EDIT

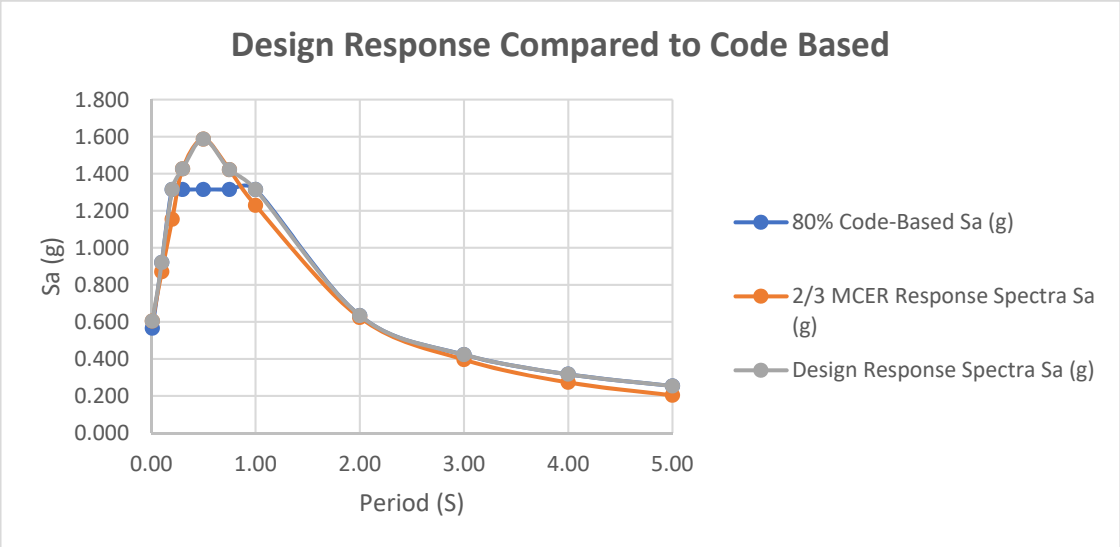


Exhibit S-5

Period (s)	MCER* Response Spectra SaM (g)	Design Response Spectra Sa (g)
0.01	0.906	0.604
0.10	1.306	0.920
0.20	1.730	1.315
0.30	2.138	1.425
0.50	2.380	1.587
0.75	2.132	1.422
1.00	1.843	1.315
2.00	0.935	0.634
3.00	0.594	0.423
4.00	0.410	0.317
5.00	0.305	0.254

Max Sa between T=0.2s and 5s is **1.587**

S_{DS} = 0.9*Max Sa = **1.428**

S_{MS} = 1.5*S_{DS} = **2.142**

Short Period Spectrum

V_{S30} = 259 ms < 365 m/s **Site Class D**

Max $T*S_a$ between T=1s and 5s is **1.315**

Therefore, S_{D1} = **1.315**

S_{M1} = 1.5*S_{D1} = **1.972**

Long Period Spectrum

Probabilistic PGA	**1.066**
Deterministic PGA	**0.824**
80% Code-Based PGA_M	**0.896**
Site-Specific PGA	**1.066**

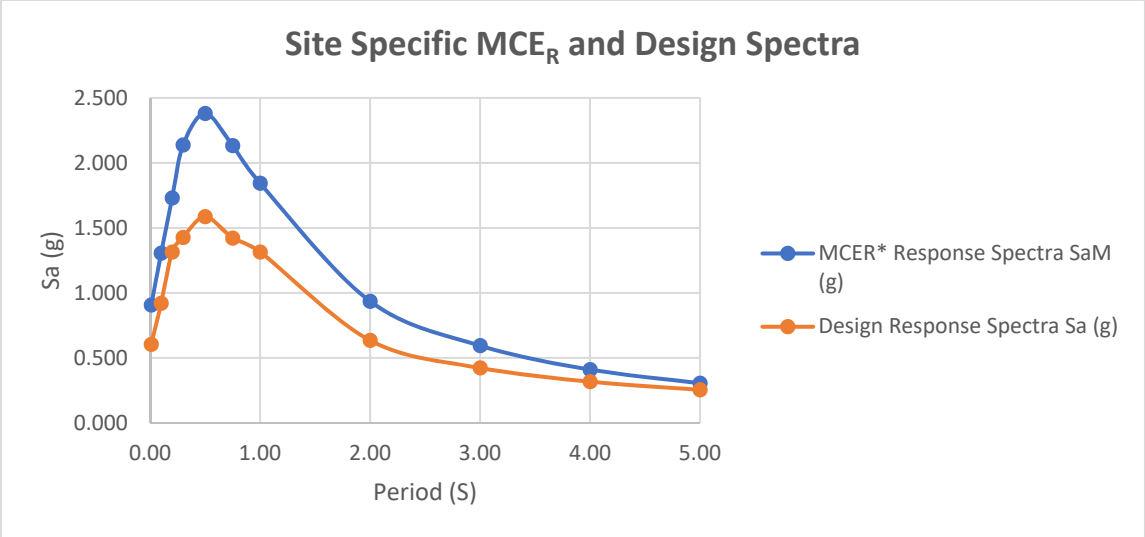


Exhibit S-6

PACIFIC EARTHQUAKE ENGINEERING RESEARCH CENTER

WEIGHTED AVERAGE of 2014 NGA WEST-2 GMPEs

Last updated: 04 14 15

by Emel Seyhan, PhD, PEER & UCLA -- email: emel.seyhan@gmail.com, peer_center@berkeley.edu

This excel file will be updated as necessary on the PEER website to fix any typos or other errors. Please check the website frequently for new versions at: http://peer.berkeley.edu/ngawest2/databases/

Legend	Pre-defined option	Main input variable	Calculated variable	Input var. flag	Internal variable

GMPE averaging	Geometric	Weighted average of the natural logarithm of the spectral values

GMPEs	ASK14	BSSA14	CB14	CY14	I14
Weight	0.25	0.25	0.25	0.25	0

# of std. dev.	1	
Damping ratio (%)	5	Modification factors are calculated in Sheet DSF

ASK14 Abrahamson & Silva & Kamai 2014 NGA West-2 Model
BSSA14 Boore & Stewart & Seyhan & Atkinson 2014 NGA West-2 Model
CB14 Campbell & Bozorgnia 2014 NGA West-2 Model
CY14 Chiou & Youngs 2014 NGA West-2 Model
I14 Idriss 2014 NGA West-2 Model

RotD50 Horizontal Component of PGA, PGV and *IMs*

Input variables | **Errors and warnings**

M_w = 7.58

R_{RUP} (km) = 1.44

R_{JB} (km) = 0

R_X (km) = 1

Ry0 (km) = 999 *If unknown use 999*

V_{S30} (m/sec) = 259

U (BSSA13) = 0 *1: Unspecified fault mech.*

F_{RV} = 0 *1: reverse fault*

F_{NM} = 0 *1: normal fault*

F_{HW} = 0 *1: hanging wall side*

Dip (deg) = 90

Z_{TOR} (km) = 0 *If unknown use 999*

Z_{HYP} (km) = 8 *If unknown use 999*

$Z_{1.0}$ (km) = 0.048 *If unknown use 999*

$Z_{2.5}$ (km) = 0.607 *If unknown use 999*

W (km) = 10 *If unknown use 999*

Vs30Flag = inferred *Choose options for V_{s30} from the list*

F_{AS} = no *Aftershock effect is not applicable.*

Region = California *Choose region from the list*

Calculated Variables/Flags

ΔDPP = 0 *Always 0 for median calcs.*

PGA_r (g) = 0.494

Z_{BOT} (km) (CB14) = 15 *Enter for default W calcs*

SS = 1 *auto calculated*

$V_{s30Flag}$ = 0 *inferred*

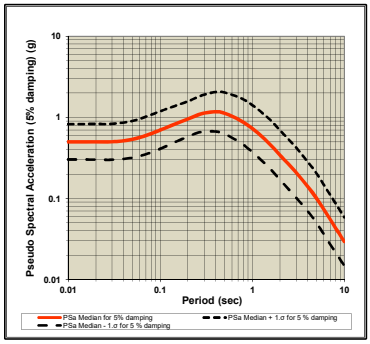
F_{AS} = 0 *Aftershock effect is not applicable.*

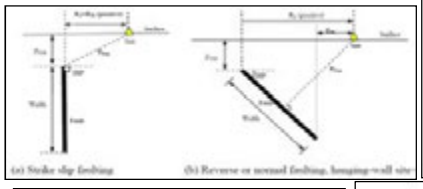
Region = 0 *California*

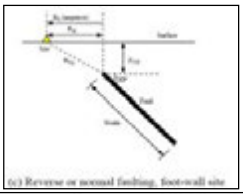
Option for Sa value = 1 *Weighted average of the natural logarithm of the spectral values*

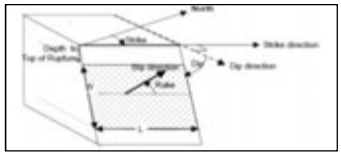
GMP	T (s)	Baseline: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5% damping	PSa Median - 1.σ for 5% damping	S_a Median for 5% damping	User defined: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5 % damping	PSa Median - 1.σ for 5 % damping	Sd Median for 5 % damping
	0.01	0.49919	0.82376	0.30250	0.00124	0.49919	0.82376	0.30250	0.00124
	0.02	0.50005	0.82872	0.30174	0.00497	0.50005	0.82872	0.30174	0.00497
	0.03	0.49984	0.83177	0.30037	0.01117	0.49934	0.83094	0.30007	0.01116
	0.05	0.53549	0.90251	0.31772	0.03323	0.53495	0.90161	0.31740	0.03320
	0.075	0.61259	1.04564	0.35889	0.08554	0.61382	1.04773	0.35961	0.08571
	0.1	0.69521	1.18460	0.40800	0.17258	0.69660	1.18697	0.40881	0.17292
	0.15	0.83666	1.39632	0.50132	0.46730	0.83834	1.39912	0.50232	0.46824
	0.2	0.95157	1.56964	0.57687	0.94485	0.95347	1.57278	0.57802	0.94674
	0.25	1.05272	1.74427	0.63535	1.63328	1.05904	1.75473	0.63916	1.64308
	0.3	1.12479	1.90043	0.66572	2.51293	1.12591	1.90233	0.66638	2.51544
	0.4	1.16821	2.04651	0.66685	4.63989	1.17055	2.05060	0.66819	4.64917
	0.5	1.12407	2.02341	0.62445	6.97586	1.12519	2.02543	0.62508	6.98284
	0.75	0.91351	1.72486	0.48381	12.75567	0.91260	1.72313	0.48333	12.74291
	1	0.72953	1.42058	0.37465	18.10972	0.72807	1.41774	0.37390	18.07350
	1.5	0.48819	0.97360	0.24479	27.26679	0.48819	0.97360	0.24479	27.26679
	2	0.34385	0.69466	0.17020	34.14222	0.34282	0.69258	0.16969	34.03979
	3	0.20884	0.42492	0.10264	46.65811	0.20842	0.42407	0.10244	46.56479
	4	0.14020	0.28258	0.06956	55.68600	0.14020	0.28258	0.06956	55.68600
	5	0.10088	0.20363	0.04998	62.60801	0.10058	0.20302	0.04983	62.42019
	7.5	0.04896	0.09841	0.02436	68.36318	0.04896	0.09841	0.02436	68.36318
	10	0.02953	0.05868	0.01486	73.31181	0.02944	0.05850	0.01482	73.09188
PGA (g)	0	0.49609	0.81808	0.30084	0.00123	0.49609	0.81808	0.30084	0.00123
PGV (cm/s)	-1	86.77922	153.01456	49.21514	0.21542	NA	NA	NA	NA

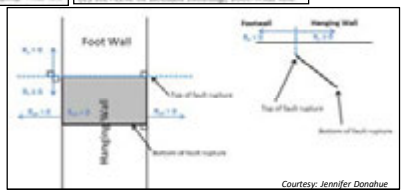
PSa (g), S_a (cm)











Courtesy: Jennifer Donahue

Definition of Parameters

Damping ratio = Viscous damping ratio (%) See Sanaz et al. (2012) PEER Report
PSA = Pseudo-absolute acceleration response spectrum (g)
PGA = Peak ground acceleration (g)
PGV = Peak ground velocity (cm/s)
S_d = Relative displacement response spectrum (cm)
M_w = Moment magnitude
R_{RUP} = Closest distance to coseismic rupture (km), used in ASK13, CB13 and CY13. See Figures a, b and c for illustation
R_{JB} = Closest distance to surface projection of coseismic rupture (km). See Figures a, b and c for illustation
R_X = Horizontal distance from top of rupture measured perpendicular to fault strike (km). See Figures a, b and c for illustation
R_{y0} = The horizontal distance off the end of the rupture measured parallel to strike (km)
V_{S30} = The average shear-wave velocity (m/s) over a subsurface depth of 30 m
U = Unspecified-mechanism factor: 1 for unspecified; 0 otherwise
F_{RV} = Reverse-faulting factor: 0 for strike slip, normal, normal-oblique; 1 for reverse, reverse-oblique and thrust
F_{NM} = Normal-faulting factor: 0 for strike slip, reverse, reverse-oblique, thrust and normal-oblique; 1 for normal
F_{HW} = Hanging-wall factor: 1 for site on down-dip side of top of rupture; 0 otherwise
Dip = Average dip of rupture plane (degrees)
Z_{TOR} = Depth to top of coseismic rupture (km)
Z_{HYP} = Hypocentral depth from the earthquake
$Z_{1.0}$ = Depth to Vs=1 km/sec
$Z_{2.5}$ = Depth to Vs=2.5 km/sec
W = Fault rupture width (km)
$V_{s30Flag}$ = 1 for measured, 0 for inferred Vs30
F_{AS} = 0 for mainshock; 1 for aftershock
Region = Specific regions considered in the models, Click on Region to see codes
ΔDPP = Directivity term, direct point parameter; uses 0 for median predictions
PGA_r *(g)* = Peak ground acceleration on rock (g), this specific cell is updated in the cell for BSSA14 and CB14, for others it is taken account for in the macros
Z_{BOT} *(km)* = The depth to the bottom of the seismogenic crust
Z_{BOR} *(km)* = The depth to the bottom of the rupture plane
SS = 1 for strike slip, automatically updated in the cell

Input variables with defaults (If entered 999 as input):

Red colored value: The value is used in the code when input is unknown

DEFAULTs	USER defined	ASK14	BSSA14	CB14	CY14	I14
W (km)	10.00			15.000		
$Z_{1.0}$ (km)	0.048	0.048			0.486	
$\delta Z_{1.0}$ (km)	-0.438		-0.438			
$Z_{2.5}$ (V_{S30}=1100)(km)	0.607			0.398		
$Z_{2.5}$ (V_{S30})(km)	0.607			2.079		
Z_{TOP} (km)	8.00			10.227		
Z_{TOR} (km)	0.00			0.000	0.000	
Z_{BOR} (km)	-			15.000		

ACKNOWLEDGEMENTS

Nick Gregor, Bechtel
Silvia Mazzoni, Consultant

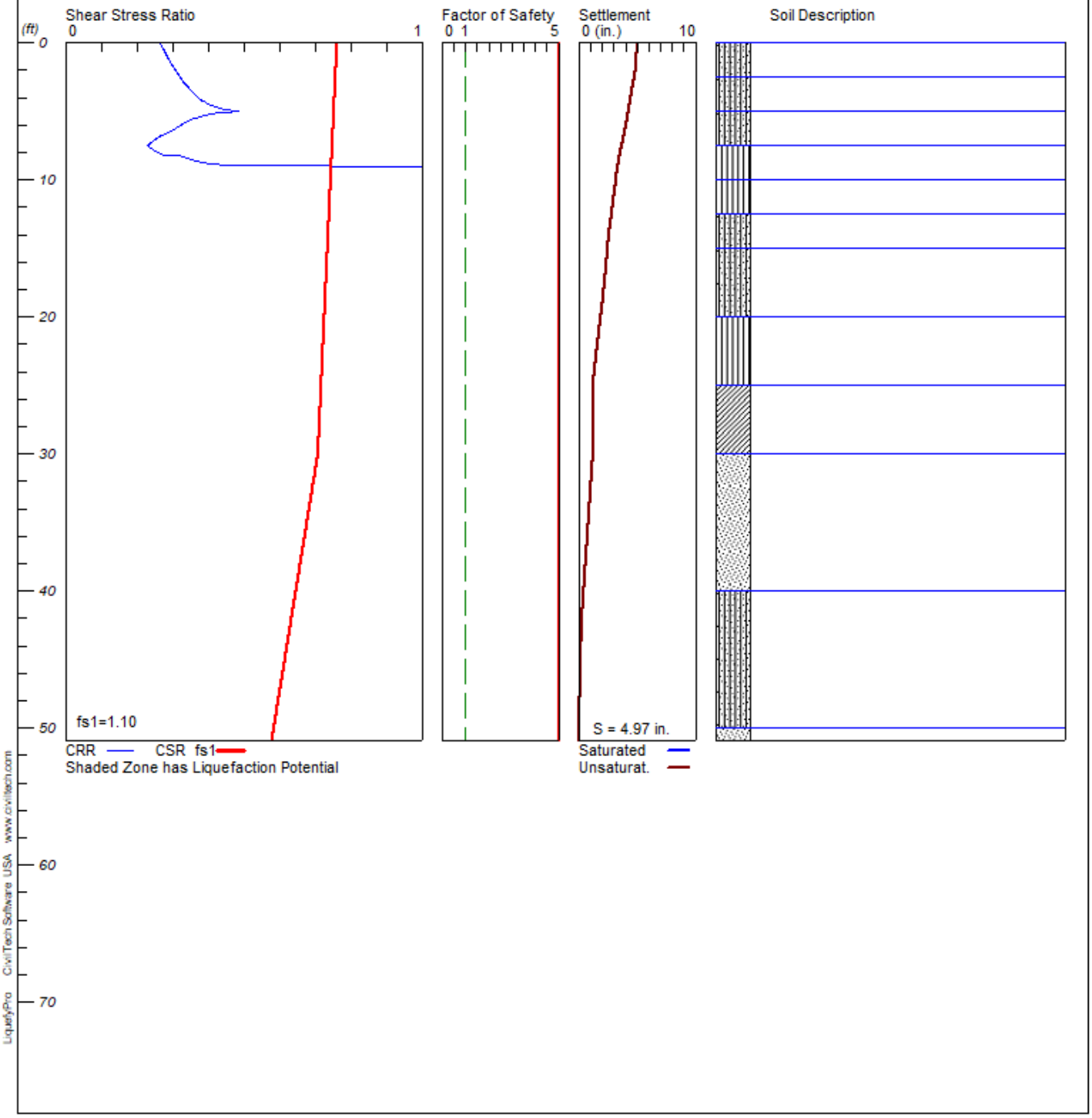
All NGA West-2 participants are acknowledged for their constructive comments and feedback.

DRY SETTLEMENT ANALYSIS

Pulte Debonne Indio

Hole No.=LB-1 Water Depth=100 ft

Magnitude=7.45
Acceleration=1.066g



****
LIQUEFACTION ANALYSIS SUMMARY

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Font: Courier New, Regular, Size 8 is recommended for this report.
Licensed to , 3/3/2020 11:30:44 AM

Input File Name: P:\Palm Desert\Infocus Projects\12000 - 12999\12656 Pulte Debonne Indio\001 Due Diligence\Analyses\Liquefy\Liquefy LB-1.liq
Title: Pulte Debonne Indio
Subtitle: 12656.001

Surface Elev.=
Hole No.=LB-1
Depth of Hole= 50.92 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration= 1.07 g
Earthquake Magnitude= 7.45

Input Data:
Surface Elev.=
Hole No.=LB-1
Depth of Hole=50.92 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration=1.07 g
Earthquake Magnitude=7.45
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Idriss/Seed
4. Fine Correction for Settlement: Post Liquefaction
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.25
7. Borehole Diameter, Cb= 1.15
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1.1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
0.00	8.40	117.00	45.00
5.00	11.40	117.00	45.00
7.50	7.80	113.00	70.00
10.00	15.00	113.00	70.00
12.50	16.20	117.00	45.00
15.00	22.80	117.00	45.00
20.00	19.20	113.00	70.00
25.00	21.60	117.00	NoLiq
30.00	41.40	115.00	10.00
40.00	42.00	117.00	45.00
50.00	54.00	115.00	NoLiq

Output Results:

Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=4.97 in.
Total Settlement of Saturated and Unsaturated Sands=4.97 in.
Differential Settlement=2.483 to 3.278 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	0.26	0.76	5.00	0.00	4.97	4.97
1.00	0.28	0.76	5.00	0.00	4.96	4.96
2.00	0.31	0.76	5.00	0.00	4.86	4.86
3.00	0.33	0.76	5.00	0.00	4.64	4.64
4.00	0.37	0.76	5.00	0.00	4.43	4.43
5.00	0.49	0.75	5.00	0.00	4.23	4.23
6.00	0.32	0.75	5.00	0.00	4.03	4.03
7.00	0.25	0.75	5.00	0.00	3.80	3.80
8.00	0.26	0.75	5.00	0.00	3.54	3.54
9.00	2.03	0.75	5.00	0.00	3.33	3.33
10.00	2.03	0.74	5.00	0.00	3.17	3.17
11.00	2.03	0.74	5.00	0.00	3.02	3.02
12.00	2.03	0.74	5.00	0.00	2.87	2.87
13.00	2.03	0.74	5.00	0.00	2.71	2.71
14.00	2.03	0.74	5.00	0.00	2.57	2.57
15.00	2.03	0.74	5.00	0.00	2.45	2.45
16.00	2.03	0.73	5.00	0.00	2.36	2.36
17.00	2.03	0.73	5.00	0.00	2.25	2.25
18.00	2.03	0.73	5.00	0.00	2.13	2.13
19.00	2.03	0.73	5.00	0.00	2.00	2.00
20.00	2.03	0.73	5.00	0.00	1.87	1.87
21.00	2.03	0.72	5.00	0.00	1.72	1.72
22.00	2.03	0.72	5.00	0.00	1.58	1.58
23.00	2.03	0.72	5.00	0.00	1.45	1.45

24.00	2.03	0.72	5.00	0.00	1.31	1.31
25.00	2.03	0.72	5.00	0.00	1.19	1.19
26.00	2.00	0.72	5.00	0.00	1.19	1.19
27.00	2.00	0.71	5.00	0.00	1.19	1.19
28.00	2.00	0.71	5.00	0.00	1.19	1.19
29.00	2.00	0.71	5.00	0.00	1.19	1.19
30.00	2.00	0.71	5.00	0.00	1.19	1.19
31.00	2.01	0.70	5.00	0.00	1.12	1.12
32.00	2.00	0.70	5.00	0.00	1.04	1.04
33.00	1.99	0.69	5.00	0.00	0.96	0.96
34.00	1.98	0.68	5.00	0.00	0.88	0.88
35.00	1.97	0.68	5.00	0.00	0.80	0.80
36.00	1.96	0.67	5.00	0.00	0.72	0.72
37.00	1.95	0.67	5.00	0.00	0.64	0.64
38.00	1.94	0.66	5.00	0.00	0.56	0.56
39.00	1.93	0.65	5.00	0.00	0.48	0.48
40.00	1.92	0.65	5.00	0.00	0.40	0.40
41.00	1.91	0.64	5.00	0.00	0.32	0.32
42.00	1.90	0.63	5.00	0.00	0.25	0.25
43.00	1.89	0.63	5.00	0.00	0.20	0.20
44.00	1.88	0.62	5.00	0.00	0.17	0.17
45.00	1.87	0.62	5.00	0.00	0.14	0.14
46.00	1.86	0.61	5.00	0.00	0.11	0.11
47.00	1.85	0.60	5.00	0.00	0.08	0.08
48.00	1.84	0.60	5.00	0.00	0.05	0.05
49.00	1.83	0.59	5.00	0.00	0.02	0.02
50.00	1.83	0.58	5.00	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2,   CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

---

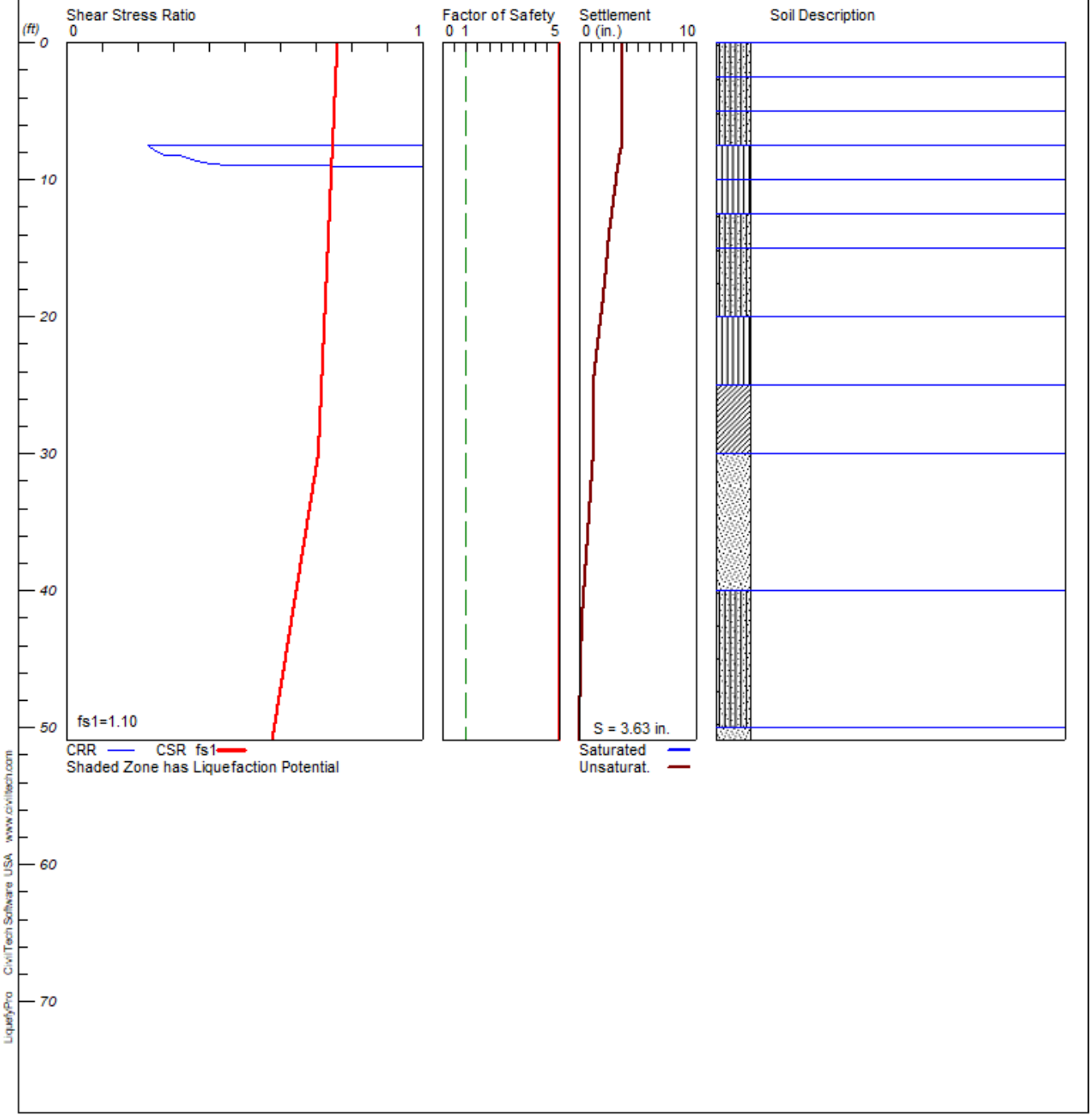
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

DRY SETTLEMENT ANALYSIS

Pulte Debonne Indio

Hole No.=LB-1 Water Depth=100 ft
With 7' O.X.

Magnitude=7.45
Acceleration=1.066g



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LIQUEFACTION ANALYSIS SUMMARY

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Input File Name: P:\Palm Desert\Infocus Projects\12000 - 12999\12656 Pulte Debonne Indio\001 Due Diligence\Analyses\Liquefy\Liquefy LB-1 7OX.liq
Title: Pulte Debonne Indio
Subtitle: 12656.001

Surface Elev.=
Hole No.=LB-1
Depth of Hole= 50.92 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration= 1.07 g
Earthquake Magnitude= 7.45

Input Data:
Surface Elev.=
Hole No.=LB-1
Depth of Hole=50.92 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration=1.07 g
Earthquake Magnitude=7.45
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Idriss/Seed
4. Fine Correction for Settlement: Post Liquefaction
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.25
7. Borehole Diameter, Cb= 1.15
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1.1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
0.00	8.40	117.00	NoLiq
5.00	11.40	117.00	NoLiq
7.50	7.80	113.00	NoLiq
10.00	15.00	113.00	70.00
12.50	16.20	117.00	45.00
15.00	22.80	117.00	45.00
20.00	19.20	113.00	70.00
25.00	21.60	117.00	NoLiq
30.00	41.40	115.00	10.00
40.00	42.00	117.00	45.00
50.00	54.00	115.00	NoLiq

Output Results:

Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=3.63 in.
Total Settlement of Saturated and Unsaturated Sands=3.63 in.
Differential Settlement=1.813 to 2.393 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	2.00	0.76	5.00	0.00	3.63	3.63
1.00	2.00	0.76	5.00	0.00	3.63	3.63
2.00	2.00	0.76	5.00	0.00	3.63	3.63
3.00	2.00	0.76	5.00	0.00	3.63	3.63
4.00	2.00	0.76	5.00	0.00	3.63	3.63
5.00	2.00	0.75	5.00	0.00	3.63	3.63
6.00	2.00	0.75	5.00	0.00	3.63	3.63
7.00	2.00	0.75	5.00	0.00	3.63	3.63
8.00	0.26	0.75	5.00	0.00	3.53	3.53
9.00	2.03	0.75	5.00	0.00	3.33	3.33
10.00	2.03	0.74	5.00	0.00	3.17	3.17
11.00	2.03	0.74	5.00	0.00	3.02	3.02
12.00	2.03	0.74	5.00	0.00	2.87	2.87
13.00	2.03	0.74	5.00	0.00	2.71	2.71
14.00	2.03	0.74	5.00	0.00	2.57	2.57
15.00	2.03	0.74	5.00	0.00	2.45	2.45
16.00	2.03	0.73	5.00	0.00	2.36	2.36
17.00	2.03	0.73	5.00	0.00	2.25	2.25
18.00	2.03	0.73	5.00	0.00	2.13	2.13
19.00	2.03	0.73	5.00	0.00	2.00	2.00
20.00	2.03	0.73	5.00	0.00	1.87	1.87
21.00	2.03	0.72	5.00	0.00	1.72	1.72
22.00	2.03	0.72	5.00	0.00	1.58	1.58
23.00	2.03	0.72	5.00	0.00	1.45	1.45

24.00	2.03	0.72	5.00	0.00	1.31	1.31
25.00	2.03	0.72	5.00	0.00	1.19	1.19
26.00	2.00	0.72	5.00	0.00	1.19	1.19
27.00	2.00	0.71	5.00	0.00	1.19	1.19
28.00	2.00	0.71	5.00	0.00	1.19	1.19
29.00	2.00	0.71	5.00	0.00	1.19	1.19
30.00	2.00	0.71	5.00	0.00	1.19	1.19
31.00	2.01	0.70	5.00	0.00	1.12	1.12
32.00	2.00	0.70	5.00	0.00	1.04	1.04
33.00	1.99	0.69	5.00	0.00	0.96	0.96
34.00	1.98	0.68	5.00	0.00	0.88	0.88
35.00	1.97	0.68	5.00	0.00	0.80	0.80
36.00	1.96	0.67	5.00	0.00	0.72	0.72
37.00	1.95	0.67	5.00	0.00	0.64	0.64
38.00	1.94	0.66	5.00	0.00	0.56	0.56
39.00	1.93	0.65	5.00	0.00	0.48	0.48
40.00	1.92	0.65	5.00	0.00	0.40	0.40
41.00	1.91	0.64	5.00	0.00	0.32	0.32
42.00	1.90	0.63	5.00	0.00	0.25	0.25
43.00	1.89	0.63	5.00	0.00	0.20	0.20
44.00	1.88	0.62	5.00	0.00	0.17	0.17
45.00	1.87	0.62	5.00	0.00	0.14	0.14
46.00	1.86	0.61	5.00	0.00	0.11	0.11
47.00	1.85	0.60	5.00	0.00	0.08	0.08
48.00	1.84	0.60	5.00	0.00	0.05	0.05
49.00	1.83	0.59	5.00	0.00	0.02	0.02
50.00	1.83	0.58	5.00	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2,   CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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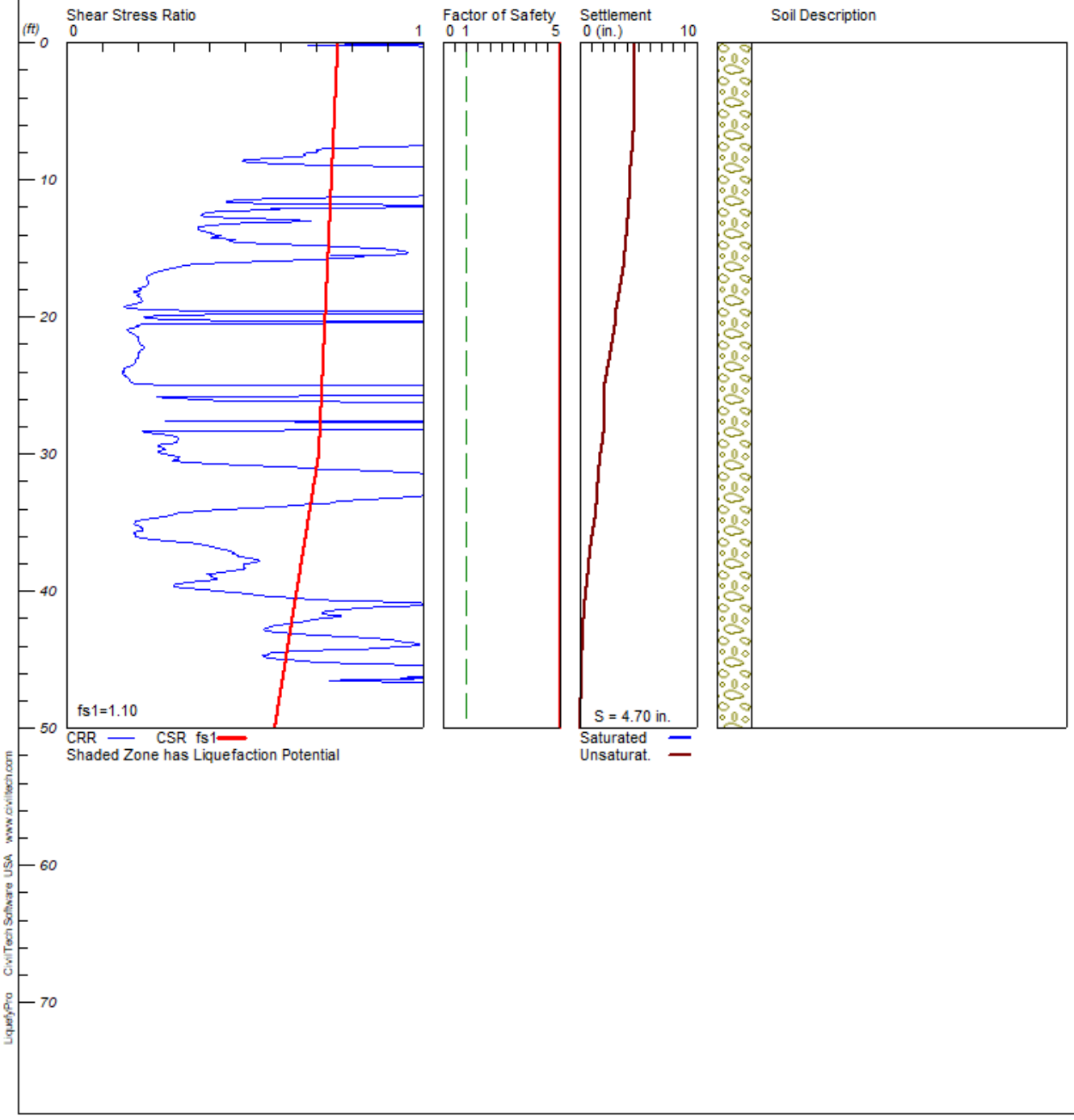
1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

DRY SETTLEMENT ANALYSIS

Pulte Debonne Indio

Hole No.=CPT-10 Water Depth=100 ft

Magnitude=7.45
Acceleration=1.066g



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LIQUEFACTION ANALYSIS SUMMARY

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Input File Name: P:\Palm Desert\Infocus Projects\12000 - 12999\12656 Pulte Debonne Indio\001 Due Diligence\Analyses\Liquefy\Liquefy CPT-10.liq
Title: Pulte Debonne Indio
Subtitle: 12656.001

Surface Elev.=
Hole No.=CPT-10
Depth of Hole= 50.00 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration= 1.07 g
Earthquake Magnitude= 7.45

Input Data:
Surface Elev.=
Hole No.=CPT-10
Depth of Hole=50.00 ft
Water Table during Earthquake= 100.00 ft
Water Table during In-Situ Testing= 100.00 ft
Max. Acceleration=1.07 g
Earthquake Magnitude=7.45
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. CPT Calculation Method: Modify Robertson*
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
9. User request factor of safety (apply to CSR) , User= 1.1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*
* Recommended Options

In-Situ Test Data:

Depth	qc	fs	Rf	gamma	Fines	D50
ft	atm	atm	pcf	%	mm	

0.00	11.94	0.10	0.84	117.00	0.00	0.15
0.75	114.70	1.45	1.27	117.00	0.00	0.15
1.39	159.50	2.06	1.29	117.00	0.00	0.15
2.10	153.20	3.23	2.11	113.00	0.00	0.15
2.70	156.50	2.97	1.90	117.00	0.00	0.15
3.38	176.10	3.73	2.12	117.00	0.00	0.15
4.01	157.30	1.97	1.25	117.00	0.00	0.15
4.67	156.40	1.50	0.96	117.00	0.00	0.15
5.32	166.80	2.28	1.37	117.00	0.00	0.15
5.99	178.00	2.43	1.37	117.00	0.00	0.15
6.67	132.50	1.67	1.26	117.00	0.00	0.15
7.33	144.70	1.48	1.02	117.00	0.00	0.15
7.94	111.60	1.47	1.32	117.00	0.00	0.15
8.65	107.10	0.97	0.90	117.00	0.00	0.15
9.29	198.00	1.83	0.92	117.00	0.00	0.15
9.94	235.80	1.68	0.71	117.00	0.00	0.15
10.59	218.70	2.35	1.07	117.00	0.00	0.15
11.26	135.20	1.92	1.42	113.00	0.00	0.15
11.89	57.79	2.68	4.64	113.00	0.00	0.15
12.53	61.25	1.78	2.91	113.00	0.00	0.15
13.21	70.34	2.16	3.07	113.00	0.00	0.15
13.85	86.25	1.99	2.30	113.00	0.00	0.15
14.53	88.76	2.29	2.58	117.00	0.00	0.15
15.22	189.70	1.79	0.94	117.00	0.00	0.15
15.85	157.50	1.84	1.17	117.00	0.00	0.15
16.49	97.07	1.34	1.38	117.00	0.00	0.15
17.13	94.04	0.90	0.96	117.00	0.00	0.15
17.78	88.50	1.02	1.15	117.00	0.00	0.15
18.45	76.48	1.06	1.38	113.00	0.00	0.15
19.12	78.29	0.86	1.09	113.00	0.00	0.15
19.75	38.24	1.26	3.29	113.00	0.00	0.15
20.42	37.81	1.30	3.44	113.00	0.00	0.15
21.13	76.56	1.03	1.34	113.00	0.00	0.15
21.80	79.16	1.26	1.59	113.00	0.00	0.15
22.48	87.03	1.21	1.39	113.00	0.00	0.15
23.12	84.26	1.17	1.39	113.00	0.00	0.15
23.77	71.89	0.95	1.32	113.00	0.00	0.15
24.43	78.12	1.02	1.31	113.00	0.00	0.15
25.06	38.59	1.50	3.89	113.00	0.00	0.15
25.74	42.22	1.28	3.03	113.00	0.00	0.15
26.39	50.78	2.08	4.09	113.00	0.00	0.15
27.13	24.83	1.44	5.79	113.00	0.00	0.15
27.71	45.07	1.52	3.38	113.00	0.00	0.15
28.39	80.37	1.57	1.95	113.00	0.00	0.15
29.04	133.00	1.87	1.40	117.00	0.00	0.15
29.68	124.60	1.77	1.42	117.00	0.00	0.15
30.37	89.37	2.36	2.64	117.00	0.00	0.15
31.04	221.90	2.52	1.13	117.00	0.00	0.15
31.69	262.60	4.72	1.80	117.00	0.00	0.15

32.39	248.60	5.07	2.04	117.00	0.00	0.15
33.00	248.10	4.54	1.83	117.00	0.00	0.15
33.67	202.90	3.65	1.80	117.00	0.00	0.15
34.32	133.90	2.41	1.80	117.00	0.00	0.15
35.00	100.10	1.53	1.53	117.00	0.00	0.15
35.64	111.00	1.55	1.39	117.00	0.00	0.15
36.30	144.70	1.89	1.31	117.00	0.00	0.15
36.96	184.60	2.79	1.51	117.00	0.00	0.15
37.64	189.70	3.57	1.88	117.00	0.00	0.15
38.30	196.90	3.22	1.63	117.00	0.00	0.15
38.93	171.00	3.05	1.78	117.00	0.00	0.15
39.56	146.00	2.51	1.72	117.00	0.00	0.15
40.23	227.60	2.78	1.22	117.00	0.00	0.15
40.89	321.20	3.37	1.05	117.00	0.00	0.15
41.53	270.70	3.23	1.19	117.00	0.00	0.15
42.20	255.80	3.47	1.36	117.00	0.00	0.15
42.86	241.00	3.09	1.28	117.00	0.00	0.15
43.58	304.20	4.04	1.33	117.00	0.00	0.15
44.22	285.60	4.07	1.43	117.00	0.00	0.15
44.88	200.10	4.59	2.29	117.00	0.00	0.15
45.54	339.50	6.69	1.97	117.00	0.00	0.15
46.19	249.40	7.68	3.08	117.00	0.00	0.15
46.86	353.70	6.42	1.82	117.00	0.00	0.15
47.51	350.10	5.34	1.53	117.00	0.00	0.15
48.17	343.20	6.14	1.79	117.00	0.00	0.15
48.83	334.90	5.97	1.78	117.00	0.00	0.15
49.49	353.70	6.12	1.73	117.00	0.00	0.15

Modify Robertson method generates Fines from qc/fs. Inputted Fines are not relevant.

Output Results:

Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=4.70 in.
Total Settlement of Saturated and Unsaturated Sands=4.70 in.
Differential Settlement=2.352 to 3.105 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	2.00	0.76	5.00	0.00	4.70	4.70
1.00	2.12	0.76	5.00	0.00	4.70	4.70
2.00	2.12	0.76	5.00	0.00	4.70	4.70
3.00	2.12	0.76	5.00	0.00	4.70	4.70
4.00	2.12	0.76	5.00	0.00	4.67	4.67
5.00	2.12	0.75	5.00	0.00	4.64	4.64
6.00	2.12	0.75	5.00	0.00	4.62	4.62
7.00	1.29	0.75	5.00	0.00	4.55	4.55
8.00	0.68	0.75	5.00	0.00	4.46	4.46
9.00	0.91	0.75	5.00	0.00	4.34	4.34

10.00	2.12	0.74	5.00	0.00	4.27	4.27
11.00	1.78	0.74	5.00	0.00	4.24	4.24
12.00	1.08	0.74	5.00	0.00	4.18	4.18
13.00	0.69	0.74	5.00	0.00	4.09	4.09
14.00	0.42	0.74	5.00	0.00	3.98	3.98
15.00	0.88	0.74	5.00	0.00	3.88	3.88
16.00	0.50	0.73	5.00	0.00	3.78	3.78
17.00	0.23	0.73	5.00	0.00	3.61	3.61
18.00	0.21	0.73	5.00	0.00	3.41	3.41
19.00	0.20	0.73	5.00	0.00	3.21	3.21
20.00	0.22	0.73	5.00	0.00	3.07	3.07
21.00	0.17	0.72	5.00	0.00	2.92	2.92
22.00	0.20	0.72	5.00	0.00	2.72	2.72
23.00	0.20	0.72	5.00	0.00	2.52	2.52
24.00	0.16	0.72	5.00	0.00	2.31	2.31
25.00	2.00	0.72	5.00	0.00	2.09	2.09
26.00	0.36	0.72	5.00	0.00	2.07	2.07
27.00	2.00	0.71	5.00	0.00	2.05	2.05
28.00	2.00	0.71	5.00	0.00	2.04	2.04
29.00	0.31	0.71	5.00	0.00	1.93	1.93
30.00	0.28	0.71	5.00	0.00	1.76	1.76
31.00	0.66	0.70	5.00	0.00	1.62	1.62
32.00	1.40	0.70	5.00	0.00	1.54	1.54
33.00	1.04	0.69	5.00	0.00	1.46	1.46
34.00	0.46	0.68	5.00	0.00	1.37	1.37
35.00	0.19	0.68	5.00	0.00	1.22	1.22
36.00	0.19	0.67	5.00	0.00	1.02	1.02
37.00	0.45	0.67	5.00	0.00	0.86	0.86
38.00	0.50	0.66	5.00	0.00	0.75	0.75
39.00	0.41	0.65	5.00	0.00	0.63	0.63
40.00	0.43	0.65	5.00	0.00	0.50	0.50
41.00	1.02	0.64	5.00	0.00	0.39	0.39
42.00	0.72	0.63	5.00	0.00	0.30	0.30
43.00	0.59	0.63	5.00	0.00	0.24	0.24
44.00	0.96	0.62	5.00	0.00	0.19	0.19
45.00	0.63	0.62	5.00	0.00	0.15	0.15
46.00	1.54	0.61	5.00	0.00	0.12	0.12
47.00	1.44	0.60	5.00	0.00	0.09	0.09
48.00	1.33	0.60	5.00	0.00	0.05	0.05
49.00	1.15	0.59	5.00	0.00	0.02	0.02
50.00	2.00	0.58	5.00	0.00	0.00	0.00

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2)
CRRm Cyclic resistance ratio from soils
CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf
S_sat Settlement from saturated sands
S_dry Settlement from Unsaturated Sands
S_all Total Settlement from Saturated and Unsaturated Sands
NoLiq No-Liquefy Soils

APPENDIX D

Earthwork and Grading Specifications

APPENDIX D

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

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Standard Details

A - Keying and Benching	Rear of Text
D - Buttress or Replacement Fill Subdrains	Rear of Text
Retaining Wall	Rear of Text

1.0 General

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ the Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultants shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested include natural ground after it has been cleared for receiving fill but before fill is placed, bottoms of all "remedial removal" areas, all key bottoms, and benches made on sloping ground to receive fill.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to determine the attained level of compaction. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the plans and specifications.

The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate observations and tests can be planned and accomplished. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). No fill lift shall contain more than 5 percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of large clay lumps or clods and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Overexcavation

In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant

prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of Section 3.1. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing

Field-tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 Safety

The Contractor shall follow all OSHA and Cal/OSHA requirements for safety of trench excavations.

7.2 Bedding and Backfill

All bedding and backfill of utility trenches shall be performed in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of relative compaction from 1 foot above the top of the conduit to the surface.

The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

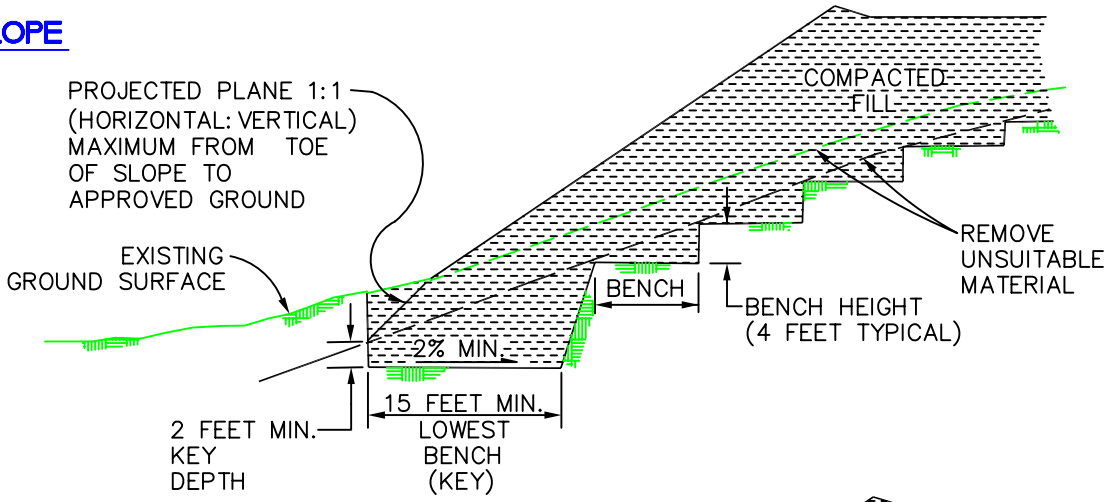
7.3 Lift Thickness

Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

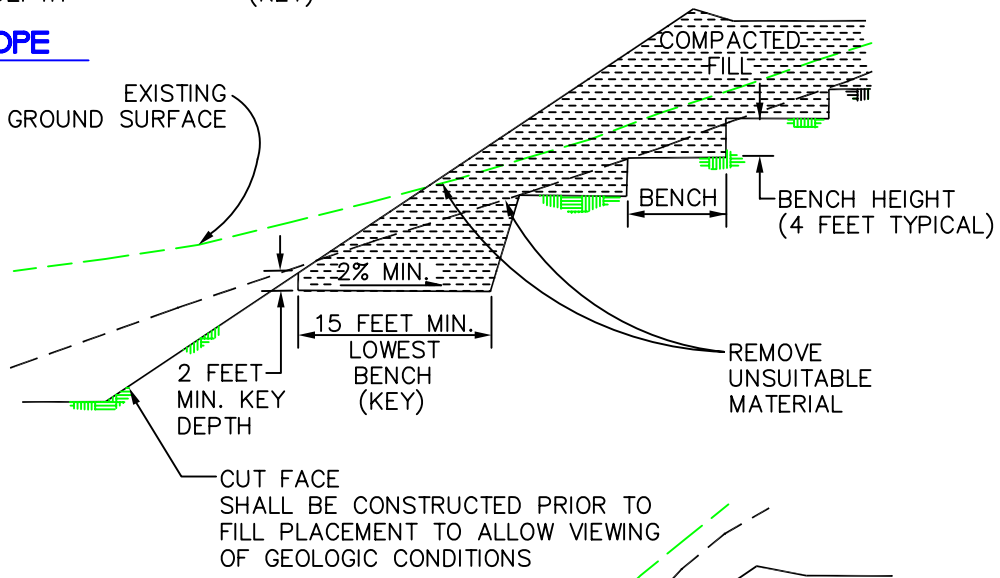
7.4 Observation and Testing

The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

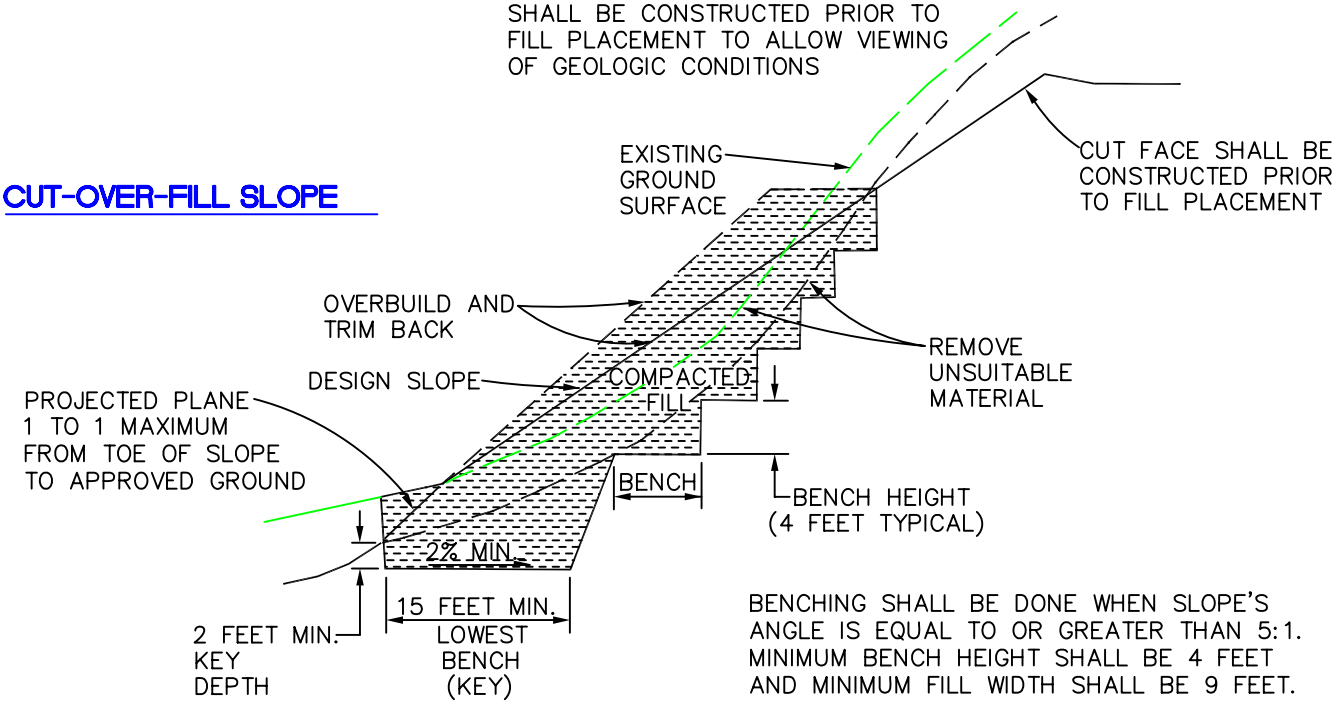
FILL SLOPE



FILL-OVER-CUT SLOPE

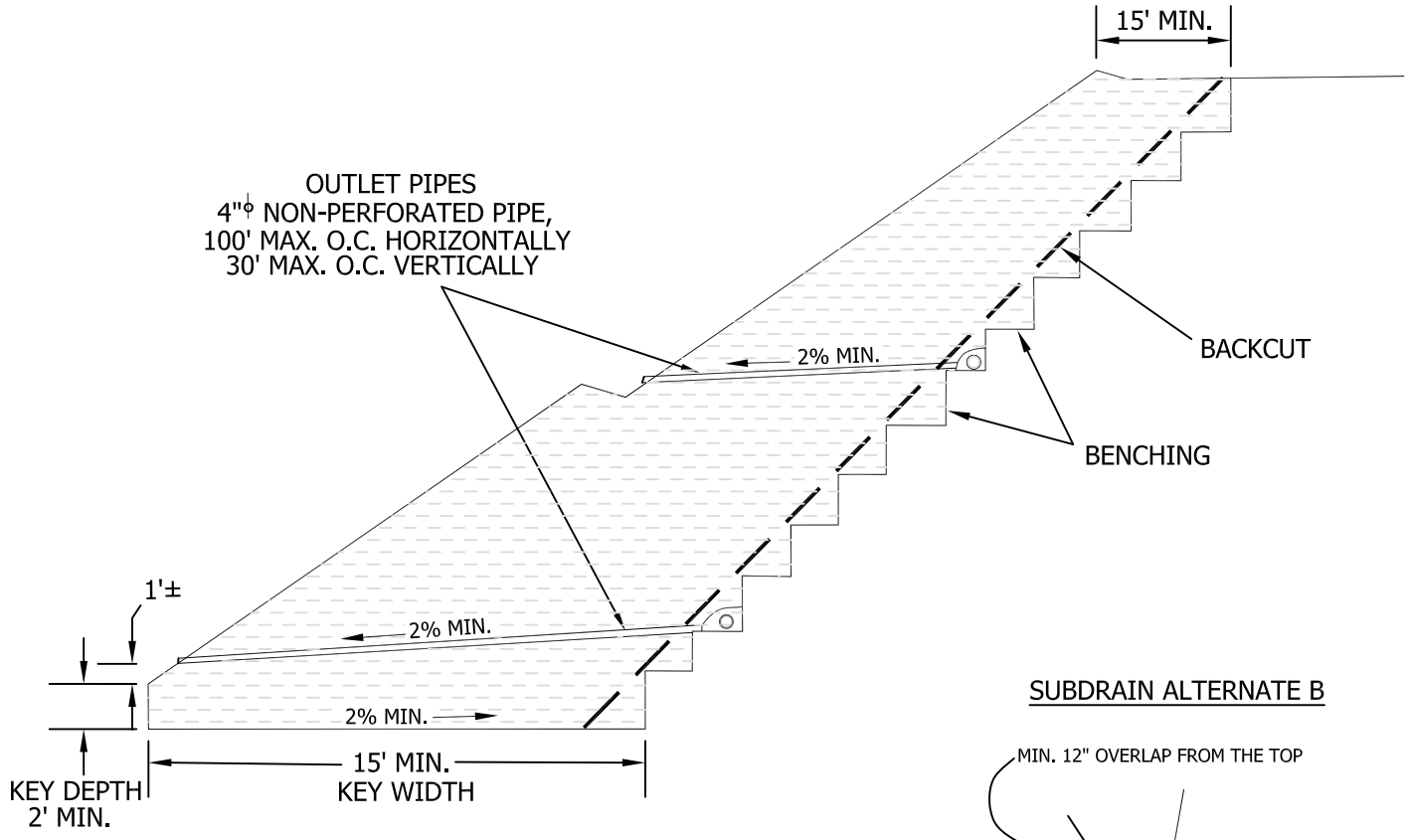


CUT-OVER-FILL SLOPE

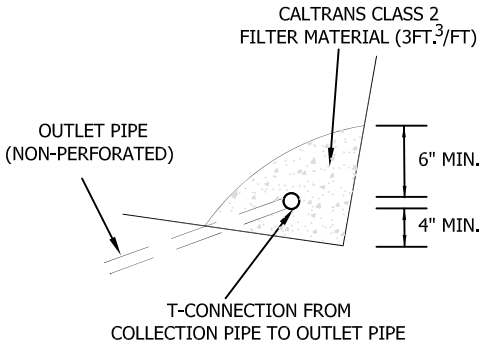


BENCHING SHALL BE DONE WHEN SLOPE'S ANGLE IS EQUAL TO OR GREATER THAN 5:1. MINIMUM BENCH HEIGHT SHALL BE 4 FEET AND MINIMUM FILL WIDTH SHALL BE 9 FEET.

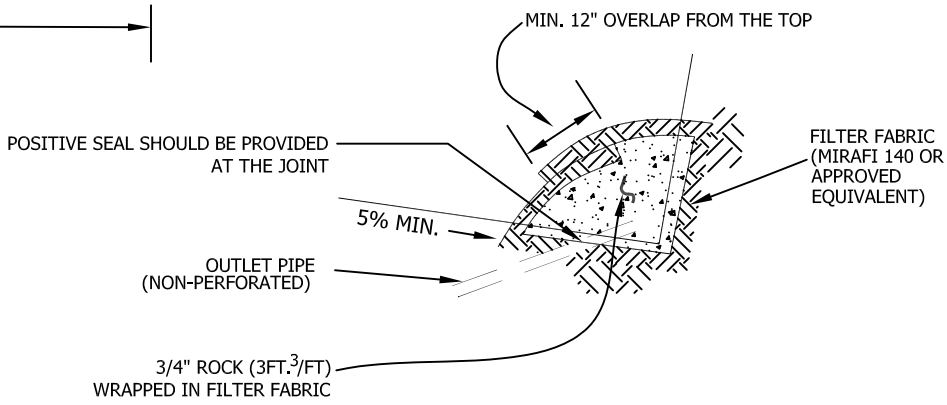
KEYING AND BENCHING	GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAILS A	Leighton



SUBDRAIN ALTERNATE A



SUBDRAIN ALTERNATE B



- SUBDRAIN INSTALLATION - Subdrain collector pipe shall be installed with perforations down or, unless otherwise designated by the geotechnical consultant. Outlet pipes shall be non-perforated pipe. The subdrain pipe shall have at least 8 perforations uniformly spaced per foot. Perforation shall be 1/4" to 1/2" if drilled holes are used. All subdrain pipes shall have a gradient at least 2% towards the outlet.
- SUBDRAIN PIPE - Subdrain pipe shall be ASTM D2751, ASTM D1527 (Schedule 40) or SDR 23.5 ABS pipe or ASTM D3034 (Schedule 40) or SDR 23.5 PVC pipe.
- All outlet pipe shall be placed in a trench and, after fill is placed above it, rodded to verify integrity.

BUTTRESS OR REPLACEMENT FILL SUBDRAINS	GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAILS D	Leighton

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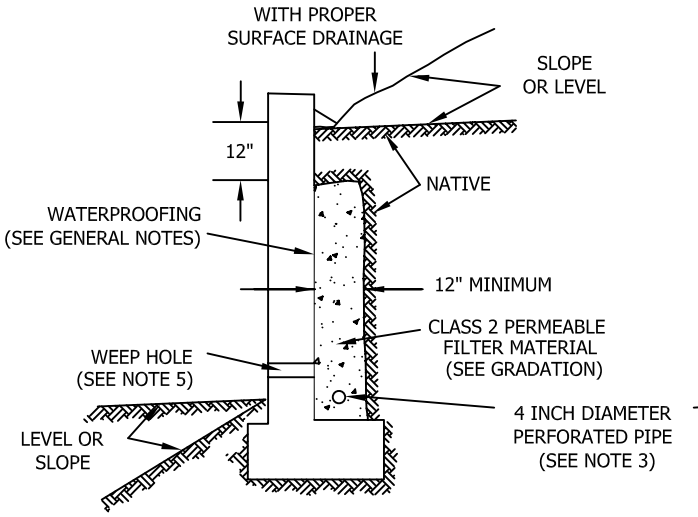
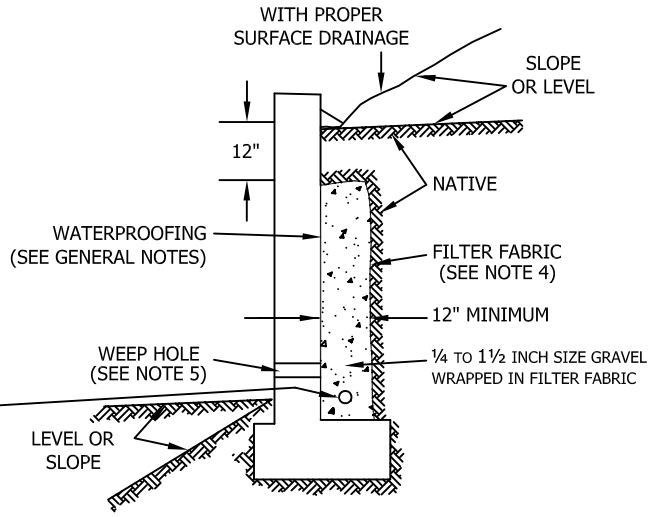
SUBDRAIN OPTIONS AND BACKFILL WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

OPTION 1: PIPE SURROUNDED WITH CLASS 2 PERMEABLE MATERIAL



OPTION 2: GRAVEL WRAPPED IN FILTER FABRIC



Class 2 Filter Permeable Material Gradation
Per Caltrans Specifications

Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

GENERAL NOTES:

* Waterproofing should be provided where moisture nuisance problem through the wall is undesirable.
* Water proofing of the walls is not under purview of the geotechnical engineer
* All drains should have a gradient of 1 percent minimum
*Outlet portion of the subdrain should have a 4-inch diameter solid pipe discharged into a suitable disposal area designed by the project engineer. The subdrain pipe should be accessible for maintenance (rodding)
*Other subdrain backfill options are subject to the review by the geotechnical engineer and modification of design parameters.

Notes:
1) Sand should have a sand equivalent of 30 or greater and may be densified by water jetting.
2) 1 Cu. ft. per ft. of 1/4- to 1 1/2-inch size gravel wrapped in filter fabric
3) Pipe type should be ASTM D1527 Acrylonitrile Butadiene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed with perforations down. Perforations should be 3/8 inch in diameter placed at the ends of a 120-degree arc in two rows at 3-inch on center (staggered)
4) Filter fabric should be Mirafi 140NC or approved equivalent.
5) Weephole should be 3-inch minimum diameter and provided at 10-foot maximum intervals. If exposure is permitted, weepholes should be located 12 inches above finished grade. If exposure is not permitted such as for a wall adjacent to a sidewalk/curb, a pipe under the sidewalk to be discharged through the curb face or equivalent should be provided. For a basement-type wall, a proper subdrain outlet system should be provided.
6) Retaining wall plans should be reviewed and approved by the geotechnical engineer.
7) Walls over six feet in height are subject to a special review by the geotechnical engineer and modifications to the above requirements.

RETAINING WALL BACKFILL AND SUBDRAIN DETAIL FOR WALLS 6 FEET OR LESS IN HEIGHT

WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

Leighton

Figure

APPENDIX E

GBA Important Information about this Geotechnical Engineering Report

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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APPENDIX I

Preliminary Hydrology Technical Memo

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

MEMORANDUM

TO: City of Indio

FROM: MSA Consulting, Inc.

DATE: November 4, 2022

SUBJECT: **TENTATIVE TRACT MAP NO. 38470 PRELIMINARY HYDROLOGIC SUMMARY – MSA Job No. 2577**

PROJECT DESCRIPTION

The subject property is approximately 377 acres located east of Jefferson Street, west of Madison Street, north of 40th Avenue and south of 38th Avenue in Section 4, Township 5 South, Range 7 East, San Bernardino Base and Meridian.

FLOOD RATE MAP

The project area is covered by FIRM Panel Number 1620 of 3805, which indicates the north 1/2 of the site is designated as Zone A and the south half as Zone X.

Zone A: Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

Zone X: Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. Insurance purchase is not required in these zones.

PROPOSED FLOOD CONTROL REQUIREMENTS

Drainage requirements fall under the jurisdiction of the City of Indio. The project design shall provide for the capture and storage of storm flow from the 100-year storm event for the project area. Catch basins will intercept and convey storm flows through storm drain piping to retention basins.

RUN-OFF ANALYSIS DESIGN

Storm runoff volumes for the 100-year event were obtained utilizing the Synthetic Unit Hydrograph Shortcut Method, as described in the RCFC&WCD Hydrology Manual. The hydrologic data used for the calculations are as follows:

Hydrologic Soil Group:

The existing soil is categorized primarily as hydrologic soil group 'b' with a small portion of the north area of the project categorized as hydrologic soil group 'a',

Soil Group A is defined by RCFCD as - "Those soils having a low runoff potential. Soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well to excessively drained sands or gravels. These soils have a high rate of water transmission."
Soil Group B is defined by RCFCD as - "Soil having moderate infiltration rates when thoroughly wetted and consisting chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission."

Antecedent Moisture Condition:
Amc II - Moderate runoff potential, an intermediate condition. Per RCFC&WCD Hydrology Manual (Dated: April, 1978): "For the purposes of design hydrology using district methods, AMC II should normally be assumed for both the 10 year and 100 year frequency storm".

Land Use Classifications and Runoff Index Numbers:
Runoff index numbers were obtained from RCFCD Plates E6.1, E6.2 and E6.3 are summarized below:
Commercial or Residential Landscaping (Soil Group B) 56

Percent of Impervious Cover (RCFCD Plate E-6.3):
Paving/Hardscape - 100%
Residential Lot - 50%
Landscaping -10%

Point precipitation frequency estimates:
Precipitation depths were obtained from NOAA atlas 14:

2-Year 1-Hour Storm:	0.351 inches
100-Year 1-Hour Storm:	1.47 inches
100-Year 3-Hour Storm:	2.12 inches
100-Year 6-Hour Storm:	2.71 inches
100-Year 24-Hour Storm:	4.38 inches

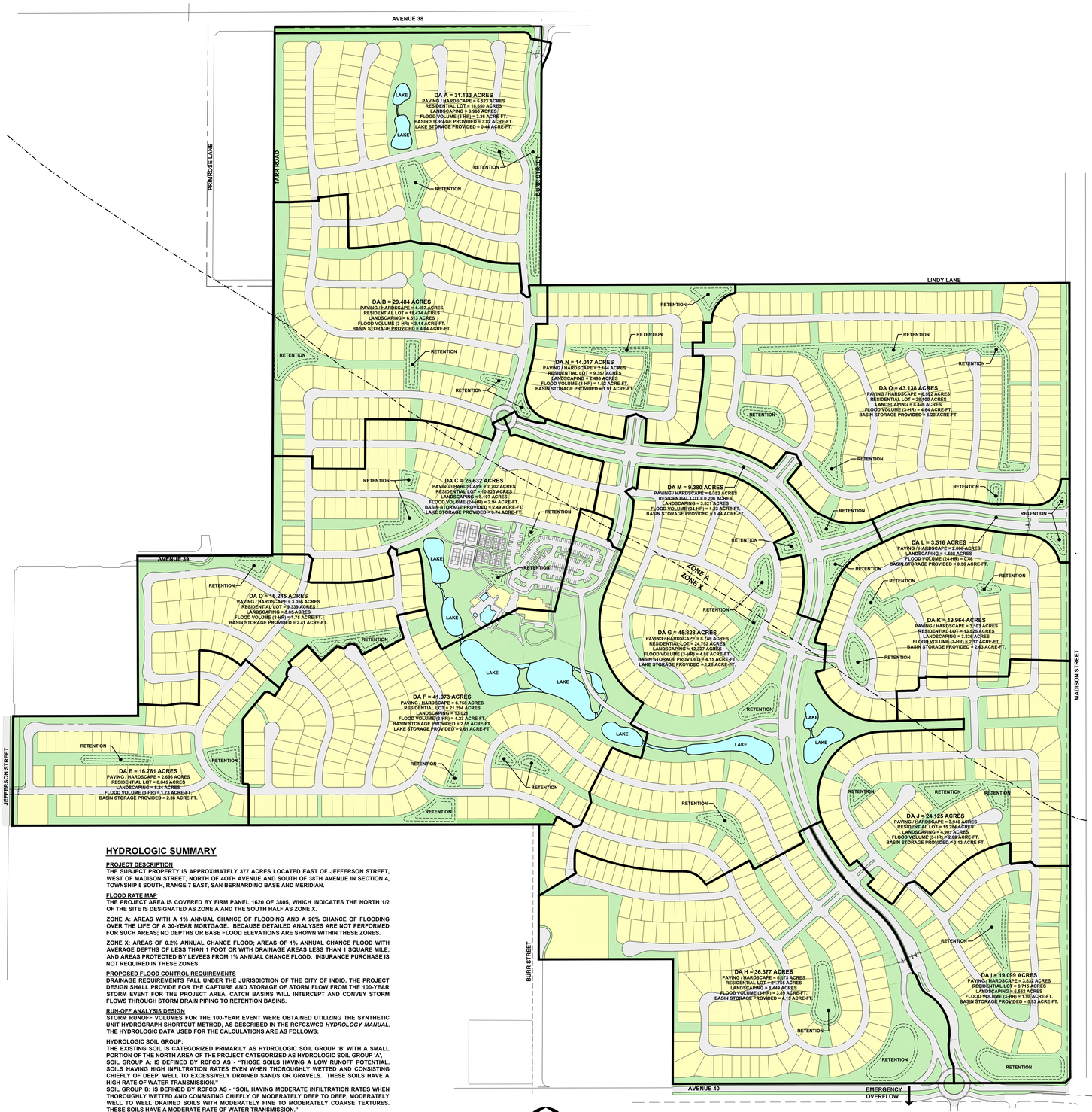
SUMMARY OF HYDROLOGIC ANALYSIS
The preliminary analysis consists of breaking down tributary areas into larger portions to demonstrate preliminary conditions of area needed for retention. In the ultimate condition, with several high and low points in the streets, and utilizing 1' of storage in each of the lakes, most tributary areas could be reduced further to achieve smaller retention areas. Based on the above criteria the proposed site has suitable retention area.

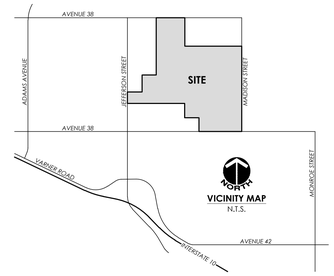
Attachments:
Tentative Tract No. 38470 Preliminary Hydrology Exhibit

IN THE CITY OF INDIO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TENTATIVE TRACT MAP NO. 38470

EXHIBIT DATE: AUGUST 17, 2022





DRAINAGE AREA A
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.29	1.24	1.26
FLOOD VOLUME	(cu-ft)	134,392	146,203	140,172	142,779
	(acre-ft)	3.09	3.36	3.22	3.28
PEAK FLOW	(cfs)	N/A	56.67	48.35	11.11

DRAINAGE AREA B
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.18	1.28	1.22	1.23
FLOOD VOLUME	(cu-ft)	126,715	136,875	130,699	131,934
	(acre-ft)	2.91	3.14	3.00	3.03
PEAK FLOW	(cfs)	N/A	53.51	45.64	10.39

DRAINAGE AREA C
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.20	1.32	1.28	1.33
FLOOD VOLUME	(cu-ft)	116,003	127,769	123,740	128,279
	(acre-ft)	2.66	2.93	2.84	2.94
PEAK FLOW	(cfs)	N/A	48.77	41.65	9.75

DRAINAGE AREA D
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.29	1.24	1.26
FLOOD VOLUME	(cu-ft)	70,124	76,265	73,139	74,499
	(acre-ft)	1.61	1.75	1.68	1.71
PEAK FLOW	(cfs)	N/A	29.57	25.23	5.80

DRAINAGE AREA E
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.17	1.24	1.21	1.16
FLOOD VOLUME	(cu-ft)	71,212	75,331	73,442	70,526
	(acre-ft)	1.63	1.73	1.69	1.62
PEAK FLOW	(cfs)	N/A	30.21	25.72	5.76

DRAINAGE AREA F
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.17	1.24	1.21	1.16
FLOOD VOLUME	(cu-ft)	174,301	184,385	179,764	172,831
	(acre-ft)	4.00	4.23	4.13	3.96
PEAK FLOW	(cfs)	N/A	73.93	62.96	13.94

DRAINAGE AREA G
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.18	1.28	1.22	1.23
FLOOD VOLUME	(cu-ft)	196,954	212,741	203,138	205,051
	(acre-ft)	4.52	4.88	4.66	4.71
PEAK FLOW	(cfs)	N/A	83.18	70.93	16.15

DRAINAGE AREA H
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.28	1.23	1.24
FLOOD VOLUME	(cu-ft)	156,584	169,569	162,152	164,217
	(acre-ft)	3.59	3.89	3.72	3.77
PEAK FLOW	(cfs)	N/A	66.09	56.37	12.88

DRAINAGE AREA I
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.17	1.25	1.22	1.17
FLOOD VOLUME	(cu-ft)	81,293	86,428	84,299	80,826
	(acre-ft)	1.87	1.98	1.94	1.86
PEAK FLOW	(cfs)	N/A	34.45	29.34	6.54

DRAINAGE AREA J
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.30	1.24	1.27
FLOOD VOLUME	(cu-ft)	104,185	113,420	108,785	110,904
	(acre-ft)	2.39	2.60	2.50	2.55
PEAK FLOW	(cfs)	N/A	43.93	37.48	8.62

DRAINAGE AREA K
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.31	1.26	1.29
FLOOD VOLUME	(cu-ft)	86,564	94,616	91,300	93,823
	(acre-ft)	1.99	2.17	2.10	2.15
PEAK FLOW	(cfs)	N/A	36.45	31.11	7.22

DRAINAGE AREA L
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.24	1.44	1.43	1.56
FLOOD VOLUME	(cu-ft)	15,650	18,426	18,197	19,906
	(acre-ft)	0.36	0.42	0.42	0.46
PEAK FLOW	(cfs)	N/A	6.59	5.65	1.42

DRAINAGE AREA M
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.25	1.45	1.43	1.58
FLOOD VOLUME	(cu-ft)	42,415	49,539	48,645	53,714
	(acre-ft)	0.97	1.14	1.12	1.23
PEAK FLOW	(cfs)	N/A	17.61	15.10	3.81

DRAINAGE AREA N
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.30	1.25	1.28
FLOOD VOLUME	(cu-ft)	60,663	66,098	63,682	65,201
	(acre-ft)	1.39	1.52	1.46	1.50
PEAK FLOW	(cfs)	N/A	25.56	21.81	5.04

DRAINAGE AREA O
STORM EVENT SUMMARY

DURATION		1-HOUR	3-HOUR	6-HOUR	24-HOUR
EFFECTIVE RAIN	(in)	1.19	1.29	1.24	1.26
FLOOD VOLUME	(cu-ft)	186,128	202,337	193,910	197,334
	(acre-ft)	4.27	4.64	4.45	4.53
PEAK FLOW	(cfs)	N/A	78.50	66.98	15.37

HYDROLOGIC SUMMARY

PROJECT DESCRIPTION
THE SUBJECT PROPERTY IS APPROXIMATELY 377 ACRES LOCATED EAST OF JEFFERSON STREET, WEST OF MADISON STREET, NORTH OF 40TH AVENUE AND SOUTH OF 38TH AVENUE IN SECTION 4, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN.

FLOOD RATE MAP
THE PROJECT AREA IS COVERED BY FIRM PANEL 1620 OF 3805, WHICH INDICATES THE NORTH 1/2 OF THE SITE IS DESIGNATED AS ZONE A AND THE SOUTH HALF AS ZONE X.

ZONE A: AREAS WITH A 1% ANNUAL CHANCE OF FLOODING AND A 26% CHANCE OF FLOODING OVER THE LIFE OF A 30-YEAR MORTGAGE. BECAUSE DETAILED ANALYSES ARE NOT PERFORMED FOR SUCH AREAS; NO DEPTHS OR BASE FLOOD ELEVATIONS ARE SHOWN WITHIN THESE ZONES.

ZONE X: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. INSURANCE PURCHASE IS NOT REQUIRED IN THESE ZONES.

PROPOSED FLOOD CONTROL REQUIREMENTS
DRAINAGE REQUIREMENTS FALL UNDER THE JURISDICTION OF THE CITY OF INDIO. THE PROJECT DESIGN SHALL PROVIDE FOR THE CAPTURE AND STORAGE OF STORM FLOW FROM THE 100-YEAR STORM EVENT FOR THE PROJECT AREA. CATCH BASINS WILL INTERCEPT AND CONVEY STORM FLOWS THROUGH STORM DRAIN PIPING TO RETENTION BASINS.

RUN-OFF ANALYSIS DESIGN
STORM RUNOFF VOLUMES FOR THE 100-YEAR EVENT WERE OBTAINED UTILIZING THE SYNTHETIC UNIT HYDROGRAPH SHORTCUT METHOD, AS DESCRIBED IN THE RCFC&WCD *HYDROLOGY MANUAL*. THE HYDROLOGIC DATA USED FOR THE CALCULATIONS ARE AS FOLLOWS:

HYDROLOGIC SOIL GROUP:
THE EXISTING SOIL IS CATEGORIZED PRIMARILY AS HYDROLOGIC SOIL GROUP 'B' WITH A SMALL PORTION OF THE NORTH AREA OF THE PROJECT CATEGORIZED AS HYDROLOGIC SOIL GROUP 'A'.
SOIL GROUP A: IS DEFINED BY RCFCD AS - "THOSE SOILS HAVING A LOW RUNOFF POTENTIAL. SOILS HAVING HIGH INFILTRATION RATES EVEN WHEN THOROUGHLY WETTED AND CONSISTING CHIEFLY OF DEEP, WELL TO EXCESSIVELY DRAINED SANDS OR GRAVELS. THESE SOILS HAVE A HIGH RATE OF WATER TRANSMISSION."
SOIL GROUP B: IS DEFINED BY RCFCD AS - "SOIL HAVING MODERATE INFILTRATION RATES WHEN THOROUGHLY WETTED AND CONSISTING CHIEFLY OF MODERATELY DEEP TO DEEP, MODERATELY WELL TO WELL DRAINED SOILS WITH MODERATELY FINE TO MODERATELY COARSE TEXTURES. THESE SOILS HAVE A MODERATE RATE OF WATER TRANSMISSION."

ANTECEDENT MOISTURE CONDITION:
AMC II - MODERATE RUNOFF POTENTIAL, AN INTERMEDIATE CONDITION. PER RCFC & WCD HYDROLOGY MANUAL (DATED: APRIL, 1978): *"FOR THE PURPOSES OF DESIGN HYDROLOGY USING DISTRICT METHODS, AMC II SHOULD NORMALLY BE ASSUMED FOR BOTH THE 10 YEAR AND 100 YEAR FREQUENCY STORM"*.

LAND USE CLASSIFICATIONS AND RUNOFF INDEX NUMBERS:
RUNOFF INDEX NUMBERS WERE OBTAINED FROM RCFCD PLATES E6.1, E6.2 AND E6.3 ARE SUMMARIZED BELOW:
COMMERCIAL OR RESIDENTIAL LANDSCAPING (SOIL GROUP B) 56

PERCENT OF IMPERVIOUS COVER (RCFCD PLATE E-6.3):
PAVING/HARDSCAPE - 100%
RESIDENTIAL LOT - 50%
LANDSCAPING -10%

POINT PRECIPITATION FREQUENCY ESTIMATES:
PRECIPITATION DEPTHS WERE OBTAINED FROM NOAA ATLAS 14

2 YEAR 1 HOUR STORM:	0.351 INCHES
100 YEAR 1 HOUR STORM:	1.47 INCHES
100 YEAR 3 HOUR STORM:	2.12 INCHES
100 YEAR 6 HOUR STORM:	2.71 INCHES
100 YEAR 24 HOUR STORM:	4.38 INCHES

SUMMARY OF HYDROLOGIC ANALYSIS
THE PRELIMINARY ANALYSIS CONSIST OF BREAKING DOWN TRIBUTARY AREAS INTO LARGER PORTIONS TO DEMONSTRATE PRELIMINARY CONDITIONS OF AREA NEEDED FOR RETENTION. IN THE ULTIMATE CONDITION, WITH SEVERAL HIGH AND LOW POINTS IN THE STREETS, AND UTILIZING 1' OF STORAGE IN EACH OF THE LAKES, MOST TRIBUTARY AREAS COULD BE REDUCED FURTHER TO ACHIEVE SMALLER RETENTION AREAS. BASED ON THE ABOVE CRITERIA THE PROPOSED SITE HAS SUITABLE RETENTION AREA.

NORTH

0' 200' 400' 600' 800'
SCALE 1"=200'

LAND USE LEGEND

- STREETS / HARDSCAPE (IMPERVIOUS AREA)
- BUILDINGS (IMPERVIOUS AREA)
- LANDSCAPED AREA
- WATER SURFACE
- TRIBUTARY AREA BOUNDARY

TENTATIVE TRACT NO. 38470
PRELIMINARY HYDROLOGY EXHIBIT

MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING
34200 Bob Hope Drive, Rancho Mirage, CA 92270
760.320.9811 msaconsultinginc.com

SHEET 1 OF 1 SHEETS

R:\3277-ACAD\Hydrology\Preliminary\3277 PRELIMINARY HYDROLOGY EXHIBIT.dwg, 8/17/2022 4:44:29 PM, smith, MSA Consulting, Inc.

APPENDIX J

Noise Worksheets

APPENDIX J.1

Turning Count Conversion

ect Name rev. (Date)

kday AM/PM Peak Hour Volumes

Intersection: 1

Talavera Blvd/Project Dwy/Ave 38

Talavera Boulevard/Project Dwy

Eastbound

	left	through	right
Existing (AM)	9	76	0
Existing (PM)	31	42	0
Existing plus Project (AM)	9	76	6
Existing plus Project (PM)	31	42	15
Near-Term 2030 (AM)	20	100	0
Near-Term 2030 (PM)	40	60	0
Near-Term 2030 plus Project (AM	20	100	6
Near-Term 2030 plus Project (PM	40	60	15
Cumulative 2045 (AM)	20	130	0
Cumulative 2045 (PM)	40	80	0
Cumulative 2045 plus Project (AM	20	130	6
Cumulative 2045 plus Project (PM	40	80	15

Southbound

	right	through	left
Existing (AM)	22	0	32
Existing (PM)	10	0	24
Existing plus Project (AM)	22	0	32
Existing plus Project (PM)	10	0	24
Near-Term 2030 (AM)	30	0	40
Near-Term 2030 (PM)	20	0	30
Near-Term 2030 plus Project (AM)	30	0	40
Near-Term 2030 plus Project (PM)	20	0	30
Cumulative 2045 (AM)	30	0	40
Cumulative 2045 (PM)	20	0	30
Cumulative 2045 plus Project (AM)	30	0	40
Cumulative 2045 plus Project (PM)	20	0	30

Northbound

	left	through	right
Existing (AM)	0	0	0
Existing (PM)	0	0	0
Existing plus Project (AM)	0	0	0
Existing plus Project (PM)	0	0	0
Near-Term 2030 (AM)	0	0	0
Near-Term 2030 (PM)	0	0	0
Near-Term 2030 plus Project (AM)	13	0	7
Near-Term 2030 plus Project (PM)	9	0	5
Cumulative 2045 (AM)	0	0	0
Cumulative 2045 (PM)	0	0	0
Cumulative 2045 plus Project (AM)	13	0	7
Cumulative 2045 plus Project (PM)	9	0	5

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	13	182	0
Existing (PM)	29	27	0
Existing plus Project (AM)	17	182	0
Existing plus Project (PM)	36	27	0
Near-Term 2030 (AM)	20	210	0
Near-Term 2030 (PM)	40	50	0
Near-Term 2030 plus Project (AM	20	210	4
Near-Term 2030 plus Project (PM	40	50	7
Cumulative 2045 (AM)	20	240	0
Cumulative 2045 (PM)	40	80	0
Cumulative 2045 plus Project (AM	20	240	4
Cumulative 2045 plus Project (PM	40	80	7

ADT

Road	Talavera Boulevard/Project Dwy		Avenue 38	
Leg	North of	South of	East of	West of
Cross Street	Avenue 38		Talavera Boulevard/Project Dwy	
Existing (AM)	608.0	0.0	2,424.0	2,312.0
Existing (PM)	752.0	0.0	976.0	880.0
Existing plus Project (AM)	640.0	48.0	2,456.0	2,360.0
Existing plus Project (PM)	808.0	120.0	1,032.0	1,000.0
Near-Term 2030 (AM)	880.0	0.0	2,960.0	2,880.0
Near-Term 2030 (PM)	1,040.0	0.0	1,440.0	1,360.0
Near-Term 2030 plus Project	880.0	240.0	3,048.0	3,032.0
Near-Term 2030 plus Project	1,040.0	288.0	1,536.0	1,552.0
Cumulative 2045 (AM)	880.0	0.0	3,440.0	3,360.0
Cumulative 2045 (PM)	1,040.0	0.0	1,840.0	1,760.0
Cumulative 2045 plus Project	880.0	240.0	3,528.0	3,512.0
Cumulative 2045 plus Project	1,040.0	288.0	1,936.0	1,952.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME / Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	dB(A) CNEL	Traffic Volumes: Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels: A	MT	HT	Dist Adj	Ld: A	MT	HT	Le: Total	A	MT	HT	Ln: Total	A	MT	HT	Total
Talavera Bouelvard/Project																																				
Existing (AM)		2	0	608	15	75	0	0	1.8%	0.7%	42.9	472	77	58	10	4	1	0	1	0	50.8	65.4	74.5	-1.8	37.8	35.5	40.6	43.2	34.8	28.0	30.4	36.8	21.6	26.1	31.4	32.8
Existing (PM)		2	0	752	15	75	0	0	1.8%	0.7%	43.8	584	96	72	12	5	1	0	1	0	50.8	65.4	74.5	-1.8	38.7	36.5	41.5	44.1	35.7	28.9	31.3	37.7	22.5	27.0	32.3	33.7
Existing plus Project (AM)		2	0	640	15	75	0	0	1.8%	0.7%	43.1	497	81	61	10	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.0	35.8	40.8	43.4	35.0	28.2	30.6	37.0	21.8	26.3	31.6	33.0
Existing plus Project (PM)		2	0	808	15	75	0	0	1.8%	0.7%	44.1	628	103	78	13	5	1	0	1	0	50.8	65.4	74.5	-1.8	39.0	36.8	41.8	44.5	36.0	29.2	31.7	38.0	22.8	27.3	32.6	34.1
Near-Term 2030 (AM)		2	0	880	15	75	0	0	1.8%	0.7%	44.5	684	112	84	14	5	1	0	1	0	50.8	65.4	74.5	-1.8	39.4	37.1	42.2	44.8	36.4	29.6	32.0	38.4	23.2	27.7	33.0	34.4
Near-Term 2030 (PM)		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2
Near-Term 2030 plus Project (AM)		2	0	880	15	75	0	0	1.8%	0.7%	44.5	684	112	84	14	5	1	0	1	0	50.8	65.4	74.5	-1.8	39.4	37.1	42.2	44.8	36.4	29.6	32.0	38.4	23.2	27.7	33.0	34.4
Near-Term 2030 plus Project (PM)		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2
Cumulative 2045 (AM)		2	0	880	15	75	0	0	1.8%	0.7%	44.5	684	112	84	14	5	1	0	1	0	50.8	65.4	74.5	-1.8	39.4	37.1	42.2	44.8	36.4	29.6	32.0	38.4	23.2	27.7	33.0	34.4
Cumulative 2045 (PM)		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2
Cumulative 2045 plus Project (AM)		2	0	880	15	75	0	0	1.8%	0.7%	44.5	684	112	84	14	5	1	0	1	0	50.8	65.4	74.5	-1.8	39.4	37.1	42.2	44.8	36.4	29.6	32.0	38.4	23.2	27.7	33.0	34.4
Cumulative 2045 plus Project (PM)		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2
Talavera Bouelvard/Project																																				
Existing (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		2	0	48	15	75	0	0	1.8%	0.7%	31.9	37	6	5	1	0	0	0	0	0	50.8	65.4	74.5	-1.8	26.7	24.5	29.6	32.2	23.8	16.9	19.4	25.7	10.6	15.1	20.3	21.8
Existing plus Project (PM)		2	0	120	15	75	0	0	1.8%	0.7%	35.9	93	15	12	2	1	0	0	0	0	50.8	65.4	74.5	-1.8	30.7	28.5	33.5	36.2	27.7	20.9	23.4	29.7	14.5	19.0	24.3	25.8
Near-Term 2030 (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		2	0	240	15	75	0	0	1.8%	0.7%	38.9	186	30	23	4	1	0	0	0	0	50.8	65.4	74.5	-1.8	33.7	31.5	36.6	39.2	30.8	23.9	26.4	32.7	17.6	22.0	27.3	28.8
Near-Term 2030 plus Project (PM)		2	0	288	15	75	0	0	1.8%	0.7%	39.7	224	37	28	5	2	0	0	0	0	50.8	65.4	74.5	-1.8	34.5	32.3	37.3	40.0	31.5	24.7	27.2	33.5	18.3	22.8	28.1	29.6
Cumulative 2045 (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)		2	0	240	15	75	0	0	1.8%	0.7%	38.9	186	30	23	4	1	0	0	0	0	50.8	65.4	74.5	-1.8	33.7	31.5	36.6	39.2	30.8	23.9	26.4	32.7	17.6	22.0	27.3	28.8
Cumulative 2045 plus Project (PM)		2	0	288	15	75	0	0	1.8%	0.7%	39.7	224	37	28	5	2	0	0	0	0	50.8	65.4	74.5	-1.8	34.5	32.3	37.3	40.0	31.5	24.7	27.2	33.5	18.3	22.8	28.1	29.6
Avenue 38 e/o Talavera																																				
Existing (AM)		3	0	2,424	40	75	0	0	1.8%	0.7%	56.7	1,883	308	233	38	15	2	0	3	1	67.4	76.3	81.2	-1.8	56.1	48.2	49.1	57.4	53.1	40.6	38.9	53.5	39.9	38.8	39.8	44.3
Existing (PM)		3	0	976	40	75	0	0	1.8%	0.7%	52.7	758	124	94	15	6	1	0	1	1	67.4	76.3	81.2	-1.8	52.1	44.3	45.1	53.5	49.2	36.7	34.9	49.5	36.0	34.8	35.9	40.4
Existing plus Project (AM)		3	0	2,456	40	75	0	0	1.8%	0.7%	56.7	1,908	312	236	39	15	2	0	3	1	67.4	76.3	81.2	-1.8	56.1	48.3	49.1	57.5	53.2	40.7	38.9	53.6	40.0	38.8	39.9	44.4
Existing plus Project (PM)		3	0	1,032	40	75	0	0	1.8%	0.7%	53.0	802	131	99	16	6	1	0	1	1	67.4	76.3	81.2	-1.8	52.4	44.5	45.3	53.7	49.4	36.9	35.2	49.8	36.2	35.1	36.1	40.6
Near-Term 2030 (AM)		3	0	2,960	40	75	0	0	1.8%	0.7%	57.6	2,300	376	284	47	18	3	1	4	2	67.4	76.3	81.2	-1.8	57.0	49.1	49.9	58.3	54.0	41.5	39.8	54.4	40.8	39.6	40.7	45.2
Near-Term 2030 (PM)		3	0	1,440	40	75	0	0	1.8%	0.7%	54.4	1,119	183	138	23	9	1	0	2	1	67.4	76.3	81.2	-1.8	53.8	46.0	46.8	55.2	50.8	38.4	36.6	51.2	37.6	36.5	37.6	42.0
Near-Term 2030 plus Project (AM)		3	0	3,048	40	75	0	0	1.8%	0.7%	57.7	2,368	387	293	48	19	3	1	4	2	67.4	76.3	81.2	-1.8	57.1	49.2	50.1	58.4	54.1	41.6	39.9	54.5	40.9	39.8	40.8	45.3
Near-Term 2030 plus Project (PM)		3	0	1,536	40	75	0	0	1.8%	0.7%	54.7	1,193	195	147	24	10	1	0	2	1	67.4	76.3	81.2	-1.8	54.1	46.2	47.1	55.4	51.1	38.7	36.9	51.5	37.9	36.8	37.8	42.3
Cumulative 2045 (AM)		3	0	3,440	40	75	0	0	1.8%	0.7%	58.2	2,673	437	330	54	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.6	49.7	50.6	58.9	54.6	42.2	40.4	55.0	41.4	40.3	41.3	45.8
Cumulative 2045 (PM)		3	0	1,840	40	75	0	0	1.8%	0.7%	55.5	1,430	234	177	29	11	2	0	2	1	67.4	76.3	81.2	-1.8	54.9	47.0	47.9	56.2	51.9	39.4	37.7	52.3	38.7	37.6	38.6	43.1
Cumulative 2045 plus Project (AM)		3	0	3,528	40	75	0	0	1.8%	0.7%	58.3	2,741	448	339	56	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.9	50.7	59.1	54.7	42.3	40.5	55.1	41.5	40.4	41.5	45.9
Cumulative 2045 plus Project (PM)		3	0	1,936	40	75	0	0	1.8%	0.7%	55.7	1,504	246	186	30	12	2	0	3	1	67.4	76.3	81.2	-1.8	55.1	47.3	48.1	56.5	52.1	39.7	37.9	52.5	38.9	37.8	38.8	43.3
Avenue 38 w/o Talavera																																				
Existing (AM)		2	15	2,312	40	75	0	0	1.8%	0.7%	56.5	1,796	294	222	36	14	2	0	3	1	67.4	76.3	81.2	-1.8	55.9	48.0	48.9	57.2	52.9	40.5	38.7	53.3	39.7	38.6	39.6	44.1
Existing (PM)		2	15	880	40	75	0	0	1.8%	0.7%	52.3	684	112	84	14	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.7	43.8	44.7	53.0	48.7	36.3	34.5	49.1	35.5	34.4	35.4	39.9
Existing plus Project (AM)		2	15	2,360	40	75	0	0	1.8%	0.7%	56.6	1,834	300	227	37	15	2	0	3	1	67.4	76.3	81.2	-1.8	56.0	48.1	49.0	57.3	53.0	40.5	38.8	53.4	39.8	38.7	39.7	44.2
Existing plus Project (PM)		2	15	1,000	40	75	0	0	1.8%	0.7%	52.9	777	127	96	16	6	1	0	1	1	67.4	76.3	81.2	-1.8	52.3	44.4	45.2	53.6	49.3	36.8	35.1	49.7	36.1	34.9	36.0	40.5
Near-Term 2030 (AM)		2	15	2,880	40	75	0	0	1.8%	0.7%	57.4	2,238	366	276	45	18	3	1	4	2	67.4	76.3	81.2	-1.8	56.8	49.0	49.8	58.2	53.9	41.4	39.7	54.3	40.7	39.5	40.6	45.1
Near-Term 2030 (PM)		2	15	1,360	40	75	0	0	1.8%	0.7%	54.2	1,057	173	131	21	8	1	0	2	1	67.4	76.3	81.2	-1.8	53.6	45.7	46.6	54.9	50.6	38.2	36.4	51.0	37.4	36.3	37.3	41.8
Near-Term 2030 plus Project (AM)		2	15	3,032	40	75	0	0	1.8%	0.7%	57.7	2,356	385	291	48	19	3	1	4	2	67.4	76.3	81.2	-1.8	57.1	49.2	50.0	58.4	54.1	41.6	39.9	54.5	40.9	39.8	40.8	45.3
Near-Term 2030 plus Project (PM)		2	15	1,552	40	75	0	0	1.8%	0.7%	54.8	1,206	197	149	24	10	1	0	2	1	67.4	76.3	81.2	-1.8	54.2	46.3	47.1	55.5	51.2	38.7	37.0	51.6	38.0	36.9	37.9	42.4
Cumulative 2045 (AM)		2	15	3,360	40	75	0	0	1.8%	0.7%	58.1	2,611	427	323	53	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.5	49.7	50.5	58.9	54.5	42.1	40.3	54.9	41.3	40.2	41.3	45.7

Cumulative 2045 (PM)	2	15	1,760	40	75	0	0	1.8%	0.7%	55.3	1,368	224	169	28	11	2	0	2	1	67.4	76.3	81.2	-1.8	54.7	46.9	47.7	56.1	51.7	39.3	37.5	52.1	38.5	37.4	38.4	42.9
Cumulative 2045 plus Project (AM)	2	15	3,512	40	75	0	0	1.8%	0.7%	58.3	2,729	446	337	55	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.9	50.7	59.1	54.7	42.3	40.5	55.1	41.5	40.4	41.4	45.9
Cumulative 2045 plus Project (PM)	2	15	1,952	40	75	0	0	1.8%	0.7%	55.8	1,517	248	187	31	12	2	0	3	1	67.4	76.3	81.2	-1.8	55.2	47.3	48.1	56.5	52.2	39.7	38.0	52.6	39.0	37.8	38.9	43.4

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 2

Madison St/Sun City Blvd

Madison St

Southbound

	right	through	left
Existing (AM)		113	1
Existing (PM)		73	3
Existing plus Project (AM)		120	1
Existing plus Project (PM)		78	3
Near-Term 2030 (AM)		130	10
Near-Term 2030 (PM)		90	10
Near-Term 2030 plus Project (AM)		137	10
Near-Term 2030 plus Project (PM)		95	10
Cumulative 2045 (AM)		160	10
Cumulative 2045 (PM)		110	10
Cumulative 2045 plus Project (AM)		167	10
Cumulative 2045 plus Project (PM)		115	10

Sun City Blvd

Eastbound

	left	through	right
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			61
Existing plus Project (PM)			43
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			61
Near-Term 2030 plus Project (PM)			43
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			61
Cumulative 2045 plus Project (PM)			43

Northbound

	left	through	right
Existing (AM)		190	14
Existing (PM)		69	35
Existing plus Project (AM)	30	194	14
Existing plus Project (PM)	67	76	35
Near-Term 2030 (AM)		220	20
Near-Term 2030 (PM)		80	50
Near-Term 2030 plus Project (AM)	30	224	20
Near-Term 2030 plus Project (PM)	67	87	50
Cumulative 2045 (AM)		250	30
Cumulative 2045 (PM)		90	60
Cumulative 2045 plus Project (AM)	30	254	30
Cumulative 2045 plus Project (PM)	67	97	60

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	1		48
Existing (PM)	1		33
Existing plus Project (AM)	1		48
Existing plus Project (PM)	1		33
Near-Term 2030 (AM)	10		60
Near-Term 2030 (PM)	10		50
Near-Term 2030 plus Project (AM	10		60
Near-Term 2030 plus Project (PM	10		50
Cumulative 2045 (AM)	10		70
Cumulative 2045 (PM)	10		60
Cumulative 2045 plus Project (AM	10		70
Cumulative 2045 plus Project (PM	10		60

ADT

Road	Madison St		Sun City Blvd	
Leg	North of	South of	East of	West of
Cross Street	Sun City Blvd		Madison St	
Existing (AM)	2,440.0	2,920.0	512.0	0.0
Existing (PM)	1,168.0	1,680.0	576.0	0.0
Existing plus Project (AM)	2,528.0	3,736.0	512.0	728.0
Existing plus Project (PM)	1,264.0	2,656.0	576.0	880.0
Near-Term 2030 (AM)	2,960.0	3,440.0	800.0	0.0
Near-Term 2030 (PM)	1,520.0	2,160.0	960.0	0.0
Near-Term 2030 plus Project	3,048.0	4,256.0	800.0	728.0
Near-Term 2030 plus Project	1,616.0	3,136.0	960.0	880.0
Cumulative 2045 (AM)	3,440.0	4,080.0	960.0	0.0
Cumulative 2045 (PM)	1,760.0	2,560.0	1,120.0	0.0
Cumulative 2045 plus Project	3,528.0	4,896.0	960.0	728.0
Cumulative 2045 plus Project	1,856.0	3,536.0	1,120.0	880.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Madison Street n/o Sun City																																				
Existing (AM)		3	0	2,440	40	75	0	0	1.8%	0.7%	56.7	1,896	310	234	38	15	2	0	3	1	67.4	76.3	81.2	-1.8	56.1	48.3	49.1	57.5	53.1	40.7	38.9	53.5	39.9	38.8	39.8	44.3
Existing (PM)		3	0	1,168	40	75	0	0	1.8%	0.7%	53.5	908	148	112	18	7	1	0	2	1	67.4	76.3	81.2	-1.8	52.9	45.1	45.9	54.3	49.9	37.5	35.7	50.3	36.7	35.6	36.6	41.1
Existing plus Project (AM)		3	0	2,528	40	75	0	0	1.8%	0.7%	56.9	1,964	321	243	40	16	2	1	3	1	67.4	76.3	81.2	-1.8	56.3	48.4	49.2	57.6	53.3	40.8	39.1	53.7	40.1	39.0	40.0	44.5
Existing plus Project (PM)		3	0	1,264	40	75	0	0	1.8%	0.7%	53.9	982	161	121	20	8	1	0	2	1	67.4	76.3	81.2	-1.8	53.3	45.4	46.2	54.6	50.3	37.8	36.1	50.7	37.1	35.9	37.0	41.5
Near-Term 2030 (AM)		3	0	2,960	40	75	0	0	1.8%	0.7%	57.6	2,300	376	284	47	18	3	1	4	2	67.4	76.3	81.2	-1.8	57.0	49.1	49.9	58.3	54.0	41.5	39.8	54.4	40.8	39.6	40.7	45.2
Near-Term 2030 (PM)		3	0	1,520	40	75	0	0	1.8%	0.7%	54.7	1,181	193	146	24	9	1	0	2	1	67.4	76.3	81.2	-1.8	54.1	46.2	47.0	55.4	51.1	38.6	36.9	51.5	37.9	36.7	37.8	42.3
Near-Term 2030 plus Project (AM)		3	0	3,048	40	75	0	0	1.8%	0.7%	57.7	2,368	387	293	48	19	3	1	4	2	67.4	76.3	81.2	-1.8	57.1	49.2	50.1	58.4	54.1	41.6	39.9	54.5	40.9	39.8	40.8	45.3
Near-Term 2030 plus Project (PM)		3	0	1,616	40	75	0	0	1.8%	0.7%	54.9	1,256	205	155	25	10	1	0	2	1	67.4	76.3	81.2	-1.8	54.3	46.5	47.3	55.7	51.3	38.9	37.1	51.7	38.2	37.0	38.1	42.5
Cumulative 2045 (AM)		3	0	3,440	40	75	0	0	1.8%	0.7%	58.2	2,673	437	330	54	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.6	49.7	50.6	58.9	54.6	42.2	40.4	55.0	41.4	40.3	41.3	45.8
Cumulative 2045 (PM)		3	0	1,760	40	75	0	0	1.8%	0.7%	55.3	1,368	224	169	28	11	2	0	2	1	67.4	76.3	81.2	-1.8	54.7	46.8	47.7	56.0	51.7	39.3	37.5	52.1	38.5	37.4	38.4	42.9
Cumulative 2045 plus Project (AM)		3	0	3,528	40	75	0	0	1.8%	0.7%	58.3	2,741	448	339	56	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.9	50.7	59.1	54.7	42.3	40.5	55.1	41.5	40.4	41.5	45.9
Cumulative 2045 plus Project (PM)		3	0	1,856	40	75	0	0	1.8%	0.7%	55.5	1,442	236	178	29	12	2	0	3	1	67.4	76.3	81.2	-1.8	54.9	47.1	47.9	56.3	51.9	39.5	37.7	52.3	38.8	37.6	38.7	43.1
Madison Street s/o Sun City																																				
Existing (AM)		3	0	2,920	40	75	0	0	1.8%	0.7%	57.5	2,269	371	280	46	18	3	1	4	2	67.4	76.3	81.2	-1.8	56.9	49.0	49.9	58.2	53.9	41.5	39.7	54.3	40.7	39.6	40.6	45.1
Existing (PM)		3	0	1,680	40	75	0	0	1.8%	0.7%	55.1	1,305	213	161	26	10	2	0	2	1	67.4	76.3	81.2	-1.8	54.5	46.6	47.5	55.8	51.5	39.1	37.3	51.9	38.3	37.2	38.2	42.7
Existing plus Project (AM)		3	0	3,736	40	75	0	0	1.8%	0.7%	58.6	2,903	474	359	59	23	3	1	5	2	67.4	76.3	81.2	-1.8	58.0	50.1	50.9	59.3	55.0	42.5	40.8	55.4	41.8	40.7	41.7	46.2
Existing plus Project (PM)		3	0	2,656	40	75	0	0	1.8%	0.7%	57.1	2,064	337	255	42	17	2	1	4	1	67.4	76.3	81.2	-1.8	56.5	48.6	49.5	57.8	53.5	41.0	39.3	53.9	40.3	39.2	40.2	44.7
Near-Term 2030 (AM)		3	0	3,440	40	75	0	0	1.8%	0.7%	58.2	2,673	437	330	54	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.6	49.7	50.6	58.9	54.6	42.2	40.4	55.0	41.4	40.3	41.3	45.8
Near-Term 2030 (PM)		3	0	2,160	40	75	0	0	1.8%	0.7%	56.2	1,678	274	207	34	13	2	0	3	1	67.4	76.3	81.2	-1.8	55.6	47.7	48.6	56.9	52.6	40.1	38.4	53.0	39.4	38.3	39.3	43.8
Near-Term 2030 plus Project (AM)		3	0	4,256	40	75	0	0	1.8%	0.7%	59.1	3,307	541	409	67	27	4	1	6	2	67.4	76.3	81.2	-1.8	58.5	50.7	51.5	59.9	55.6	43.1	41.3	55.9	42.4	41.2	42.3	46.7
Near-Term 2030 plus Project (PM)		3	0	3,136	40	75	0	0	1.8%	0.7%	57.8	2,437	398	301	49	20	3	1	4	2	67.4	76.3	81.2	-1.8	57.2	49.3	50.2	58.5	54.2	41.8	40.0	54.6	41.0	39.9	40.9	45.4
Cumulative 2045 (AM)		3	0	4,080	40	75	0	0	1.8%	0.7%	58.9	3,170	518	392	64	25	4	1	6	2	67.4	76.3	81.2	-1.8	58.3	50.5	51.3	59.7	55.4	42.9	41.2	55.8	42.2	41.0	42.1	46.6
Cumulative 2045 (PM)		3	0	2,560	40	75	0	0	1.8%	0.7%	56.9	1,989	325	246	40	16	2	1	3	1	67.4	76.3	81.2	-1.8	56.3	48.5	49.3	57.7	53.3	40.9	39.1	53.7	40.1	39.0	40.1	44.5
Cumulative 2045 plus Project (AM)		3	0	4,896	40	75	0	0	1.8%	0.7%	59.7	3,804	622	470	77	31	4	1	7	3	67.4	76.3	81.2	-1.8	59.1	51.3	52.1	60.5	56.2	43.7	41.9	56.6	43.0	41.8	42.9	47.4
Cumulative 2045 plus Project (PM)		3	0	3,536	40	75	0	0	1.8%	0.7%	58.3	2,747	449	339	56	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.9	50.7	59.1	54.7	42.3	40.5	55.1	41.6	40.4	41.5	45.9
Sun City Boulevard e/o																																				
Existing (AM)		4	15	512	25	75	0	0	1.8%	0.7%	46.2	398	65	49	8	3	0	0	1	0	59.4	71.1	78.7	-1.6	43.7	38.5	42.1	46.7	40.7	30.9	32.0	41.6	27.5	29.0	32.9	35.2
Existing (PM)		4	15	576	25	75	0	0	1.8%	0.7%	46.7	448	73	55	9	4	1	0	1	0	59.4	71.1	78.7	-1.6	44.2	39.0	42.6	47.2	41.2	31.4	32.5	42.1	28.0	29.6	33.4	35.7
Existing plus Project (AM)		4	15	512	25	75	0	0	1.8%	0.7%	46.2	398	65	49	8	3	0	0	1	0	59.4	71.1	78.7	-1.6	43.7	38.5	42.1	46.7	40.7	30.9	32.0	41.6	27.5	29.0	32.9	35.2
Existing plus Project (PM)		4	15	576	25	75	0	0	1.8%	0.7%	46.7	448	73	55	9	4	1	0	1	0	59.4	71.1	78.7	-1.6	44.2	39.0	42.6	47.2	41.2	31.4	32.5	42.1	28.0	29.6	33.4	35.7
Near-Term 2030 (AM)		4	15	800	25	75	0	0	1.8%	0.7%	48.1	622	102	77	13	5	1	0	1	0	59.4	71.1	78.7	-1.6	45.6	40.4	44.1	48.6	42.6	32.9	33.9	43.6	29.4	31.0	34.8	37.1
Near-Term 2030 (PM)		4	15	960	25	75	0	0	1.8%	0.7%	48.9	746	122	92	15	6	1	0	1	1	59.4	71.1	78.7	-1.6	46.4	41.2	44.9	49.4	43.4	33.6	34.7	44.3	30.2	31.8	35.6	37.9
Near-Term 2030 plus Project (AM)		4	15	800	25	75	0	0	1.8%	0.7%	48.1	622	102	77	13	5	1	0	1	0	59.4	71.1	78.7	-1.6	45.6	40.4	44.1	48.6	42.6	32.9	33.9	43.6	29.4	31.0	34.8	37.1
Near-Term 2030 plus Project (PM)		4	15	960	25	75	0	0	1.8%	0.7%	48.9	746	122	92	15	6	1	0	1	1	59.4	71.1	78.7	-1.6	46.4	41.2	44.9	49.4	43.4	33.6	34.7	44.3	30.2	31.8	35.6	37.9
Cumulative 2045 (AM)		4	15	960	25	75	0	0	1.8%	0.7%	48.9	746	122	92	15	6	1	0	1	1	59.4	71.1	78.7	-1.6	46.4	41.2	44.9	49.4	43.4	33.6	34.7	44.3	30.2	31.8	35.6	37.9
Cumulative 2045 (PM)		4	15	1,120	25	75	0	0	1.8%	0.7%	49.6	870	142	108	18	7	1	0	2	1	59.4	71.1	78.7	-1.6	47.1	41.9	45.5	50.1	44.1	34.3	35.4	45.0	30.9	32.4	36.3	38.6
Cumulative 2045 plus Project (AM)		4	15	960	25	75	0	0	1.8%	0.7%	48.9	746	122	92	15	6	1	0	1	1	59.4	71.1	78.7	-1.6	46.4	41.2	44.9	49.4	43.4	33.6	34.7	44.3	30.2	31.8	35.6	37.9
Cumulative 2045 plus Project (PM)		4	15	1,120	25	75	0	0	1.8%	0.7%	49.6	870	142	108	18	7	1	0	2	1	59.4	71.1	78.7	-1.6	47.1	41.9	45.5	50.1	44.1	34.3	35.4	45.0	30.9	32.4	36.3	38.6
Sun City Boulevard w/o																																				
Existing (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		2	0	728	40	75	0	0	1.8%	0.7%	51.4	566	92	70	11	5	1	0	1	0	67.4	76.3	81.2	-1.8	50.8	43.0	43.8	52.2	47.8	35.4	33.6	48.2	34.6	33.5	34.6	39.0
Existing plus Project (PM)		2	0	880	40	75	0	0	1.8%	0.7%	52.2	684	112	84	14	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.6	43.8	44.6	53.0	48.7	36.2	34.4	49.1	35.5	34.3	35.4	39.9
Near-Term 2030 (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		2	0	728	40	75	0	0	1.8%	0.7%	51.4	566	92	70	11	5	1	0	1	0	67.4	76.3	81.2	-1.8	50.8	43.0	43.8	52.2	47.8	35.4	33.6	48.2	34.6	33.5	34.6	39.0
Near-Term 2030 plus Project (PM)		2	0	880	40	75	0	0	1.8%	0.7%	52.2	684	112	84	14	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.6	43.8	44.6	53.0	48.7	36.2	34.4	49.1	35.5	34.3	35.4	39.9
Cumulative 2045 (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####

Cumulative 2045 (PM)	2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)	2	0	728	40	75	0	0	1.8%	0.7%	51.4	566	92	70	11	5	1	0	1	0	67.4	76.3	81.2	-1.8	50.8	43.0	43.8	52.2	47.8	35.4	33.6	48.2	34.6	33.5	34.6	39.0
Cumulative 2045 plus Project (PM)	2	0	880	40	75	0	0	1.8%	0.7%	52.2	684	112	84	14	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.6	43.8	44.6	53.0	48.7	36.2	34.4	49.1	35.5	34.3	35.4	39.9

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 3

Adams St/Avenue 40

Avenue 40

Eastbound

	left	through	right
Existing (AM)	51	41	12
Existing (PM)	32	45	16
Existing plus Project (AM)	51	55	12
Existing plus Project (PM)	32	73	16
Near-Term 2030 (AM)	60	60	20
Near-Term 2030 (PM)	40	100	30
Near-Term 2030 plus Project (AM)	60	74	20
Near-Term 2030 plus Project (PM)	40	128	30
Cumulative 2045 (AM)	60	90	
Cumulative 2045 (PM)	40	190	
Cumulative 2045 plus Project (AM)	60	104	
Cumulative 2045 plus Project (PM)	40	218	

Adams St

Southbound

	right	through	left
Existing (AM)	69	274	24
Existing (PM)	29	129	24
Existing plus Project (AM)	69	274	24
Existing plus Project (PM)	29	129	24
Near-Term 2030 (AM)	70	280	30
Near-Term 2030 (PM)	30	140	30
Near-Term 2030 plus Project (AM)	70	280	30
Near-Term 2030 plus Project (PM)	30	140	30
Cumulative 2045 (AM)	70	280	30
Cumulative 2045 (PM)	30	150	30
Cumulative 2045 plus Project (AM)	70	280	30
Cumulative 2045 plus Project (PM)	30	150	30

Northbound

	left	through	right
Existing (AM)	3	303	51
Existing (PM)	11	89	53
Existing plus Project (AM)	3	303	51
Existing plus Project (PM)	11	89	53
Near-Term 2030 (AM)	10	310	60
Near-Term 2030 (PM)	20	100	60
Near-Term 2030 plus Project (AM)	10	310	60
Near-Term 2030 plus Project (PM)	20	100	60
Cumulative 2045 (AM)	20	310	60
Cumulative 2045 (PM)	20	110	60
Cumulative 2045 plus Project (AM)	20	310	60
Cumulative 2045 plus Project (PM)	20	110	60

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	80	89	30
Existing (PM)	15	83	23
Existing plus Project (AM)	80	124	30
Existing plus Project (PM)	15	108	23
Near-Term 2030 (AM)	90	170	30
Near-Term 2030 (PM)	20	100	30
Near-Term 2030 plus Project (AM	90	205	30
Near-Term 2030 plus Project (PM	20	125	30
Cumulative 2045 (AM)	100	310	30
Cumulative 2045 (PM)	20	120	30
Cumulative 2045 plus Project (AM	100	345	30
Cumulative 2045 plus Project (PM	20	145	30

ADT

Road	Adams St		Avenue 40	
Leg	North of	South of	East of	West of
Cross Street	Avenue 40		Adams St	
Existing (AM)	6,408.0	5,384.0	2,520.0	2,120.0
Existing (PM)	2,544.0	2,568.0	1,944.0	1,728.0
Existing plus Project (AM)	6,408.0	5,384.0	2,912.0	2,512.0
Existing plus Project (PM)	2,544.0	2,568.0	2,368.0	2,152.0
Near-Term 2030 (AM)	6,720.0	5,680.0	3,520.0	3,120.0
Near-Term 2030 (PM)	2,880.0	3,040.0	2,720.0	2,560.0
Near-Term 2030 plus Project	6,720.0	5,680.0	3,912.0	3,512.0
Near-Term 2030 plus Project	2,880.0	3,040.0	3,144.0	2,984.0
Cumulative 2045 (AM)	6,800.0	5,600.0	4,960.0	4,400.0
Cumulative 2045 (PM)	3,040.0	2,960.0	3,600.0	3,200.0
Cumulative 2045 plus Project	6,800.0	5,600.0	5,352.0	4,792.0
Cumulative 2045 plus Project	3,040.0	2,960.0	4,024.0	3,624.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Adams Street n/o Avenue 40																																				
Existing (AM)		3	0	6,408	50	75	0	0	1.8%	0.7%	63.3	4,979	814	615	101	40	6	1	9	4	71.1	78.8	83.0	-1.8	63.1	54.0	54.2	64.1	60.1	46.4	44.0	60.4	46.9	44.5	44.9	50.4
Existing (PM)		3	0	2,544	50	75	0	0	1.8%	0.7%	59.2	1,977	323	244	40	16	2	1	3	1	71.1	78.8	83.0	-1.8	59.1	50.0	50.2	60.1	56.1	42.4	40.0	56.4	42.9	40.5	40.9	46.3
Existing plus Project (AM)		3	0	6,408	50	75	0	0	1.8%	0.7%	63.3	4,979	814	615	101	40	6	1	9	4	71.1	78.8	83.0	-1.8	63.1	54.0	54.2	64.1	60.1	46.4	44.0	60.4	46.9	44.5	44.9	50.4
Existing plus Project (PM)		3	0	2,544	50	75	0	0	1.8%	0.7%	59.2	1,977	323	244	40	16	2	1	3	1	71.1	78.8	83.0	-1.8	59.1	50.0	50.2	60.1	56.1	42.4	40.0	56.4	42.9	40.5	40.9	46.3
Near-Term 2030 (AM)		3	0	6,720	50	75	0	0	1.8%	0.7%	63.5	5,221	853	645	106	42	6	1	9	4	71.1	78.8	83.0	-1.8	63.3	54.2	54.4	64.3	60.3	46.6	44.2	60.6	47.1	44.7	45.1	50.6
Near-Term 2030 (PM)		3	0	2,880	50	75	0	0	1.8%	0.7%	59.8	2,238	366	276	45	18	3	1	4	2	71.1	78.8	83.0	-1.8	59.6	50.5	50.7	60.6	56.6	42.9	40.5	56.9	43.5	41.0	41.5	46.9
Near-Term 2030 plus Project (AM)		3	0	6,720	50	75	0	0	1.8%	0.7%	63.5	5,221	853	645	106	42	6	1	9	4	71.1	78.8	83.0	-1.8	63.3	54.2	54.4	64.3	60.3	46.6	44.2	60.6	47.1	44.7	45.1	50.6
Near-Term 2030 plus Project (PM)		3	0	2,880	50	75	0	0	1.8%	0.7%	59.8	2,238	366	276	45	18	3	1	4	2	71.1	78.8	83.0	-1.8	59.6	50.5	50.7	60.6	56.6	42.9	40.5	56.9	43.5	41.0	41.5	46.9
Cumulative 2045 (AM)		3	0	6,800	50	75	0	0	1.8%	0.7%	63.5	5,284	864	653	107	42	6	1	9	4	71.1	78.8	83.0	-1.8	63.4	54.2	54.4	64.3	60.4	46.6	44.3	60.7	47.2	44.8	45.2	50.6
Cumulative 2045 (PM)		3	0	3,040	50	75	0	0	1.8%	0.7%	60.0	2,362	386	292	48	19	3	1	4	2	71.1	78.8	83.0	-1.8	59.9	50.7	50.9	60.8	56.9	43.1	40.8	57.2	43.7	41.3	41.7	47.1
Cumulative 2045 plus Project (AM)		3	0	6,800	50	75	0	0	1.8%	0.7%	63.5	5,284	864	653	107	42	6	1	9	4	71.1	78.8	83.0	-1.8	63.4	54.2	54.4	64.3	60.4	46.6	44.3	60.7	47.2	44.8	45.2	50.6
Cumulative 2045 plus Project (PM)		3	0	3,040	50	75	0	0	1.8%	0.7%	60.0	2,362	386	292	48	19	3	1	4	2	71.1	78.8	83.0	-1.8	59.9	50.7	50.9	60.8	56.9	43.1	40.8	57.2	43.7	41.3	41.7	47.1
Adams Street s/o Avenue 40																																				
Existing (AM)		4	0	5,384	50	75	0	0	1.8%	0.7%	62.6	4,183	684	517	85	34	5	1	7	3	71.1	78.8	83.0	-1.7	62.4	53.3	53.5	63.4	59.4	45.7	43.3	59.7	46.2	43.8	44.3	49.7
Existing (PM)		4	0	2,568	50	75	0	0	1.8%	0.7%	59.4	1,995	326	247	40	16	2	1	3	1	71.1	78.8	83.0	-1.7	59.2	50.1	50.3	60.2	56.2	42.5	40.1	56.5	43.0	40.6	41.0	46.5
Existing plus Project (AM)		4	0	5,384	50	75	0	0	1.8%	0.7%	62.6	4,183	684	517	85	34	5	1	7	3	71.1	78.8	83.0	-1.7	62.4	53.3	53.5	63.4	59.4	45.7	43.3	59.7	46.2	43.8	44.3	49.7
Existing plus Project (PM)		4	0	2,568	50	75	0	0	1.8%	0.7%	59.4	1,995	326	247	40	16	2	1	3	1	71.1	78.8	83.0	-1.7	59.2	50.1	50.3	60.2	56.2	42.5	40.1	56.5	43.0	40.6	41.0	46.5
Near-Term 2030 (AM)		4	0	5,680	50	75	0	0	1.8%	0.7%	62.8	4,413	721	545	89	35	5	1	8	3	71.1	78.8	83.0	-1.7	62.6	53.5	53.7	63.6	59.7	45.9	43.6	59.9	46.5	44.1	44.5	49.9
Near-Term 2030 (PM)		4	0	3,040	50	75	0	0	1.8%	0.7%	60.1	2,362	386	292	48	19	3	1	4	2	71.1	78.8	83.0	-1.7	59.9	50.8	51.0	60.9	57.0	43.2	40.8	57.2	43.8	41.3	41.8	47.2
Near-Term 2030 plus Project (AM)		4	0	5,680	50	75	0	0	1.8%	0.7%	62.8	4,413	721	545	89	35	5	1	8	3	71.1	78.8	83.0	-1.7	62.6	53.5	53.7	63.6	59.7	45.9	43.6	59.9	46.5	44.1	44.5	49.9
Near-Term 2030 plus Project (PM)		4	0	3,040	50	75	0	0	1.8%	0.7%	60.1	2,362	386	292	48	19	3	1	4	2	71.1	78.8	83.0	-1.7	59.9	50.8	51.0	60.9	57.0	43.2	40.8	57.2	43.8	41.3	41.8	47.2
Cumulative 2045 (AM)		4	0	5,600	50	75	0	0	1.8%	0.7%	62.7	4,351	711	538	88	35	5	1	8	3	71.1	78.8	83.0	-1.7	62.6	53.4	53.7	63.6	59.6	45.9	43.5	59.9	46.4	44.0	44.4	49.8
Cumulative 2045 (PM)		4	0	2,960	50	75	0	0	1.8%	0.7%	60.0	2,300	376	284	47	18	3	1	4	2	71.1	78.8	83.0	-1.7	59.8	50.7	50.9	60.8	56.8	43.1	40.7	57.1	43.6	41.2	41.7	47.1
Cumulative 2045 plus Project (AM)		4	0	5,600	50	75	0	0	1.8%	0.7%	62.7	4,351	711	538	88	35	5	1	8	3	71.1	78.8	83.0	-1.7	62.6	53.4	53.7	63.6	59.6	45.9	43.5	59.9	46.4	44.0	44.4	49.8
Cumulative 2045 plus Project (PM)		4	0	2,960	50	75	0	0	1.8%	0.7%	60.0	2,300	376	284	47	18	3	1	4	2	71.1	78.8	83.0	-1.7	59.8	50.7	50.9	60.8	56.8	43.1	40.7	57.1	43.6	41.2	41.7	47.1
Avenue 40 e/o Adams Street																																				
Existing (AM)		2	15	2,520	45	75	0	0	1.8%	0.7%	58.1	1,958	320	242	40	16	2	1	3	1	69.3	77.6	82.1	-1.8	57.7	49.2	49.7	58.9	54.8	41.6	39.5	55.1	41.6	39.8	40.5	45.4
Existing (PM)		2	15	1,944	45	75	0	0	1.8%	0.7%	57.0	1,510	247	187	31	12	2	0	3	1	69.3	77.6	82.1	-1.8	56.6	48.1	48.6	57.7	53.6	40.5	38.4	54.0	40.4	38.6	39.3	44.3
Existing plus Project (AM)		2	15	2,912	45	75	0	0	1.8%	0.7%	58.7	2,263	370	280	46	18	3	1	4	2	69.3	77.6	82.1	-1.8	58.4	49.8	50.3	59.5	55.4	42.3	40.2	55.7	42.2	40.4	41.1	46.1
Existing plus Project (PM)		2	15	2,368	45	75	0	0	1.8%	0.7%	57.8	1,840	301	227	37	15	2	0	3	1	69.3	77.6	82.1	-1.8	57.5	48.9	49.4	58.6	54.5	41.4	39.3	54.8	41.3	39.5	40.2	45.2
Near-Term 2030 (AM)		2	15	3,520	45	75	0	0	1.8%	0.7%	59.5	2,735	447	338	55	22	3	1	5	2	69.3	77.6	82.1	-1.8	59.2	50.7	51.2	60.3	56.2	43.1	41.0	56.5	43.0	41.2	41.9	46.9
Near-Term 2030 (PM)		2	15	2,720	45	75	0	0	1.8%	0.7%	58.4	2,113	345	261	43	17	2	1	4	2	69.3	77.6	82.1	-1.8	58.1	49.5	50.0	59.2	55.1	42.0	39.9	55.4	41.9	40.1	40.8	45.8
Near-Term 2030 plus Project (AM)		2	15	3,912	45	75	0	0	1.8%	0.7%	60.0	3,040	497	376	62	24	4	1	5	2	69.3	77.6	82.1	-1.8	59.7	51.1	51.6	60.8	56.7	43.5	41.5	57.0	43.5	41.7	42.4	47.3
Near-Term 2030 plus Project (PM)		2	15	3,144	45	75	0	0	1.8%	0.7%	59.1	2,443	399	302	49	20	3	1	4	2	69.3	77.6	82.1	-1.8	58.7	50.2	50.7	59.8	55.7	42.6	40.5	56.1	42.5	40.7	41.4	46.4
Cumulative 2045 (AM)		2	15	4,960	45	75	0	0	1.8%	0.7%	61.0	3,854	630	476	78	31	5	1	7	3	69.3	77.6	82.1	-1.8	60.7	52.2	52.7	61.8	57.7	44.6	42.5	58.0	44.5	42.7	43.4	48.4
Cumulative 2045 (PM)		2	15	3,600	45	75	0	0	1.8%	0.7%	59.6	2,797	457	346	57	22	3	1	5	2	69.3	77.6	82.1	-1.8	59.3	50.8	51.3	60.4	56.3	43.2	41.1	56.6	43.1	41.3	42.0	47.0
Cumulative 2045 plus Project (AM)		2	15	5,352	45	75	0	0	1.8%	0.7%	61.4	4,159	680	514	84	33	5	1	7	3	69.3	77.6	82.1	-1.8	61.0	52.5	53.0	62.1	58.0	44.9	42.8	58.4	44.8	43.0	43.7	48.7
Cumulative 2045 plus Project (PM)		2	15	4,024	45	75	0	0	1.8%	0.7%	60.1	3,127	511	386	63	25	4	1	5	2	69.3	77.6	82.1	-1.8	59.8	51.2	51.7	60.9	56.8	43.7	41.6	57.1	43.6	41.8	42.5	47.5
Avenue 40 w/o Adams Street																																				
Existing (AM)		2	0	2,120	45	75	0	0	1.8%	0.7%	57.3	1,647	269	204	33	13	2	0	3	1	69.3	77.6	82.1	-1.8	56.9	48.4	48.9	58.1	54.0	40.8	38.7	54.3	40.8	38.9	39.7	44.6
Existing (PM)		2	0	1,728	45	75	0	0	1.8%	0.7%	56.4	1,343	219	166	27	11	2	0	2	1	69.3	77.6	82.1	-1.8	56.0	47.5	48.0	57.2	53.1	39.9	37.8	53.4	39.9	38.1	38.8	43.7
Existing plus Project (AM)		2	0	2,512	45	75	0	0	1.8%	0.7%	58.0	1,952	319	241	40	16	2	0	3	1	69.3	77.6	82.1	-1.8	57.7	49.1	49.6	58.8	54.7	41.6	39.5	55.0	41.5	39.7	40.4	45.4
Existing plus Project (PM)		2	0	2,152	45	75	0	0	1.8%	0.7%	57.3	1,672	273	207	34	13	2	0	3	1	69.3	77.6	82.1	-1.8	57.0	48.5	49.0	58.1	54.0	40.9	38.8	54.3	40.8	39.0	39.7	44.7
Near-Term 2030 (AM)		2	0	3,120	45	75	0	0	1.8%	0.7%	59.0	2,424	396	300	49	19	3	1	4	2	69.3	77.6	82.1	-1.8	58.6	50.1	50.6	59.7	55.6	42.5	40.4	56.0	42.4	40.6	41.3	46.3
Near-Term 2030 (PM)		2	0	2,560	45	75	0	0	1.8%	0.7%	58.1	1,989	325	246	40	16	2	1	3	1	69.3	77.6	82.1	-1.8	57.8	49.2	49.7	58.9	54.8	41.6	39.6	55.1	41.6	39.8	40.5	45.4
Near-Term 2030 plus Project (AM)		2	0	3,512	45	75	0	0	1.8%	0.7%	59.5	2,729	446	337	55	22	3	1	5	2	69.3	77.6	82.1	-1.8	59.1	50.6	51.1	60.3	56.1	43.0	40.9	56.5	43.0	41.1	41.9	46.8
Near-Term 2030 plus Project (PM)		2	0	2,984	45	75	0	0	1.8%	0.7%	58.8	2,319	379	286	47	19	3	1	4	2	69.3	77.6	82.1	-1.8	58.4	49.9	50.4	59.6	55.4	42.3	40.2	55.8	42.2	40.4	41.2	46.1
Cumulative 2045 (AM)		2	0	4,400	45	75	0	0	1.8%	0.7%	60.5	3,419	559	422	69	27	4	1	6	2	69.3	77.6	82.1	-1.8	60.1	51.6	52.1	61.2	57.1	44.0	41.9	57.5	43.9	42.1	42.8	47.8

Cumulative 2045 (PM)	2	0	3,200	45	75	0	0	1.8%	0.7%	59.1	2,486	406	307	50	20	3	1	4	2	69.3	77.6	82.1	-1.8	58.7	50.2	50.7	59.9	55.7	42.6	40.5	56.1	42.5	40.7	41.5	46.4
Cumulative 2045 plus Project (AM)	2	0	4,792	45	75	0	0	1.8%	0.7%	60.8	3,723	609	460	75	30	4	1	6	3	69.3	77.6	82.1	-1.8	60.5	51.9	52.4	61.6	57.5	44.4	42.3	57.8	44.3	42.5	43.2	48.2
Cumulative 2045 plus Project (PM)	2	0	3,624	45	75	0	0	1.8%	0.7%	59.6	2,816	460	348	57	23	3	1	5	2	69.3	77.6	82.1	-1.8	59.3	50.7	51.2	60.4	56.3	43.1	41.1	56.6	43.1	41.3	42.0	47.0

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 4

Jefferson St/Avenue 40

Jefferson St

Southbound

	right	through	left
Existing (AM)	68	722	189
Existing (PM)	41	647	211
Existing plus Project (AM)	70	733	189
Existing plus Project (PM)	43	655	211
Near-Term 2030 (AM)	90	800	220
Near-Term 2030 (PM)	50	720	240
Near-Term 2030 plus Project (AM)	92	811	220
Near-Term 2030 plus Project (PM)	52	728	240
Cumulative 2045 (AM)	110	930	250
Cumulative 2045 (PM)	50	830	280
Cumulative 2045 plus Project (AM)	112	941	250
Cumulative 2045 plus Project (PM)	52	838	280

Eastbound

Avenue 40

	left	through	right
Existing (AM)	19	33	41
Existing (PM)	27	74	82
Existing plus Project (AM)	21	45	41
Existing plus Project (PM)	29	100	82
Near-Term 2030 (AM)	30	40	60
Near-Term 2030 (PM)	50	100	120
Near-Term 2030 plus Project (AM)	32	52	60
Near-Term 2030 plus Project (PM)	52	126	120
Cumulative 2045 (AM)	30	60	90
Cumulative 2045 (PM)	70	130	180
Cumulative 2045 plus Project (AM)	32	72	90
Cumulative 2045 plus Project (PM)	72	156	180

Northbound

	left	through	right
Existing (AM)	52	635	77
Existing (PM)	72	561	121
Existing plus Project (AM)	52	639	124
Existing plus Project (PM)	72	574	228
Near-Term 2030 (AM)	100	740	90
Near-Term 2030 (PM)	90	670	140
Near-Term 2030 plus Project (AM)	100	744	137
Near-Term 2030 plus Project (PM)	90	683	247
Cumulative 2045 (AM)	170	910	110
Cumulative 2045 (PM)	120	870	170
Cumulative 2045 plus Project (AM)	170	914	157
Cumulative 2045 plus Project (PM)	120	883	277

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	288	85	88
Existing (PM)	129	70	96
Existing plus Project (AM)	288	118	176
Existing plus Project (PM)	129	93	159
Near-Term 2030 (AM)	100	140	320
Near-Term 2030 (PM)	110	90	150
Near-Term 2030 plus Project (AM	320	173	188
Near-Term 2030 plus Project (PM	150	113	173
Cumulative 2045 (AM)	370	230	120
Cumulative 2045 (PM)	170	100	130
Cumulative 2045 plus Project (AM	370	263	208
Cumulative 2045 plus Project (PM	170	123	193

ADT

Road	Jefferson St		Avenue 40	
Leg	North of	South of	East of	West of
Cross Street	Avenue 40		Jefferson St	
Existing (AM)	15,368.0	12,920.0	6,080.0	2,384.0
Existing (PM)	12,928.0	12,632.0	5,608.0	2,928.0
Existing plus Project (AM)	15,520.0	14,120.0	7,520.0	2,776.0
Existing plus Project (PM)	13,128.0	14,160.0	7,360.0	3,352.0
Near-Term 2030 (AM)	15,840.0	16,880.0	7,280.0	3,680.0
Near-Term 2030 (PM)	14,720.0	15,120.0	6,640.0	4,000.0
Near-Term 2030 plus Project	17,752.0	16,320.0	8,720.0	4,072.0
Near-Term 2030 plus Project	15,240.0	16,328.0	8,392.0	4,424.0
Cumulative 2045 (AM)	20,800.0	18,640.0	9,120.0	5,520.0
Cumulative 2045 (PM)	18,160.0	18,400.0	7,840.0	5,200.0
Cumulative 2045 plus Project	20,952.0	19,840.0	10,560.0	5,912.0
Cumulative 2045 plus Project	18,360.0	19,928.0	9,592.0	5,624.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Jefferson Street n/o Avenue																																				
Existing (AM)		2	15	15,368	45	75	0	0	1.8%	0.7%	65.9	####	1,952	1,475	242	96	14	3	21	9	69.3	77.6	82.1	-1.8	65.6	57.1	57.6	66.7	62.6	49.5	47.4	62.9	49.4	47.6	48.3	53.3
Existing (PM)		2	15	12,928	45	75	0	0	1.8%	0.7%	65.2	####	1,642	1,241	203	81	12	3	17	7	69.3	77.6	82.1	-1.8	64.8	56.3	56.8	66.0	61.9	48.7	46.6	62.2	48.7	46.9	47.6	52.5
Existing plus Project (AM)		2	15	15,520	45	75	0	0	1.8%	0.7%	66.0	####	1,971	1,490	244	97	14	3	21	9	69.3	77.6	82.1	-1.8	65.6	57.1	57.6	66.8	62.7	49.5	47.4	63.0	49.5	47.7	48.4	53.3
Existing plus Project (PM)		2	15	13,128	45	75	0	0	1.8%	0.7%	65.3	####	1,667	1,260	207	82	12	3	18	7	69.3	77.6	82.1	-1.8	64.9	56.4	56.9	66.0	61.9	48.8	46.7	62.3	48.7	46.9	47.6	52.6
Near-Term 2030 (AM)		2	15	15,840	45	75	0	0	1.8%	0.7%	66.1	####	2,012	1,521	249	99	14	3	21	9	69.3	77.6	82.1	-1.8	65.7	57.2	57.7	66.9	62.7	49.6	47.5	63.1	49.6	47.7	48.5	53.4
Near-Term 2030 (PM)		2	15	14,720	45	75	0	0	1.8%	0.7%	65.8	####	1,869	1,413	232	92	13	3	20	8	69.3	77.6	82.1	-1.8	65.4	56.9	57.4	66.5	62.4	49.3	47.2	62.8	49.2	47.4	48.1	53.1
Near-Term 2030 plus Project (AM)		2	15	17,752	45	75	0	0	1.8%	0.7%	66.6	####	2,255	1,704	279	111	16	4	24	10	69.3	77.6	82.1	-1.8	66.2	57.7	58.2	67.4	63.2	50.1	48.0	63.6	50.0	48.2	49.0	53.9
Near-Term 2030 plus Project (PM)		2	15	15,240	45	75	0	0	1.8%	0.7%	65.9	####	1,935	1,463	240	95	14	3	21	9	69.3	77.6	82.1	-1.8	65.6	57.0	57.5	66.7	62.6	49.4	47.4	62.9	49.4	47.6	48.3	53.3
Cumulative 2045 (AM)		2	15	20,800	45	75	0	0	1.8%	0.7%	67.3	####	2,642	1,997	327	130	19	4	28	12	69.3	77.6	82.1	-1.8	66.9	58.4	58.9	68.0	63.9	50.8	48.7	64.3	50.7	48.9	49.6	54.6
Cumulative 2045 (PM)		2	15	18,160	45	75	0	0	1.8%	0.7%	66.7	####	2,306	1,743	286	113	17	4	25	10	69.3	77.6	82.1	-1.8	66.3	57.8	58.3	67.5	63.3	50.2	48.1	63.7	50.1	48.3	49.1	54.0
Cumulative 2045 plus Project (AM)		2	15	20,952	45	75	0	0	1.8%	0.7%	67.3	####	2,661	2,011	330	131	19	4	28	12	69.3	77.6	82.1	-1.8	66.9	58.4	58.9	68.1	64.0	50.8	48.7	64.3	50.8	49.0	49.7	54.6
Cumulative 2045 plus Project (PM)		2	15	18,360	45	75	0	0	1.8%	0.7%	66.7	####	2,332	1,763	289	115	17	4	25	10	69.3	77.6	82.1	-1.8	66.4	57.8	58.3	67.5	63.4	50.3	48.2	63.7	50.2	48.4	49.1	54.1
Jefferson Street s/o Avenue																																				
Existing (AM)		3	15	12,920	45	75	0	0	1.8%	0.7%	65.3	####	1,641	1,240	203	81	12	3	17	7	69.3	77.6	82.1	-1.7	64.9	56.4	56.9	66.1	61.9	48.8	46.7	62.3	48.7	46.9	47.7	52.6
Existing (PM)		3	15	12,632	45	75	0	0	1.8%	0.7%	65.2	9,815	1,604	1,213	199	79	11	3	17	7	69.3	77.6	82.1	-1.7	64.8	56.3	56.8	66.0	61.8	48.7	46.6	62.2	48.6	46.8	47.6	52.5
Existing plus Project (AM)		3	15	14,120	45	75	0	0	1.8%	0.7%	65.7	####	1,793	1,356	222	88	13	3	19	8	69.3	77.6	82.1	-1.7	65.3	56.8	57.3	66.4	62.3	49.2	47.1	62.7	49.1	47.3	48.0	53.0
Existing plus Project (PM)		3	15	14,160	45	75	0	0	1.8%	0.7%	65.7	####	1,798	1,359	223	88	13	3	19	8	69.3	77.6	82.1	-1.7	65.3	56.8	57.3	66.5	62.3	49.2	47.1	62.7	49.1	47.3	48.1	53.0
Near-Term 2030 (AM)		3	15	16,880	45	75	0	0	1.8%	0.7%	66.4	####	2,144	1,620	266	105	15	3	23	10	69.3	77.6	82.1	-1.7	66.1	57.6	58.1	67.2	63.1	50.0	47.9	63.4	49.9	48.1	48.8	53.8
Near-Term 2030 (PM)		3	15	15,120	45	75	0	0	1.8%	0.7%	66.0	####	1,920	1,452	238	94	14	3	20	9	69.3	77.6	82.1	-1.7	65.6	57.1	57.6	66.7	62.6	49.5	47.4	63.0	49.4	47.6	48.3	53.3
Near-Term 2030 plus Project (AM)		3	15	16,320	45	75	0	0	1.8%	0.7%	66.3	####	2,073	1,567	257	102	15	3	22	9	69.3	77.6	82.1	-1.7	65.9	57.4	57.9	67.1	63.0	49.8	47.7	63.3	49.8	47.9	48.7	53.6
Near-Term 2030 plus Project (PM)		3	15	16,328	45	75	0	0	1.8%	0.7%	66.3	####	2,074	1,567	257	102	15	3	22	9	69.3	77.6	82.1	-1.7	65.9	57.4	57.9	67.1	63.0	49.8	47.7	63.3	49.8	48.0	48.7	53.6
Cumulative 2045 (AM)		3	15	18,640	45	75	0	0	1.8%	0.7%	66.9	####	2,367	1,789	293	116	17	4	25	11	69.3	77.6	82.1	-1.7	66.5	58.0	58.5	67.6	63.5	50.4	48.3	63.9	50.3	48.5	49.2	54.2
Cumulative 2045 (PM)		3	15	18,400	45	75	0	0	1.8%	0.7%	66.8	####	2,337	1,766	290	115	17	4	25	10	69.3	77.6	82.1	-1.7	66.5	57.9	58.4	67.6	63.5	50.3	48.3	63.8	50.3	48.5	49.2	54.2
Cumulative 2045 plus Project (AM)		3	15	19,840	45	75	0	0	1.8%	0.7%	67.1	####	2,520	1,905	312	124	18	4	27	11	69.3	77.6	82.1	-1.7	66.8	58.3	58.8	67.9	63.8	50.7	48.6	64.1	50.6	48.8	49.5	54.5
Cumulative 2045 plus Project (PM)		3	15	19,928	45	75	0	0	1.8%	0.7%	67.2	####	2,531	1,913	314	124	18	4	27	11	69.3	77.6	82.1	-1.7	66.8	58.3	58.8	67.9	63.8	50.7	48.6	64.2	50.6	48.8	49.5	54.5
Avenue 40 e/o Jefferson																																				
Existing (AM)		3	0	6,080	45	75	0	0	1.8%	0.7%	61.9	4,724	772	584	96	38	6	1	8	3	69.3	77.6	82.1	-1.8	61.6	53.0	53.5	62.7	58.6	45.4	43.4	58.9	45.4	43.6	44.3	49.2
Existing (PM)		3	0	5,608	45	75	0	0	1.8%	0.7%	61.6	4,357	712	538	88	35	5	1	8	3	69.3	77.6	82.1	-1.8	61.2	52.7	53.2	62.3	58.2	45.1	43.0	58.6	45.0	43.2	43.9	48.9
Existing plus Project (AM)		3	0	7,520	45	75	0	0	1.8%	0.7%	62.8	5,843	955	722	118	47	7	1	10	4	69.3	77.6	82.1	-1.8	62.5	53.9	54.4	63.6	59.5	46.4	44.3	59.8	46.3	44.5	45.2	50.2
Existing plus Project (PM)		3	0	7,360	45	75	0	0	1.8%	0.7%	62.7	5,719	935	707	116	46	7	1	10	4	69.3	77.6	82.1	-1.8	62.4	53.9	54.3	63.5	59.4	46.3	44.2	59.7	46.2	44.4	45.1	50.1
Near-Term 2030 (AM)		3	0	7,280	45	75	0	0	1.8%	0.7%	62.7	5,657	925	699	115	45	7	1	10	4	69.3	77.6	82.1	-1.8	62.3	53.8	54.3	63.5	59.4	46.2	44.1	59.7	46.2	44.3	45.1	50.0
Near-Term 2030 (PM)		3	0	6,640	45	75	0	0	1.8%	0.7%	62.3	5,159	843	637	104	41	6	1	9	4	69.3	77.6	82.1	-1.8	61.9	53.4	53.9	63.1	59.0	45.8	43.7	59.3	45.8	43.9	44.7	49.6
Near-Term 2030 plus Project (AM)		3	0	8,720	45	75	0	0	1.8%	0.7%	63.5	6,775	1,107	837	137	54	8	2	12	5	69.3	77.6	82.1	-1.8	63.1	54.6	55.1	64.3	60.1	47.0	44.9	60.5	46.9	45.1	45.9	50.8
Near-Term 2030 plus Project (PM)		3	0	8,392	45	75	0	0	1.8%	0.7%	63.3	6,521	1,066	806	132	52	8	2	11	5	69.3	77.6	82.1	-1.8	63.0	54.4	54.9	64.1	60.0	46.8	44.8	60.3	46.8	45.0	45.7	50.6
Cumulative 2045 (AM)		3	0	9,120	45	75	0	0	1.8%	0.7%	63.7	7,086	1,158	876	144	57	8	2	12	5	69.3	77.6	82.1	-1.8	63.3	54.8	55.3	64.4	60.3	47.2	45.1	60.7	47.1	45.3	46.0	51.0
Cumulative 2045 (PM)		3	0	7,840	45	75	0	0	1.8%	0.7%	63.0	6,092	996	753	123	49	7	2	11	4	69.3	77.6	82.1	-1.8	62.7	54.1	54.6	63.8	59.7	46.5	44.5	60.0	46.5	44.7	45.4	50.3
Cumulative 2045 plus Project (AM)		3	0	10,560	45	75	0	0	1.8%	0.7%	64.3	8,205	1,341	1,014	166	66	10	2	14	6	69.3	77.6	82.1	-1.8	64.0	55.4	55.9	65.1	61.0	47.8	45.8	61.3	47.8	46.0	46.7	51.6
Cumulative 2045 plus Project (PM)		3	0	9,592	45	75	0	0	1.8%	0.7%	63.9	7,453	1,218	921	151	60	9	2	13	5	69.3	77.6	82.1	-1.8	63.5	55.0	55.5	64.7	60.6	47.4	45.3	60.9	47.4	45.5	46.3	51.2
Avenue 40 w/o Jefferson																																				
Existing (AM)		2	0	2,384	45	75	0	0	1.8%	0.7%	57.8	1,852	303	229	38	15	2	0	3	1	69.3	77.6	82.1	-1.8	57.4	48.9	49.4	58.6	54.5	41.3	39.2	54.8	41.3	39.5	40.2	45.1
Existing (PM)		2	0	2,928	45	75	0	0	1.8%	0.7%	58.7	2,275	372	281	46	18	3	1	4	2	69.3	77.6	82.1	-1.8	58.3	49.8	50.3	59.5	55.4	42.2	40.1	55.7	42.2	40.4	41.1	46.0
Existing plus Project (AM)		2	0	2,776	45	75	0	0	1.8%	0.7%	58.5	2,157	353	266	44	17	3	1	4	2	69.3	77.6	82.1	-1.8	58.1	49.6	50.1	59.2	55.1	42.0	39.9	55.5	41.9	40.1	40.8	45.8
Existing plus Project (PM)		2	0	3,352	45	75	0	0	1.8%	0.7%	59.3	2,605	426	322	53	21	3	1	5	2	69.3	77.6	82.1	-1.8	58.9	50.4	50.9	60.1	55.9	42.8	40.7	56.3	42.7	40.9	41.7	46.6
Near-Term 2030 (AM)		2	0	3,680	45	75	0	0	1.8%	0.7%	59.7	2,859	467	353	58	23	3	1	5	2	69.3	77.6	82.1	-1.8	59.3	50.8	51.3	60.5	56.4	43.2	41.1	56.7	43.2	41.3	42.1	47.0
Near-Term 2030 (PM)		2	0	4,000	45	75	0	0	1.8%	0.7%	60.0	3,108	508	384	63	25	4	1	5	2	69.3	77.6	82.1	-1.8	59.7	51.2	51.7	60.8	56.7	43.6	41.5	57.0	43.5	41.7	42.4	47.4
Near-Term 2030 plus Project (AM)		2	0	4,072	45	75	0	0	1.8%	0.7%	60.1	3,164	517	391	64	25	4	1	6	2	69.3	77.6	82.1	-1.8	59.8	51.2	51.7	60.9	56.8	43.7	41.6	57.1	43.6	41.8	42.5	47.5
Near-Term 2030 plus Project (PM)		2	0	4,424	45	75	0	0	1.8%	0.7%	60.5	3,437	562	425	70	28	4	1	6	2	69.3	77.6	82.1	-1.8	60.1	51.6	52.1	61.3	57.2	44.0	41.9	57.5	44.0	42.1	42.9	47.8
Cumulative 2045 (AM)		2	0	5,520	45	75	0	0	1.8%	0.7%	61.4	4,289	701	530	87	34	5	1	7	3	69.3	77.6	82.1	-1.8	61.1	52.6	53.1	62.2	58.1	45.0	42.9	58.4	44.9	43.1	43.8	48.8

Cumulative 2045 (PM)	2	0	5,200	45	75	0	0	1.8%	0.7%	61.2	4,040	660	499	82	32	5	1	7	3	69.3	77.6	82.1	-1.8	60.8	52.3	52.8	62.0	57.9	44.7	42.6	58.2	44.7	42.8	43.6	48.5
Cumulative 2045 plus Project (AM)	2	0	5,912	45	75	0	0	1.8%	0.7%	61.7	4,594	751	568	93	37	5	1	8	3	69.3	77.6	82.1	-1.8	61.4	52.9	53.4	62.5	58.4	45.3	43.2	58.7	45.2	43.4	44.1	49.1
Cumulative 2045 plus Project (PM)	2	0	5,624	45	75	0	0	1.8%	0.7%	61.5	4,370	714	540	89	35	5	1	8	3	69.3	77.6	82.1	-1.8	61.2	52.6	53.1	62.3	58.2	45.1	43.0	58.5	45.0	43.2	43.9	48.9

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 5

Camino San Gregorio

Camino San Gregorio

Eastbound

Avenue 40

	left	through	right
Existing (AM)		295	4
Existing (PM)		400	6
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		340	10
Near-Term 2030 (PM)		470	10
Near-Term 2030 plus Project (AM)	42	357	10
Near-Term 2030 plus Project (PM)	94	509	10
Cumulative 2045 (AM)		410	10
Cumulative 2045 (PM)		570	10
Cumulative 2045 plus Project (AM)	42	427	10
Cumulative 2045 plus Project (PM)	94	609	10

Southbound

	right	through	left
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	85	0	38
Near-Term 2030 (PM)	60	0	26
Near-Term 2030 plus Project (AM)	85	0	38
Near-Term 2030 plus Project (PM)	60	0	26
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)	85	0	38
Cumulative 2045 plus Project (PM)	60	0	26

Northbound

	left	through	right
Existing (AM)	4		20
Existing (PM)	12		21
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	10		20
Near-Term 2030 (PM)	20		30
Near-Term 2030 plus Project (AM)	10		20
Near-Term 2030 plus Project (PM)	20		30
Cumulative 2045 (AM)	10		20
Cumulative 2045 (PM)	20		30
Cumulative 2045 plus Project (AM)	10		20
Cumulative 2045 plus Project (PM)	20		30

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)		457	15
Existing (PM)		283	19
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		550	30
Near-Term 2030 (PM)		330	30
Near-Term 2030 plus Project (AM)		586	30
Near-Term 2030 plus Project (PM)		356	30
Cumulative 2045 (AM)		710	30
Cumulative 2045 (PM)		380	30
Cumulative 2045 plus Project (AM	18	746	30
Cumulative 2045 plus Project (PM	41	406	30

ADT

Road	Camino San Gregorio		Avenue 40	
Leg	North of	South of	East of	West of
Cross Street	Avenue 40		Camino San Gregorio	
Existing (AM)	0.0	344.0	6,296.0	6,080.0
Existing (PM)	0.0	464.0	5,784.0	5,608.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	984.0	560.0	7,824.0	7,960.0
Near-Term 2030 (PM)	688.0	720.0	7,088.0	7,120.0
Near-Term 2030 plus Project	1,320.0	560.0	8,248.0	8,720.0
Near-Term 2030 plus Project	1,440.0	720.0	7,608.0	8,392.0
Cumulative 2045 (AM)	0.0	560.0	9,360.0	9,120.0
Cumulative 2045 (PM)	0.0	720.0	8,080.0	7,840.0
Cumulative 2045 plus Project	1,464.0	560.0	10,232.0	10,560.0
Cumulative 2045 plus Project	1,768.0	720.0	9,136.0	9,592.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels A	MT	HT	Dist Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Camino San Gregorio n/o																																				
Existing (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	984	15	75	0	0	1.8%	0.7%	45.0	765	125	94	15	6	1	0	1	1	50.8	65.4	74.5	-1.8	39.9	37.6	42.7	45.3	36.9	30.0	32.5	38.8	23.7	28.2	33.4	34.9
Near-Term 2030 (PM)		2	0	688	15	75	0	0	1.8%	0.7%	43.5	535	87	66	11	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.3	36.1	41.1	43.8	35.3	28.5	31.0	37.3	22.1	26.6	31.9	33.4
Near-Term 2030 plus Project (AM)		2	0	1,320	15	75	0	0	1.8%	0.7%	46.3	1,026	168	127	21	8	1	0	2	1	50.8	65.4	74.5	-1.8	41.1	38.9	44.0	46.6	38.2	31.3	33.8	40.1	25.0	29.4	34.7	36.2
Near-Term 2030 plus Project (PM)		2	0	1,440	15	75	0	0	1.8%	0.7%	46.7	1,119	183	138	23	9	1	0	2	1	50.8	65.4	74.5	-1.8	41.5	39.3	44.3	47.0	38.5	31.7	34.2	40.5	25.3	29.8	35.1	36.6
Cumulative 2045 (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)		2	0	1,464	15	75	0	0	1.8%	0.7%	46.7	1,138	186	141	23	9	1	0	2	1	50.8	65.4	74.5	-1.8	41.6	39.4	44.4	47.0	38.6	31.8	34.2	40.6	25.4	29.9	35.2	36.6
Cumulative 2045 plus Project (PM)		2	0	1,768	15	75	0	0	1.8%	0.7%	47.5	1,374	225	170	28	11	2	0	2	1	50.8	65.4	74.5	-1.8	42.4	40.2	45.2	47.9	39.4	32.6	35.1	41.4	26.2	30.7	36.0	37.5
Camino San Gregorio s/o																																				
Existing (AM)		2	0	344	15	75	0	0	1.8%	0.7%	40.4	267	44	33	5	2	0	0	0	0	50.8	65.4	74.5	-1.8	35.3	33.1	38.1	40.8	32.3	25.5	27.9	34.3	19.1	23.6	28.9	30.3
Existing (PM)		2	0	464	15	75	0	0	1.8%	0.7%	41.7	361	59	45	7	3	0	0	1	0	50.8	65.4	74.5	-1.8	36.6	34.4	39.4	42.1	33.6	26.8	29.2	35.6	20.4	24.9	30.2	31.6
Existing plus Project (AM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	560	15	75	0	0	1.8%	0.7%	42.6	435	71	54	9	3	1	0	1	0	50.8	65.4	74.5	-1.8	37.4	35.2	40.2	42.9	34.4	27.6	30.1	36.4	21.2	25.7	31.0	32.5
Near-Term 2030 (PM)		2	0	720	15	75	0	0	1.8%	0.7%	43.6	559	91	69	11	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.5	36.3	41.3	44.0	35.5	28.7	31.2	37.5	22.3	26.8	32.1	33.6
Near-Term 2030 plus Project (AM)		2	0	560	15	75	0	0	1.8%	0.7%	42.6	435	71	54	9	3	1	0	1	0	50.8	65.4	74.5	-1.8	37.4	35.2	40.2	42.9	34.4	27.6	30.1	36.4	21.2	25.7	31.0	32.5
Near-Term 2030 plus Project (PM)		2	0	720	15	75	0	0	1.8%	0.7%	43.6	559	91	69	11	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.5	36.3	41.3	44.0	35.5	28.7	31.2	37.5	22.3	26.8	32.1	33.6
Cumulative 2045 (AM)		2	0	560	15	75	0	0	1.8%	0.7%	42.6	435	71	54	9	3	1	0	1	0	50.8	65.4	74.5	-1.8	37.4	35.2	40.2	42.9	34.4	27.6	30.1	36.4	21.2	25.7	31.0	32.5
Cumulative 2045 (PM)		2	0	720	15	75	0	0	1.8%	0.7%	43.6	559	91	69	11	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.5	36.3	41.3	44.0	35.5	28.7	31.2	37.5	22.3	26.8	32.1	33.6
Cumulative 2045 plus Project (AM)		2	0	560	15	75	0	0	1.8%	0.7%	42.6	435	71	54	9	3	1	0	1	0	50.8	65.4	74.5	-1.8	37.4	35.2	40.2	42.9	34.4	27.6	30.1	36.4	21.2	25.7	31.0	32.5
Cumulative 2045 plus Project (PM)		2	0	720	15	75	0	0	1.8%	0.7%	43.6	559	91	69	11	4	1	0	1	0	50.8	65.4	74.5	-1.8	38.5	36.3	41.3	44.0	35.5	28.7	31.2	37.5	22.3	26.8	32.1	33.6
Avenue 40 e/o Camino San																																				
Existing (AM)		4	0	6,296	45	75	0	0	1.8%	0.7%	62.1	4,892	800	604	99	39	6	1	9	4	69.3	77.6	82.1	-1.7	61.8	53.2	53.7	62.9	58.8	45.7	43.6	59.1	45.6	43.8	44.5	49.5
Existing (PM)		4	0	5,784	45	75	0	0	1.8%	0.7%	61.8	4,494	735	555	91	36	5	1	8	3	69.3	77.6	82.1	-1.7	61.4	52.9	53.4	62.5	58.4	45.3	43.2	58.8	45.2	43.4	44.1	49.1
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	7,824	45	75	0	0	1.8%	0.7%	63.1	6,079	994	751	123	49	7	2	11	4	69.3	77.6	82.1	-1.7	62.7	54.2	54.7	63.9	59.7	46.6	44.5	60.1	46.5	44.7	45.5	50.4
Near-Term 2030 (PM)		4	0	7,088	45	75	0	0	1.8%	0.7%	62.6	5,507	900	680	112	44	6	1	10	4	69.3	77.6	82.1	-1.7	62.3	53.8	54.3	63.4	59.3	46.2	44.1	59.6	46.1	44.3	45.0	50.0
Near-Term 2030 plus Project (AM)		4	0	8,248	45	75	0	0	1.8%	0.7%	63.3	6,409	1,047	792	130	51	7	2	11	5	69.3	77.6	82.1	-1.7	63.0	54.4	54.9	64.1	60.0	46.8	44.8	60.3	46.8	45.0	45.7	50.6
Near-Term 2030 plus Project (PM)		4	0	7,608	45	75	0	0	1.8%	0.7%	62.9	5,911	966	730	120	47	7	2	10	4	69.3	77.6	82.1	-1.7	62.6	54.1	54.6	63.7	59.6	46.5	44.4	59.9	46.4	44.6	45.3	50.3
Cumulative 2045 (AM)		4	0	9,360	45	75	0	0	1.8%	0.7%	63.8	7,273	1,189	899	147	58	9	2	13	5	69.3	77.6	82.1	-1.7	63.5	55.0	55.5	64.6	60.5	47.4	45.3	60.8	47.3	45.5	46.2	51.2
Cumulative 2045 (PM)		4	0	8,080	45	75	0	0	1.8%	0.7%	63.2	6,278	1,026	776	127	50	7	2	11	5	69.3	77.6	82.1	-1.7	62.9	54.3	54.8	64.0	59.9	46.7	44.7	60.2	46.7	44.9	45.6	50.6
Cumulative 2045 plus Project (AM)		4	0	10,232	45	75	0	0	1.8%	0.7%	64.2	7,950	1,299	982	161	64	9	2	14	6	69.3	77.6	82.1	-1.7	63.9	55.4	55.9	65.0	60.9	47.8	45.7	61.2	47.7	45.9	46.6	51.6
Cumulative 2045 plus Project (PM)		4	0	9,136	45	75	0	0	1.8%	0.7%	63.7	7,099	1,160	877	144	57	8	2	12	5	69.3	77.6	82.1	-1.7	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.7	47.2	45.4	46.1	51.1
Avenue 40 w/o Camino San																																				
Existing (AM)		4	0	6,080	45	75	0	0	1.8%	0.7%	62.0	4,724	772	584	96	38	6	1	8	3	69.3	77.6	82.1	-1.7	61.6	53.1	53.6	62.8	58.6	45.5	43.4	59.0	45.5	43.6	44.4	49.3
Existing (PM)		4	0	5,608	45	75	0	0	1.8%	0.7%	61.6	4,357	712	538	88	35	5	1	8	3	69.3	77.6	82.1	-1.7	61.3	52.7	53.2	62.4	58.3	45.2	43.1	58.6	45.1	43.3	44.0	49.0
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	7,960	45	75	0	0	1.8%	0.7%	63.1	6,185	1,011	764	125	50	7	2	11	4	69.3	77.6	82.1	-1.7	62.8	54.3	54.8	63.9	59.8	46.7	44.6	60.1	46.6	44.8	45.5	50.5
Near-Term 2030 (PM)		4	0	7,120	45	75	0	0	1.8%	0.7%	62.7	5,532	904	684	112	44	6	1	10	4	69.3	77.6	82.1	-1.7	62.3	53.8	54.3	63.4	59.3	46.2	44.1	59.7	46.1	44.3	45.0	50.0
Near-Term 2030 plus Project (AM)		4	0	8,720	45	75	0	0	1.8%	0.7%	63.5	6,775	1,107	837	137	54	8	2	12	5	69.3	77.6	82.1	-1.7	63.2	54.7	55.2	64.3	60.2	47.1	45.0	60.5	47.0	45.2	45.9	50.9
Near-Term 2030 plus Project (PM)		4	0	8,392	45	75	0	0	1.8%	0.7%	63.4	6,521	1,066	806	132	52	8	2	11	5	69.3	77.6	82.1	-1.7	63.0	54.5	55.0	64.2	60.0	46.9	44.8	60.4	46.9	45.0	45.8	50.7
Cumulative 2045 (AM)		4	0	9,120	45	75	0	0	1.8%	0.7%	63.7	7,086	1,158	876	144	57	8	2	12	5	69.3	77.6	82.1	-1.7	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.7	47.2	45.4	46.1	51.1

Cumulative 2045 (PM)	4	0	7,840	45	75	0	0	1.8%	0.7%	63.1	6,092	996	753	123	49	7	2	11	4	69.3	77.6	82.1	-1.7	62.7	54.2	54.7	63.9	59.8	46.6	44.5	60.1	46.6	44.7	45.5	50.4
Cumulative 2045 plus Project (AM)	4	0	10,560	45	75	0	0	1.8%	0.7%	64.4	8,205	1,341	1,014	166	66	10	2	14	6	69.3	77.6	82.1	-1.7	64.0	55.5	56.0	65.2	61.0	47.9	45.8	61.4	47.8	46.0	46.8	51.7
Cumulative 2045 plus Project (PM)	4	0	9,592	45	75	0	0	1.8%	0.7%	64.0	7,453	1,218	921	151	60	9	2	13	5	69.3	77.6	82.1	-1.7	63.6	55.1	55.6	64.7	60.6	47.5	45.4	61.0	47.4	45.6	46.3	51.3

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 6

Madison St/Avenue 40

Madison St

Southbound

	right	through	left
Existing (AM)	53	0	99
Existing (PM)	46	0	176
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	70	0	110
Near-Term 2030 (PM)	60	0	200
Near-Term 2030 plus Project (AM)	106	0	142
Near-Term 2030 plus Project (PM)	86	0	222
Cumulative 2045 (AM)	80		130
Cumulative 2045 (PM)	70		230
Cumulative 2045 plus Project (AM)	116	0	162
Cumulative 2045 plus Project (PM)	96	0	252

Avenue 40

Eastbound

	left	through	right
Existing (AM)	24	291	0
Existing (PM)	50	371	0
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	30	330	0
Near-Term 2030 (PM)	60	440	0
Near-Term 2030 plus Project (AM)	47	368	0
Near-Term 2030 plus Project (PM)	99	466	0
Cumulative 2045 (AM)	40	390	
Cumulative 2045 (PM)	70	530	
Cumulative 2045 plus Project (AM)	57	428	0
Cumulative 2045 plus Project (PM)	109	556	0

Northbound

	left	through	right
Existing (AM)	0	0	0
Existing (PM)	1	0	0
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	0	0	0
Near-Term 2030 (PM)	10	0	0
Near-Term 2030 plus Project (AM)	0	0	0
Near-Term 2030 plus Project (PM)	10	0	0
Cumulative 2045 (AM)	0	0	0
Cumulative 2045 (PM)	10	0	0
Cumulative 2045 plus Project (AM)	0	0	0
Cumulative 2045 plus Project (PM)	10	0	0

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	173	419	0
Existing (PM)	106	255	1
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	200	510	0
Near-Term 2030 (PM)	120	290	10
Near-Term 2030 plus Project (AM	217	528	0
Near-Term 2030 plus Project (PM	155	331	10
Cumulative 2045 (AM)	230	660	0
Cumulative 2045 (PM)	140	330	10
Cumulative 2045 plus Project (AM	247	678	0
Cumulative 2045 plus Project (PM	175	371	10

ADT

Road	Madison St		Avenue 40	
Leg	North of	South of	East of	West of
Cross Street	Avenue 40		Madison St	
Existing (AM)	2,792.0	0.0	7,856.0	6,296.0
Existing (PM)	3,024.0	16.0	7,272.0	5,784.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	3,280.0	0.0	9,200.0	7,520.0
Near-Term 2030 (PM)	3,520.0	160.0	8,480.0	6,880.0
Near-Term 2030 plus Project	4,096.0	0.0	10,040.0	8,392.0
Near-Term 2030 plus Project	4,496.0	160.0	9,472.0	7,936.0
Cumulative 2045 (AM)	3,840.0	0.0	11,280.0	9,360.0
Cumulative 2045 (PM)	4,080.0	160.0	9,920.0	8,080.0
Cumulative 2045 plus Project	4,656.0	0.0	12,120.0	10,232.0
Cumulative 2045 plus Project	5,056.0	160.0	10,912.0	9,136.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Madison Street n/o Avenue																																				
Existing (AM)		3	0	2,792	45	75	0	0	1.8%	0.7%	58.5	2,169	355	268	44	17	3	1	4	2	69.3	77.6	82.1	-1.8	58.2	49.6	50.1	59.3	55.2	42.1	40.0	55.5	42.0	40.2	40.9	45.9
Existing (PM)		3	0	3,024	45	75	0	0	1.8%	0.7%	58.9	2,350	384	290	48	19	3	1	4	2	69.3	77.6	82.1	-1.8	58.5	50.0	50.5	59.7	55.5	42.4	40.3	55.9	42.3	40.5	41.3	46.2
Existing plus Project (AM)		3	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		3	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		3	0	3,280	45	75	0	0	1.8%	0.7%	59.2	2,549	417	315	52	20	3	1	4	2	69.3	77.6	82.1	-1.8	58.9	50.3	50.8	60.0	55.9	42.8	40.7	56.2	42.7	40.9	41.6	46.6
Near-Term 2030 (PM)		3	0	3,520	45	75	0	0	1.8%	0.7%	59.5	2,735	447	338	55	22	3	1	5	2	69.3	77.6	82.1	-1.8	59.2	50.6	51.1	60.3	56.2	43.1	41.0	56.5	43.0	41.2	41.9	46.9
Near-Term 2030 plus Project (AM)		3	0	4,096	45	75	0	0	1.8%	0.7%	60.2	3,183	520	393	64	26	4	1	6	2	69.3	77.6	82.1	-1.8	59.8	51.3	51.8	61.0	56.9	43.7	41.6	57.2	43.7	41.9	42.6	47.5
Near-Term 2030 plus Project (PM)		3	0	4,496	45	75	0	0	1.8%	0.7%	60.6	3,493	571	432	71	28	4	1	6	3	69.3	77.6	82.1	-1.8	60.2	51.7	52.2	61.4	57.3	44.1	42.0	57.6	44.1	42.3	43.0	47.9
Cumulative 2045 (AM)		3	0	3,840	45	75	0	0	1.8%	0.7%	59.9	2,984	488	369	60	24	3	1	5	2	69.3	77.6	82.1	-1.8	59.6	51.0	51.5	60.7	56.6	43.4	41.4	56.9	43.4	41.6	42.3	47.2
Cumulative 2045 (PM)		3	0	4,080	45	75	0	0	1.8%	0.7%	60.2	3,170	518	392	64	25	4	1	6	2	69.3	77.6	82.1	-1.8	59.8	51.3	51.8	61.0	56.8	43.7	41.6	57.2	43.6	41.8	42.6	47.5
Cumulative 2045 plus Project (AM)		3	0	4,656	45	75	0	0	1.8%	0.7%	60.7	3,618	591	447	73	29	4	1	6	3	69.3	77.6	82.1	-1.8	60.4	51.9	52.4	61.5	57.4	44.3	42.2	57.7	44.2	42.4	43.1	48.1
Cumulative 2045 plus Project (PM)		3	0	5,056	45	75	0	0	1.8%	0.7%	61.1	3,929	642	485	80	32	5	1	7	3	69.3	77.6	82.1	-1.8	60.8	52.2	52.7	61.9	57.8	44.6	42.6	58.1	44.6	42.8	43.5	48.4
Madison Street s/o Avenue 40																																				
Existing (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		1	0	16	45	75	0	0	1.8%	0.7%	36.0	12	2	2	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	35.7	27.2	27.7	36.8	32.7	19.6	17.5	33.0	19.5	17.7	18.4	23.4
Existing plus Project (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		1	0	160	45	75	0	0	1.8%	0.7%	46.0	124	20	15	3	1	0	0	0	0	69.3	77.6	82.1	-1.8	45.7	37.2	37.7	46.8	42.7	29.6	27.5	43.0	29.5	27.7	28.4	33.4
Near-Term 2030 plus Project (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (PM)		1	0	160	45	75	0	0	1.8%	0.7%	46.0	124	20	15	3	1	0	0	0	0	69.3	77.6	82.1	-1.8	45.7	37.2	37.7	46.8	42.7	29.6	27.5	43.0	29.5	27.7	28.4	33.4
Cumulative 2045 (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (PM)		1	0	160	45	75	0	0	1.8%	0.7%	46.0	124	20	15	3	1	0	0	0	0	69.3	77.6	82.1	-1.8	45.7	37.2	37.7	46.8	42.7	29.6	27.5	43.0	29.5	27.7	28.4	33.4
Cumulative 2045 plus Project (AM)		1	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (PM)		1	0	160	45	75	0	0	1.8%	0.7%	46.0	124	20	15	3	1	0	0	0	0	69.3	77.6	82.1	-1.8	45.7	37.2	37.7	46.8	42.7	29.6	27.5	43.0	29.5	27.7	28.4	33.4
Avenue 40 e/o Madison Street																																				
Existing (AM)		4	15	7,856	45	75	0	0	1.8%	0.7%	63.2	6,104	998	754	124	49	7	2	11	4	69.3	77.6	82.1	-1.6	62.9	54.3	54.8	64.0	59.9	46.8	44.7	60.2	46.7	44.9	45.6	50.6
Existing (PM)		4	15	7,272	45	75	0	0	1.8%	0.7%	62.9	5,650	924	698	114	45	7	1	10	4	69.3	77.6	82.1	-1.6	62.5	54.0	54.5	63.7	59.6	46.4	44.3	59.9	46.4	44.6	45.3	50.2
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	9,200	45	75	0	0	1.8%	0.7%	63.9	7,148	1,168	883	145	57	8	2	12	5	69.3	77.6	82.1	-1.6	63.6	55.0	55.5	64.7	60.6	47.4	45.4	60.9	47.4	45.6	46.3	51.3
Near-Term 2030 (PM)		4	15	8,480	45	75	0	0	1.8%	0.7%	63.6	6,589	1,077	814	133	53	8	2	11	5	69.3	77.6	82.1	-1.6	63.2	54.7	55.2	64.3	60.2	47.1	45.0	60.6	47.0	45.2	45.9	50.9
Near-Term 2030 plus Project (AM)		4	15	10,040	45	75	0	0	1.8%	0.7%	64.3	7,801	1,275	964	158	63	9	2	14	6	69.3	77.6	82.1	-1.6	63.9	55.4	55.9	65.1	61.0	47.8	45.7	61.3	47.8	46.0	46.7	51.6
Near-Term 2030 plus Project (PM)		4	15	9,472	45	75	0	0	1.8%	0.7%	64.0	7,360	1,203	909	149	59	9	2	13	5	69.3	77.6	82.1	-1.6	63.7	55.2	55.7	64.8	60.7	47.6	45.5	61.0	47.5	45.7	46.4	51.4
Cumulative 2045 (AM)		4	15	11,280	45	75	0	0	1.8%	0.7%	64.8	8,765	1,433	1,083	178	70	10	2	15	6	69.3	77.6	82.1	-1.6	64.4	55.9	56.4	65.6	61.5	48.3	46.2	61.8	48.3	46.5	47.2	52.1
Cumulative 2045 (PM)		4	15	9,920	45	75	0	0	1.8%	0.7%	64.2	7,708	1,260	952	156	62	9	2	13	6	69.3	77.6	82.1	-1.6	63.9	55.4	55.9	65.0	60.9	47.8	45.7	61.2	47.7	45.9	46.6	51.6
Cumulative 2045 plus Project (AM)		4	15	12,120	45	75	0	0	1.8%	0.7%	65.1	9,417	1,539	1,164	191	76	11	2	16	7	69.3	77.6	82.1	-1.6	64.8	56.2	56.7	65.9	61.8	48.6	46.6	62.1	48.6	46.8	47.5	52.5
Cumulative 2045 plus Project (PM)		4	15	10,912	45	75	0	0	1.8%	0.7%	64.7	8,479	1,386	1,048	172	68	10	2	15	6	69.3	77.6	82.1	-1.6	64.3	55.8	56.3	65.4	61.3	48.2	46.1	61.7	48.1	46.3	47.0	52.0
Avenue 40 w/o Madison																																				
Existing (AM)		4	15	6,296	45	75	0	0	1.8%	0.7%	62.3	4,892	800	604	99	39	6	1	9	4	69.3	77.6	82.1	-1.6	61.9	53.4	53.9	63.0	58.9	45.8	43.7	59.3	45.7	43.9	44.6	49.6
Existing (PM)		4	15	5,784	45	75	0	0	1.8%	0.7%	61.9	4,494	735	555	91	36	5	1	8	3	69.3	77.6	82.1	-1.6	61.5	53.0	53.5	62.7	58.6	45.4	43.3	58.9	45.4	43.6	44.3	49.2
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	7,520	45	75	0	0	1.8%	0.7%	63.0	5,843	955	722	118	47	7	1	10	4	69.3	77.6	82.1	-1.6	62.7	54.2	54.7	63.8	59.7	46.6	44.5	60.0	46.5	44.7	45.4	50.4
Near-Term 2030 (PM)		4	15	6,880	45	75	0	0	1.8%	0.7%	62.7	5,346	874	660	108	43	6	1	9	4	69.3	77.6	82.1	-1.6	62.3	53.8	54.3	63.4	59.3	46.2	44.1	59.6	46.1	44.3	45.0	50.0
Near-Term 2030 plus Project (AM)		4	15	8,392	45	75	0	0	1.8%	0.7%	63.5	6,521	1,066	806	132	52	8	2	11	5	69.3	77.6	82.1	-1.6	63.2	54.6	55.1	64.3	60.2	47.0	45.0	60.5	47.0	45.2	45.9	50.9
Near-Term 2030 plus Project (PM)		4	15	7,936	45	75	0	0	1.8%	0.7%	63.3	6,166	1,008	762	125	49	7	2	11	4	69.3	77.6	82.1	-1.6	62.9	54.4	54.9	64.1	59.9	46.8	44.7	60.3	46.7	44.9	45.7	50.6
Cumulative 2045 (AM)		4	15	9,360	45	75	0	0	1.8%	0.7%	64.0	7,273	1,189	899	147	58	9	2	13	5	69.3	77.6	82.1	-1.6	63.6	55.1	55.6	64.8	60.7	47.5	45.4	61.0	47.5	45.7	46.4	51.3

Cumulative 2045 (PM)	4	15	8,080	45	75	0	0	1.8%	0.7%	63.3	6,278	1,026	776	127	50	7	2	11	5	69.3	77.6	82.1	-1.6	63.0	54.5	55.0	64.1	60.0	46.9	44.8	60.3	46.8	45.0	45.7	50.7
Cumulative 2045 plus Project (AM)	4	15	10,232	45	75	0	0	1.8%	0.7%	64.4	7,950	1,299	982	161	64	9	2	14	6	69.3	77.6	82.1	-1.6	64.0	55.5	56.0	65.2	61.0	47.9	45.8	61.4	47.8	46.0	46.8	51.7
Cumulative 2045 plus Project (PM)	4	15	9,136	45	75	0	0	1.8%	0.7%	63.9	7,099	1,160	877	144	57	8	2	12	5	69.3	77.6	82.1	-1.6	63.5	55.0	55.5	64.7	60.6	47.4	45.3	60.9	47.4	45.5	46.3	51.2

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 7

Jefferson St/Varner Road

Jefferson St

Southbound

	right	through	left
Existing (AM)	117	744	81
Existing (PM)	83	580	60
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	140	830	100
Near-Term 2030 (PM)	90	710	70
Near-Term 2030 plus Project (AM)	140	929	100
Near-Term 2030 plus Project (PM)	90	781	70
Cumulative 2045 (AM)	170	970	120
Cumulative 2045 (PM)	100	810	70
Cumulative 2045 plus Project (AM)	170	1,069	120
Cumulative 2045 plus Project (PM)	100	881	70

Eastbound

Varner Road

	left	through	right
Existing (AM)	63	73	166
Existing (PM)	103	140	308
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	80	90	250
Near-Term 2030 (PM)	120	170	370
Near-Term 2030 plus Project (AM)	80	90	250
Near-Term 2030 plus Project (PM)	120	170	370
Cumulative 2045 (AM)	80	100	280
Cumulative 2045 (PM)	140	210	420
Cumulative 2045 plus Project (AM)	80	100	280
Cumulative 2045 plus Project (PM)	140	210	420

Northbound

	left	through	right
Existing (AM)	433	629	58
Existing (PM)	203	566	108
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	520	760	90
Near-Term 2030 (PM)	270	680	140
Near-Term 2030 plus Project (AM)	520	811	90
Near-Term 2030 plus Project (PM)	270	800	140
Cumulative 2045 (AM)	660	930	120
Cumulative 2045 (PM)	270	760	200
Cumulative 2045 plus Project (AM)	660	981	120
Cumulative 2045 plus Project (PM)	270	880	200

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	71	123	92
Existing (PM)	40	76	60
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	110	170	100
Near-Term 2030 (PM)	70	90	60
Near-Term 2030 plus Project (AM	110	170	100
Near-Term 2030 plus Project (PM	70	90	60
Cumulative 2045 (AM)	120	240	140
Cumulative 2045 (PM)	70	90	90
Cumulative 2045 plus Project (AM	120	240	140
Cumulative 2045 plus Project (PM	70	90	90

ADT

Road	Jefferson St		Varner Road	
Leg	North of	South of	East of	West of
Cross Street	Varner Road		Jefferson St	
Existing (AM)	13,640.0	16,976.0	3,984.0	7,800.0
Existing (PM)	11,456.0	14,600.0	3,872.0	7,304.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	16,160.0	20,400.0	5,280.0	10,000.0
Near-Term 2030 (PM)	13,920.0	17,840.0	4,800.0	8,880.0
Near-Term 2030 plus Project	17,360.0	21,600.0	5,280.0	10,000.0
Near-Term 2030 plus Project	15,448.0	19,368.0	4,800.0	8,880.0
Cumulative 2045 (AM)	19,120.0	24,800.0	6,720.0	12,240.0
Cumulative 2045 (PM)	15,600.0	20,400.0	5,840.0	9,840.0
Cumulative 2045 plus Project	20,320.0	26,000.0	6,720.0	12,240.0
Cumulative 2045 plus Project	17,128.0	21,928.0	5,840.0	9,840.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Jefferson Street n/o Varner																																				
Existing (AM)		7	0	13,640	45	75	0	0	1.8%	0.7%	65.9	####	1,732	1,309	215	85	12	3	18	8	69.3	77.6	82.1	-1.3	65.6	57.0	57.5	66.7	62.6	49.5	47.4	62.9	49.4	47.6	48.3	53.3
Existing (PM)		7	0	11,456	45	75	0	0	1.8%	0.7%	65.2	8,901	1,455	1,100	180	71	10	2	16	6	69.3	77.6	82.1	-1.3	64.8	56.3	56.8	65.9	61.8	48.7	46.6	62.2	48.6	46.8	47.5	52.5
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	16,160	45	75	0	0	1.8%	0.7%	66.7	####	2,052	1,551	254	101	15	3	22	9	69.3	77.6	82.1	-1.3	66.3	57.8	58.3	67.4	63.3	50.2	48.1	63.7	50.1	48.3	49.0	54.0
Near-Term 2030 (PM)		7	0	13,920	45	75	0	0	1.8%	0.7%	66.0	####	1,768	1,336	219	87	13	3	19	8	69.3	77.6	82.1	-1.3	65.7	57.1	57.6	66.8	62.7	49.5	47.5	63.0	49.5	47.7	48.4	53.4
Near-Term 2030 plus Project (AM)		7	0	17,360	45	75	0	0	1.8%	0.7%	67.0	####	2,205	1,667	273	108	16	3	23	10	69.3	77.6	82.1	-1.3	66.6	58.1	58.6	67.8	63.6	50.5	48.4	64.0	50.4	48.6	49.4	54.3
Near-Term 2030 plus Project (PM)		7	0	15,448	45	75	0	0	1.8%	0.7%	66.5	####	1,962	1,483	243	96	14	3	21	9	69.3	77.6	82.1	-1.3	66.1	57.6	58.1	67.2	63.1	50.0	47.9	63.5	49.9	48.1	48.8	53.8
Cumulative 2045 (AM)		7	0	19,120	45	75	0	0	1.8%	0.7%	67.4	####	2,428	1,836	301	119	17	4	26	11	69.3	77.6	82.1	-1.3	67.0	58.5	59.0	68.2	64.1	50.9	48.8	64.4	50.9	49.1	49.8	54.7
Cumulative 2045 (PM)		7	0	15,600	45	75	0	0	1.8%	0.7%	66.5	####	1,981	1,498	246	97	14	3	21	9	69.3	77.6	82.1	-1.3	66.2	57.6	58.1	67.3	63.2	50.0	48.0	63.5	50.0	48.2	48.9	53.9
Cumulative 2045 plus Project (AM)		7	0	20,320	45	75	0	0	1.8%	0.7%	67.7	####	2,581	1,951	320	127	18	4	28	11	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.4	64.3	51.2	49.1	64.7	51.1	49.3	50.0	55.0
Cumulative 2045 plus Project (PM)		7	0	17,128	45	75	0	0	1.8%	0.7%	66.9	####	2,175	1,644	270	107	16	3	23	10	69.3	77.6	82.1	-1.3	66.6	58.0	58.5	67.7	63.6	50.4	48.4	63.9	50.4	48.6	49.3	54.3
Jefferson Street s/o Varner																																				
Existing (AM)		7	0	16,976	45	75	0	0	1.8%	0.7%	66.9	####	2,156	1,630	267	106	15	3	23	10	69.3	77.6	82.1	-1.3	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2
Existing (PM)		7	0	14,600	45	75	0	0	1.8%	0.7%	66.2	####	1,854	1,402	230	91	13	3	20	8	69.3	77.6	82.1	-1.3	65.9	57.3	57.8	67.0	62.9	49.8	47.7	63.2	49.7	47.9	48.6	53.6
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Near-Term 2030 (PM)		7	0	17,840	45	75	0	0	1.8%	0.7%	67.1	####	2,266	1,713	281	111	16	4	24	10	69.3	77.6	82.1	-1.3	66.7	58.2	58.7	67.9	63.8	50.6	48.5	64.1	50.6	48.8	49.5	54.4
Near-Term 2030 plus Project (AM)		7	0	21,600	45	75	0	0	1.8%	0.7%	67.9	####	2,743	2,074	340	135	20	4	29	12	69.3	77.6	82.1	-1.3	67.6	59.0	59.5	68.7	64.6	51.5	49.4	64.9	51.4	49.6	50.3	55.3
Near-Term 2030 plus Project (PM)		7	0	19,368	45	75	0	0	1.8%	0.7%	67.4	####	2,460	1,859	305	121	18	4	26	11	69.3	77.6	82.1	-1.3	67.1	58.6	59.1	68.2	64.1	51.0	48.9	64.4	50.9	49.1	49.8	54.8
Cumulative 2045 (AM)		7	0	24,800	45	75	0	0	1.8%	0.7%	68.5	####	3,150	2,381	390	155	23	5	34	14	69.3	77.6	82.1	-1.3	68.2	59.6	60.1	69.3	65.2	52.1	50.0	65.5	52.0	50.2	50.9	55.9
Cumulative 2045 (PM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Cumulative 2045 plus Project (AM)		7	0	26,000	45	75	0	0	1.8%	0.7%	68.7	####	3,302	2,496	409	162	24	5	35	15	69.3	77.6	82.1	-1.3	68.4	59.8	60.3	69.5	65.4	52.3	50.2	65.7	52.2	50.4	51.1	56.1
Cumulative 2045 plus Project (PM)		7	0	21,928	45	75	0	0	1.8%	0.7%	68.0	####	2,785	2,105	345	137	20	4	30	12	69.3	77.6	82.1	-1.3	67.6	59.1	59.6	68.8	64.7	51.5	49.4	65.0	51.5	49.7	50.4	55.3
Varner Road e/o Jefferson																																				
Existing (AM)		4	15	3,984	45	75	0	0	1.8%	0.7%	60.3	3,096	506	382	63	25	4	1	5	2	69.3	77.6	82.1	-1.6	59.9	51.4	51.9	61.1	56.9	43.8	41.7	57.3	43.8	41.9	42.7	47.6
Existing (PM)		4	15	3,872	45	75	0	0	1.8%	0.7%	60.2	3,009	492	372	61	24	4	1	5	2	69.3	77.6	82.1	-1.6	59.8	51.3	51.8	60.9	56.8	43.7	41.6	57.2	43.6	41.8	42.5	47.5
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	5,280	45	75	0	0	1.8%	0.7%	61.5	4,103	671	507	83	33	5	1	7	3	69.3	77.6	82.1	-1.6	61.2	52.6	53.1	62.3	58.2	45.0	43.0	58.5	45.0	43.2	43.9	48.8
Near-Term 2030 (PM)		4	15	4,800	45	75	0	0	1.8%	0.7%	61.1	3,730	610	461	76	30	4	1	6	3	69.3	77.6	82.1	-1.6	60.7	52.2	52.7	61.9	57.8	44.6	42.5	58.1	44.6	42.7	43.5	48.4
Near-Term 2030 plus Project (AM)		4	15	5,280	45	75	0	0	1.8%	0.7%	61.5	4,103	671	507	83	33	5	1	7	3	69.3	77.6	82.1	-1.6	61.2	52.6	53.1	62.3	58.2	45.0	43.0	58.5	45.0	43.2	43.9	48.8
Near-Term 2030 plus Project (PM)		4	15	4,800	45	75	0	0	1.8%	0.7%	61.1	3,730	610	461	76	30	4	1	6	3	69.3	77.6	82.1	-1.6	60.7	52.2	52.7	61.9	57.8	44.6	42.5	58.1	44.6	42.7	43.5	48.4
Cumulative 2045 (AM)		4	15	6,720	45	75	0	0	1.8%	0.7%	62.5	5,221	853	645	106	42	6	1	9	4	69.3	77.6	82.1	-1.6	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.5	46.0	44.2	44.9	49.9
Cumulative 2045 (PM)		4	15	5,840	45	75	0	0	1.8%	0.7%	61.9	4,538	742	561	92	36	5	1	8	3	69.3	77.6	82.1	-1.6	61.6	53.1	53.6	62.7	58.6	45.5	43.4	58.9	45.4	43.6	44.3	49.3
Cumulative 2045 plus Project (AM)		4	15	6,720	45	75	0	0	1.8%	0.7%	62.5	5,221	853	645	106	42	6	1	9	4	69.3	77.6	82.1	-1.6	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.5	46.0	44.2	44.9	49.9
Cumulative 2045 plus Project (PM)		4	15	5,840	45	75	0	0	1.8%	0.7%	61.9	4,538	742	561	92	36	5	1	8	3	69.3	77.6	82.1	-1.6	61.6	53.1	53.6	62.7	58.6	45.5	43.4	58.9	45.4	43.6	44.3	49.3
Varner Road w/o Jefferson																																				
Existing (AM)		4	15	7,800	45	75	0	0	1.8%	0.7%	63.2	6,061	991	749	123	49	7	2	11	4	69.3	77.6	82.1	-1.6	62.8	54.3	54.8	64.0	59.9	46.7	44.6	60.2	46.7	44.9	45.6	50.5
Existing (PM)		4	15	7,304	45	75	0	0	1.8%	0.7%	62.9	5,675	928	701	115	46	7	1	10	4	69.3	77.6	82.1	-1.6	62.6	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.3
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	10,000	45	75	0	0	1.8%	0.7%	64.3	7,770	1,270	960	157	62	9	2	14	6	69.3	77.6	82.1	-1.6	63.9	55.4	55.9	65.1	60.9	47.8	45.7	61.3	47.7	45.9	46.7	51.6
Near-Term 2030 (PM)		4	15	8,880	45	75	0	0	1.8%	0.7%	63.8	6,900	1,128	852	140	55	8	2	12	5	69.3	77.6	82.1	-1.6	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.8	47.2	45.4	46.1	51.1
Near-Term 2030 plus Project (AM)		4	15	10,000	45	75	0	0	1.8%	0.7%	64.3	7,770	1,270	960	157	62	9	2	14	6	69.3	77.6	82.1	-1.6	63.9	55.4	55.9	65.1	60.9	47.8	45.7	61.3	47.7	45.9	46.7	51.6
Near-Term 2030 plus Project (PM)		4	15	8,880	45	75	0	0	1.8%	0.7%	63.8	6,900	1,128	852	140	55	8	2	12	5	69.3	77.6	82.1	-1.6	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.8	47.2	45.4	46.1	51.1
Cumulative 2045 (AM)		4	15	12,240	45	75	0	0	1.8%	0.7%	65.2	9,510	1,554	1,175	193	76	11	2	17	7	69.3	77.6	82.1	-1.6	64.8	56.3	56.8	65.9	61.8	48.7	46.6	62.2	48.6	46.8	47.5	52.5

Cumulative 2045 (PM)	4	15	9,840	45	75	0	0	1.8%	0.7%	64.2	7,646	1,250	945	155	61	9	2	13	6	69.3	77.6	82.1	-1.6	63.9	55.3	55.8	65.0	60.9	47.7	45.7	61.2	47.7	45.9	46.6	51.5
Cumulative 2045 plus Project (AM)	4	15	12,240	45	75	0	0	1.8%	0.7%	65.2	9,510	1,554	1,175	193	76	11	2	17	7	69.3	77.6	82.1	-1.6	64.8	56.3	56.8	65.9	61.8	48.7	46.6	62.2	48.6	46.8	47.5	52.5
Cumulative 2045 plus Project (PM)	4	15	9,840	45	75	0	0	1.8%	0.7%	64.2	7,646	1,250	945	155	61	9	2	13	6	69.3	77.6	82.1	-1.6	63.9	55.3	55.8	65.0	60.9	47.7	45.7	61.2	47.7	45.9	46.6	51.5

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 8

Jefferson St/I-10 WB Ramps

Jefferson St

Southbound

	right	through	left
Existing (AM)	141	738	
Existing (PM)	94	834	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	190	990	
Near-Term 2030 (PM)	130	1,010	
Near-Term 2030 plus Project (AM)	219	1,060	
Near-Term 2030 plus Project (PM)	151	1,060	
Cumulative 2045 (AM)	200	1,190	
Cumulative 2045 (PM)	180	1,140	
Cumulative 2045 plus Project (AM)	229	1,260	
Cumulative 2045 plus Project (PM)	201	1,190	

Eastbound

I-10 WB Ramps

	left	through	right
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

Northbound

	left	through	right
Existing (AM)		1,002	917
Existing (PM)		776	724
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		1,200	1010
Near-Term 2030 (PM)		960	800
Near-Term 2030 plus Project (AM)		1,247	1010
Near-Term 2030 plus Project (PM)		1,072	800
Cumulative 2045 (AM)		1,490	1170
Cumulative 2045 (PM)		1,070	930
Cumulative 2045 plus Project (AM)		1,537	1170
Cumulative 2045 plus Project (PM)		1,182	930

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	134	2	329
Existing (PM)	101	0	216
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	170	0	380
Near-Term 2030 (PM)	130	0	250
Near-Term 2030 plus Project (AM	174	0	380
Near-Term 2030 plus Project (PM	138	0	250
Cumulative 2045 (AM)	220	0	460
Cumulative 2045 (PM)	160	0	310
Cumulative 2045 plus Project (AM	224	0	460
Cumulative 2045 plus Project (PM	168	0	310

ADT

Road	Jefferson St		I-10 WB Ramps	
Leg	North of	South of	East of	West of
Cross Street	I-10 WB Ramps		Jefferson St	
Existing (AM)	16,120.0	23,888.0	11,056.0	1,144.0
Existing (PM)	14,440.0	20,400.0	8,328.0	752.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	20,400.0	28,640.0	12,480.0	1,520.0
Near-Term 2030 (PM)	17,840.0	24,160.0	9,440.0	1,040.0
Near-Term 2030 plus Project	21,600.0	29,576.0	12,512.0	1,752.0
Near-Term 2030 plus Project	19,368.0	25,456.0	9,504.0	1,208.0
Cumulative 2045 (AM)	24,800.0	34,480.0	14,800.0	1,600.0
Cumulative 2045 (PM)	20,400.0	27,600.0	11,200.0	1,440.0
Cumulative 2045 plus Project	26,000.0	35,416.0	14,832.0	1,832.0
Cumulative 2045 plus Project	21,928.0	28,896.0	11,264.0	1,608.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels A	MT	HT	Dist Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Jefferson Street n/o I-10 WB																																			
Existing (AM)		7	0	16,120	45	75	0	0	1.8%	0.7%	66.7	####	2,047	1,548	254	101	15	3	22	9	69.3	77.6	82.1	-1.3	66.3	57.8	58.3	67.4	63.3	50.2	48.1	63.6	50.1	48.3	49.0	54.0
Existing (PM)		7	0	14,440	45	75	0	0	1.8%	0.7%	66.2	####	1,834	1,386	227	90	13	3	20	8	69.3	77.6	82.1	-1.3	65.8	57.3	57.8	67.0	62.8	49.7	47.6	63.2	49.6	47.8	48.6	53.5
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Near-Term 2030 (PM)		7	0	17,840	45	75	0	0	1.8%	0.7%	67.1	####	2,266	1,713	281	111	16	4	24	10	69.3	77.6	82.1	-1.3	66.7	58.2	58.7	67.9	63.8	50.6	48.5	64.1	50.6	48.8	49.5	54.4
Near-Term 2030 plus Project (AM)		7	0	21,600	45	75	0	0	1.8%	0.7%	67.9	####	2,743	2,074	340	135	20	4	29	12	69.3	77.6	82.1	-1.3	67.6	59.0	59.5	68.7	64.6	51.5	49.4	64.9	51.4	49.6	50.3	55.3
Near-Term 2030 plus Project (PM)		7	0	19,368	45	75	0	0	1.8%	0.7%	67.4	####	2,460	1,859	305	121	18	4	26	11	69.3	77.6	82.1	-1.3	67.1	58.6	59.1	68.2	64.1	51.0	48.9	64.4	50.9	49.1	49.8	54.8
Cumulative 2045 (AM)		7	0	24,800	45	75	0	0	1.8%	0.7%	68.5	####	3,150	2,381	390	155	23	5	34	14	69.3	77.6	82.1	-1.3	68.2	59.6	60.1	69.3	65.2	52.1	50.0	65.5	52.0	50.2	50.9	55.9
Cumulative 2045 (PM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Cumulative 2045 plus Project (AM)		7	0	26,000	45	75	0	0	1.8%	0.7%	68.7	####	3,302	2,496	409	162	24	5	35	15	69.3	77.6	82.1	-1.3	68.4	59.8	60.3	69.5	65.4	52.3	50.2	65.7	52.2	50.4	51.1	56.1
Cumulative 2045 plus Project (PM)		7	0	21,928	45	75	0	0	1.8%	0.7%	68.0	####	2,785	2,105	345	137	20	4	30	12	69.3	77.6	82.1	-1.3	67.6	59.1	59.6	68.8	64.7	51.5	49.4	65.0	51.5	49.7	50.4	55.3
Jefferson Street s/o I-10 WB																																			
Existing (AM)		7	0	23,888	45	75	0	0	1.8%	0.7%	68.4	####	3,034	2,293	376	149	22	5	32	13	69.3	77.6	82.1	-1.3	68.0	59.5	60.0	69.1	65.0	51.9	49.8	65.4	51.8	50.0	50.7	55.7
Existing (PM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	28,640	45	75	0	0	1.8%	0.7%	69.1	####	3,637	2,749	451	179	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.1	52.6	50.8	51.5	56.5
Near-Term 2030 (PM)		7	0	24,160	45	75	0	0	1.8%	0.7%	68.4	####	3,068	2,319	380	151	22	5	33	14	69.3	77.6	82.1	-1.3	68.1	59.5	60.0	69.2	65.1	51.9	49.9	65.4	51.9	50.1	50.8	55.8
Near-Term 2030 plus Project (AM)		7	0	29,576	45	75	0	0	1.8%	0.7%	69.3	####	3,756	2,839	465	184	27	6	40	17	69.3	77.6	82.1	-1.3	68.9	60.4	60.9	70.1	66.0	52.8	50.7	66.3	52.8	50.9	51.7	56.6
Near-Term 2030 plus Project (PM)		7	0	25,456	45	75	0	0	1.8%	0.7%	68.6	####	3,233	2,444	401	159	23	5	34	14	69.3	77.6	82.1	-1.3	68.3	59.8	60.3	69.4	65.3	52.2	50.1	65.6	52.1	50.3	51.0	56.0
Cumulative 2045 (AM)		7	0	34,480	45	75	0	0	1.8%	0.7%	70.0	####	4,379	3,310	543	215	31	7	47	19	69.3	77.6	82.1	-1.3	69.6	61.1	61.6	70.7	66.6	53.5	51.4	67.0	53.4	51.6	52.3	57.3
Cumulative 2045 (PM)		7	0	27,600	45	75	0	0	1.8%	0.7%	69.0	####	3,505	2,650	434	172	25	5	37	16	69.3	77.6	82.1	-1.3	68.6	60.1	60.6	69.8	65.7	52.5	50.4	66.0	52.5	50.6	51.4	56.3
Cumulative 2045 plus Project (AM)		7	0	35,416	45	75	0	0	1.8%	0.7%	70.1	####	4,498	3,400	557	221	32	7	48	20	69.3	77.6	82.1	-1.3	69.7	61.2	61.7	70.9	66.7	53.6	51.5	67.1	53.5	51.7	52.5	57.4
Cumulative 2045 plus Project (PM)		7	0	28,896	45	75	0	0	1.8%	0.7%	69.2	####	3,670	2,774	455	180	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	70.0	65.9	52.7	50.6	66.2	52.7	50.8	51.6	56.5
I-10 WB Ramps e/o Jefferson																																			
Existing (AM)		5	0	11,056	45	75	0	0	1.8%	0.7%	64.7	8,591	1,404	1,061	174	69	10	2	15	6	69.3	77.6	82.1	-1.6	64.3	55.8	56.3	65.5	61.3	48.2	46.1	61.7	48.2	46.3	47.1	52.0
Existing (PM)		5	0	8,328	45	75	0	0	1.8%	0.7%	63.4	6,471	1,058	799	131	52	8	2	11	5	69.3	77.6	82.1	-1.6	63.1	54.6	55.1	64.2	60.1	47.0	44.9	60.4	46.9	45.1	45.8	50.8
Existing plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		5	0	12,480	45	75	0	0	1.8%	0.7%	65.2	9,697	1,585	1,198	196	78	11	2	17	7	69.3	77.6	82.1	-1.6	64.9	56.3	56.8	66.0	61.9	48.7	46.7	62.2	48.7	46.9	47.6	52.5
Near-Term 2030 (PM)		5	0	9,440	45	75	0	0	1.8%	0.7%	64.0	7,335	1,199	906	149	59	9	2	13	5	69.3	77.6	82.1	-1.6	63.6	55.1	55.6	64.8	60.7	47.5	45.4	61.0	47.5	45.7	46.4	51.3
Near-Term 2030 plus Project (AM)		5	0	12,512	45	75	0	0	1.8%	0.7%	65.2	9,722	1,589	1,201	197	78	11	2	17	7	69.3	77.6	82.1	-1.6	64.9	56.3	56.8	66.0	61.9	48.7	46.7	62.2	48.7	46.9	47.6	52.6
Near-Term 2030 plus Project (PM)		5	0	9,504	45	75	0	0	1.8%	0.7%	64.0	7,385	1,207	912	150	59	9	2	13	5	69.3	77.6	82.1	-1.6	63.7	55.1	55.6	64.8	60.7	47.6	45.5	61.0	47.5	45.7	46.4	51.4
Cumulative 2045 (AM)		5	0	14,800	45	75	0	0	1.8%	0.7%	65.9	####	1,880	1,421	233	92	13	3	20	8	69.3	77.6	82.1	-1.6	65.6	57.1	57.6	66.7	62.6	49.5	47.4	62.9	49.4	47.6	48.3	53.3
Cumulative 2045 (PM)		5	0	11,200	45	75	0	0	1.8%	0.7%	64.7	8,702	1,422	1,075	176	70	10	2	15	6	69.3	77.6	82.1	-1.6	64.4	55.9	56.4	65.5	61.4	48.3	46.2	61.7	48.2	46.4	47.1	52.1
Cumulative 2045 plus Project (AM)		5	0	14,832	45	75	0	0	1.8%	0.7%	66.0	####	1,884	1,424	233	93	13	3	20	8	69.3	77.6	82.1	-1.6	65.6	57.1	57.6	66.7	62.6	49.5	47.4	63.0	49.4	47.6	48.3	53.3
Cumulative 2045 plus Project (PM)		5	0	11,264	45	75	0	0	1.8%	0.7%	64.8	8,752	1,431	1,081	177	70	10	2	15	6	69.3	77.6	82.1	-1.6	64.4	55.9	56.4	65.5	61.4	48.3	46.2	61.8	48.2	46.4	47.1	52.1
I-10 WB Ramps w/o																																			
Existing (AM)		5	0	1,144	45	75	0	0	1.8%	0.7%	54.8	889	145	110	18	7	1	0	2	1	69.3	77.6	82.1	-1.6	54.5	45.9	46.4	55.6	51.5	38.4	36.3	51.8	38.3	36.5	37.2	42.2
Existing (PM)		5	0	752	45	75	0	0	1.8%	0.7%	53.0	584	96	72	12	5	1	0	1	0	69.3	77.6	82.1	-1.6	52.7	44.1	44.6	53.8	49.7	36.5	34.5	50.0	36.5	34.7	35.4	40.3
Existing plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		5	0	1,520	45	75	0	0	1.8%	0.7%	56.1	1,181	193	146	24	9	1	0	2	1	69.3	77.6	82.1	-1.6	55.7	47.2	47.7	56.8	52.7	39.6	37.5	53.1	39.5	37.7	38.4	43.4
Near-Term 2030 (PM)		5	0	1,040	45	75	0	0	1.8%	0.7%	54.4	808	132	100	16	6	1	0	1	1	69.3	77.6	82.1	-1.6	54.1	45.5	46.0	55.2	51.1	37.9	35.9	51.4	37.9	36.1	36.8	41.8
Near-Term 2030 plus Project (AM)		5	0	1,752	45	75	0	0	1.8%	0.7%	56.7	1,361	223	168	28	11	2	0	2	1	69.3	77.6	82.1	-1.6	56.3	47.8	48.3	57.5	53.3	40.2	38.1	53.7	40.2	38.3	39.1	44.0
Near-Term 2030 plus Project (PM)		5	0	1,208	45	75	0	0	1.8%	0.7%	55.1	939	153	116	19	8	1	0	2	1	69.3	77.6	82.1	-1.6	54.7	46.2	46.7	55.8	51.7	38.6	36.5	52.1	38.5	36.7	37.4	42.4
Cumulative 2045 (AM)		5	0	1,600	45	75	0	0	1.8%	0.7%	56.3	1,243	203	154	25	10	1	0	2	1	69.3	77.6	82.1	-1.6	55.9	47.4	47.9	57.1	53.0	39.8	37.7	53.3	39.8	37.9	38.7	43.6

Cumulative 2045 (PM)	5	0	1,440	45	75	0	0	1.8%	0.7%	55.8	1,119	183	138	23	9	1	0	2	1	69.3	77.6	82.1	-1.6	55.5	46.9	47.4	56.6	52.5	39.4	37.3	52.8	39.3	37.5	38.2	43.2
Cumulative 2045 plus Project (AM)	5	0	1,832	45	75	0	0	1.8%	0.7%	56.9	1,423	233	176	29	11	2	0	2	1	69.3	77.6	82.1	-1.6	56.5	48.0	48.5	57.7	53.5	40.4	38.3	53.9	40.3	38.5	39.3	44.2
Cumulative 2045 plus Project (PM)	5	0	1,608	45	75	0	0	1.8%	0.7%	56.3	1,249	204	154	25	10	1	0	2	1	69.3	77.6	82.1	-1.6	56.0	47.4	47.9	57.1	53.0	39.8	37.8	53.3	39.8	38.0	38.7	43.6

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 9

Jefferson St/I-10 EB Ramps

Jefferson St

Southbound

	right	through	left
Existing (AM)	110	957	
Existing (PM)	121	929	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	140	1,230	
Near-Term 2030 (PM)	160	1,100	
Near-Term 2030 plus Project (AM)	147	1,293	
Near-Term 2030 plus Project (PM)	166	1,144	
Cumulative 2045 (AM)	190	1,460	
Cumulative 2045 (PM)	230	1,220	
Cumulative 2045 plus Project (AM)	197	1,523	
Cumulative 2045 plus Project (PM)	236	1,264	

Eastbound

I-10 EB Ramps

	left	through	right
Existing (AM)	67		715
Existing (PM)	125		894
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	100		790
Near-Term 2030 (PM)	150		990
Near-Term 2030 plus Project (AM)	118		790
Near-Term 2030 plus Project (PM)	196		990
Cumulative 2045 (AM)	110		920
Cumulative 2045 (PM)	170		1150
Cumulative 2045 plus Project (AM)	128		920
Cumulative 2045 plus Project (PM)	216		1150

Northbound

	left	through	right
Existing (AM)	101	1,852	
Existing (PM)	122	1,375	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	120	2,110	
Near-Term 2030 (PM)	150	1,610	
Near-Term 2030 plus Project (AM)	120	2139	
Near-Term 2030 plus Project (PM)	150	1,676	
Cumulative 2045 (AM)	120	2,550	
Cumulative 2045 (PM)	180	1,830	
Cumulative 2045 plus Project (AM)	120	2,579	
Cumulative 2045 plus Project (PM)	180	1,896	

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

ADT

Road	Jefferson St		I-10 EB Ramps	
Leg	North of	South of	East of	West of
Cross Street	I-10 EB Ramps		Jefferson St	
Existing (AM)	23,888.0	29,000.0	0.0	7,944.0
Existing (PM)	20,400.0	26,560.0	0.0	10,096.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	28,640.0	34,000.0	0.0	9,200.0
Near-Term 2030 (PM)	24,160.0	30,800.0	0.0	11,600.0
Near-Term 2030 plus Project	29,576.0	34,736.0	0.0	9,400.0
Near-Term 2030 plus Project	25,456.0	31,680.0	0.0	12,016.0
Cumulative 2045 (AM)	34,480.0	40,400.0	0.0	10,720.0
Cumulative 2045 (PM)	27,600.0	35,040.0	0.0	13,840.0
Cumulative 2045 plus Project	35,416.0	41,136.0	0.0	10,920.0
Cumulative 2045 plus Project	28,896.0	35,920.0	0.0	14,256.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Jefferson Street n/o I-10 EB																																				
Existing (AM)		7	0	23,888	45	75	0	0	1.8%	0.7%	68.4	####	3,034	2,293	376	149	22	5	32	13	69.3	77.6	82.1	-1.3	68.0	59.5	60.0	69.1	65.0	51.9	49.8	65.4	51.8	50.0	50.7	55.7
Existing (PM)		7	0	20,400	45	75	0	0	1.8%	0.7%	67.7	####	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.3	67.3	58.8	59.3	68.5	64.3	51.2	49.1	64.7	51.1	49.3	50.1	55.0
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	28,640	45	75	0	0	1.8%	0.7%	69.1	####	3,637	2,749	451	179	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.1	52.6	50.8	51.5	56.5
Near-Term 2030 (PM)		7	0	24,160	45	75	0	0	1.8%	0.7%	68.4	####	3,068	2,319	380	151	22	5	33	14	69.3	77.6	82.1	-1.3	68.1	59.5	60.0	69.2	65.1	51.9	49.9	65.4	51.9	50.1	50.8	55.8
Near-Term 2030 plus Project (AM)		7	0	29,576	45	75	0	0	1.8%	0.7%	69.3	####	3,756	2,839	465	184	27	6	40	17	69.3	77.6	82.1	-1.3	68.9	60.4	60.9	70.1	66.0	52.8	50.7	66.3	52.8	50.9	51.7	56.6
Near-Term 2030 plus Project (PM)		7	0	25,456	45	75	0	0	1.8%	0.7%	68.6	####	3,233	2,444	401	159	23	5	34	14	69.3	77.6	82.1	-1.3	68.3	59.8	60.3	69.4	65.3	52.2	50.1	65.6	52.1	50.3	51.0	56.0
Cumulative 2045 (AM)		7	0	34,480	45	75	0	0	1.8%	0.7%	70.0	####	4,379	3,310	543	215	31	7	47	19	69.3	77.6	82.1	-1.3	69.6	61.1	61.6	70.7	66.6	53.5	51.4	67.0	53.4	51.6	52.3	57.3
Cumulative 2045 (PM)		7	0	27,600	45	75	0	0	1.8%	0.7%	69.0	####	3,505	2,650	434	172	25	5	37	16	69.3	77.6	82.1	-1.3	68.6	60.1	60.6	69.8	65.7	52.5	50.4	66.0	52.5	50.6	51.4	56.3
Cumulative 2045 plus Project (AM)		7	0	35,416	45	75	0	0	1.8%	0.7%	70.1	####	4,498	3,400	557	221	32	7	48	20	69.3	77.6	82.1	-1.3	69.7	61.2	61.7	70.9	66.7	53.6	51.5	67.1	53.5	51.7	52.5	57.4
Cumulative 2045 plus Project (PM)		7	0	28,896	45	75	0	0	1.8%	0.7%	69.2	####	3,670	2,774	455	180	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	70.0	65.9	52.7	50.6	66.2	52.7	50.8	51.6	56.5
Jefferson Street s/o I-10 EB																																				
Existing (AM)		7	0	29,000	45	75	0	0	1.8%	0.7%	69.2	####	3,683	2,784	456	181	26	6	39	16	69.3	77.6	82.1	-1.3	68.9	60.3	60.8	70.0	65.9	52.7	50.7	66.2	52.7	50.9	51.6	56.5
Existing (PM)		7	0	26,560	45	75	0	0	1.8%	0.7%	68.8	####	3,373	2,550	418	166	24	5	36	15	69.3	77.6	82.1	-1.3	68.5	59.9	60.4	69.6	65.5	52.4	50.3	65.8	52.3	50.5	51.2	56.2
Existing plus Project (AM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		7	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		7	0	34,000	45	75	0	0	1.8%	0.7%	69.9	####	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-1.3	69.5	61.0	61.5	70.7	66.6	53.4	51.3	66.9	53.4	51.6	52.3	57.2
Near-Term 2030 (PM)		7	0	30,800	45	75	0	0	1.8%	0.7%	69.5	####	3,912	2,957	485	192	28	6	42	17	69.3	77.6	82.1	-1.3	69.1	60.6	61.1	70.2	66.1	53.0	50.9	66.5	52.9	51.1	51.8	56.8
Near-Term 2030 plus Project (AM)		7	0	34,736	45	75	0	0	1.8%	0.7%	70.0	####	4,411	3,335	547	217	32	7	47	20	69.3	77.6	82.1	-1.3	69.6	61.1	61.6	70.8	66.7	53.5	51.4	67.0	53.5	51.6	52.4	57.3
Near-Term 2030 plus Project (PM)		7	0	31,680	45	75	0	0	1.8%	0.7%	69.6	####	4,023	3,041	499	198	29	6	43	18	69.3	77.6	82.1	-1.3	69.2	60.7	61.2	70.4	66.3	53.1	51.0	66.6	53.1	51.2	52.0	56.9
Cumulative 2045 (AM)		7	0	40,400	45	75	0	0	1.8%	0.7%	70.6	####	5,131	3,878	636	252	37	8	55	23	69.3	77.6	82.1	-1.3	70.3	61.8	62.3	71.4	67.3	54.2	52.1	67.6	54.1	52.3	53.0	58.0
Cumulative 2045 (PM)		7	0	35,040	45	75	0	0	1.8%	0.7%	70.0	####	4,450	3,364	551	219	32	7	47	20	69.3	77.6	82.1	-1.3	69.7	61.1	61.6	70.8	66.7	53.6	51.5	67.0	53.5	51.7	52.4	57.4
Cumulative 2045 plus Project (AM)		7	0	41,136	45	75	0	0	1.8%	0.7%	70.7	####	5,224	3,949	647	257	37	8	56	23	69.3	77.6	82.1	-1.3	70.4	61.8	62.3	71.5	67.4	54.3	52.2	67.7	54.2	52.4	53.1	58.1
Cumulative 2045 plus Project (PM)		7	0	35,920	45	75	0	0	1.8%	0.7%	70.1	####	4,562	3,448	565	224	33	7	49	20	69.3	77.6	82.1	-1.3	69.8	61.2	61.7	70.9	66.8	53.7	51.6	67.1	53.6	51.8	52.5	57.5
I-10 EB Ramps e/o Jefferson																																				
Existing (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
I-10 EB Ramps w/o Jefferson																																				
Existing (AM)		5	0	7,944	45	75	0	0	1.8%	0.7%	63.2	6,172	1,009	763	125	50	7	2	11	4	69.3	77.6	82.1	-1.6	62.9	54.4	54.9	64.0	59.9	46.8	44.7	60.2	46.7	44.9	45.6	50.6
Existing (PM)		5	0	10,096	45	75	0	0	1.8%	0.7%	64.3	7,845	1,282	969	159	63	9	2	14	6	69.3	77.6	82.1	-1.6	63.9	55.4	55.9	65.1	61.0	47.8	45.7	61.3	47.8	45.9	46.7	51.6
Existing plus Project (AM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		5	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		5	0	9,200	45	75	0	0	1.8%	0.7%	63.9	7,148	1,168	883	145	57	8	2	12	5	69.3	77.6	82.1	-1.6	63.5	55.0	55.5	64.7	60.6	47.4	45.3	60.9	47.4	45.5	46.3	51.2
Near-Term 2030 (PM)		5	0	11,600	45	75	0	0	1.8%	0.7%	64.9	9,013	1,473	1,114	183	72	11	2	16	7	69.3	77.6	82.1	-1.6	64.5	56.0	56.5	65.7	61.6	48.4	46.3	61.9	48.4	46.6	47.3	52.2
Near-Term 2030 plus Project (AM)		5	0	9,400	45	75	0	0	1.8%	0.7%	64.0	7,304	1,194	902	148	59	9	2	13	5	69.3	77.6	82.1	-1.6	63.6	55.1	55.6	64.8	60.6	47.5	45.4	61.0	47.4	45.6	46.4	51.3
Near-Term 2030 plus Project (PM)		5	0	12,016	45	75	0	0	1.8%	0.7%	65.0	9,336	1,526	1,154	189	75	11	2	16	7	69.3	77.6	82.1	-1.6	64.7	56.2	56.7	65.8	61.7	48.6	46.5	62.0	48.5	46.7	47.4	52.4
Cumulative 2045 (AM)		5	0	10,720	45	75	0	0	1.8%	0.7%	64.5	8,329	1,361	1,029	169	67	10	2	15	6	69.3	77.6	82.1	-1.6	64.2	55.7	56.2	65.3	61.2	48.1	46.0	61.5	48.0	46.2	46.9	51.9

Cumulative 2045 (PM)	5	0	13,840	45	75	0	0	1.8%	0.7%	65.7	####	1,758	1,329	218	86	13	3	19	8	69.3	77.6	82.1	-1.6	65.3	56.8	57.3	66.4	62.3	49.2	47.1	62.7	49.1	47.3	48.0	53.0
Cumulative 2045 plus Project (AM)	5	0	10,920	45	75	0	0	1.8%	0.7%	64.6	8,485	1,387	1,048	172	68	10	2	15	6	69.3	77.6	82.1	-1.6	64.3	55.7	56.2	65.4	61.3	48.2	46.1	61.6	48.1	46.3	47.0	52.0
Cumulative 2045 plus Project (PM)	5	0	14,256	45	75	0	0	1.8%	0.7%	65.8	####	1,811	1,369	224	89	13	3	19	8	69.3	77.6	82.1	-1.6	65.4	56.9	57.4	66.6	62.5	49.3	47.2	62.8	49.3	47.4	48.2	53.1

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 10

Indio Blvd/Jefferson St

Indio Boulevard

Eastbound

	left	through	right
Existing (AM)	1,133		217
Existing (PM)	1,001		311
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	1,240		240
Near-Term 2030 (PM)	1,110		350
Near-Term 2030 plus Project (AM)	1,260		240
Near-Term 2030 plus Project (PM)	1155		350
Cumulative 2045 (AM)	1450		280
Cumulative 2045 (PM)	1200		410
Cumulative 2045 plus Project (AM)	1470		280
Cumulative 2045 plus Project (PM)	1245		410

Jefferson Street

Southbound

	right	through	left
Existing (AM)	1,195	477	
Existing (PM)	1,095	728	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	1,350	670	
Near-Term 2030 (PM)	1,210	880	
Near-Term 2030 plus Project (AM)	1,392	691	
Near-Term 2030 plus Project (PM)	1,240	894	
Cumulative 2045 (AM)	1,530	1,020	
Cumulative 2045 (PM)	1,400	1,150	
Cumulative 2045 plus Project (AM)	1572	1,041	
Cumulative 2045 plus Project (PM)	1430	1,164	

Northbound

	left	through	right
Existing (AM)	439	820	
Existing (PM)	233	496	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	490	990	
Near-Term 2030 (PM)	260	650	
Near-Term 2030 plus Project (AM)	490	999	
Near-Term 2030 plus Project (PM)	260	671	
Cumulative 2045 (AM)	560	1,300	
Cumulative 2045 (PM)	310	930	
Cumulative 2045 plus Project (AM)	560	1,309	
Cumulative 2045 plus Project (PM)	310	951	

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

ADT

Road	Jefferson Street		Indio Boulevard	
Leg	North of	South of	East of	West of
Cross Street	Indio Boulevard		Jefferson Street	
Existing (AM)	29,000.0	15,624.0	0.0	23,872.0
Existing (PM)	26,560.0	14,144.0	0.0	21,120.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	34,000.0	19,120.0	0.0	26,560.0
Near-Term 2030 (PM)	30,800.0	17,120.0	0.0	23,440.0
Near-Term 2030 plus Project	34,736.0	19,360.0	0.0	27,056.0
Near-Term 2030 plus Project	31,680.0	17,400.0	0.0	24,040.0
Cumulative 2045 (AM)	42,400.0	25,280.0	0.0	30,560.0
Cumulative 2045 (PM)	37,440.0	22,400.0	0.0	26,560.0
Cumulative 2045 plus Project	43,136.0	25,520.0	0.0	31,056.0
Cumulative 2045 plus Project	38,320.0	22,680.0	0.0	27,160.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Jefferson Street n/o Indio																																			
Existing (AM)		6	10	29,000	45	75	0	0	1.8%	0.7%	69.2	####	3,683	2,784	456	181	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.2	52.6	50.8	51.5	56.5
Existing (PM)		6	10	26,560	45	75	0	0	1.8%	0.7%	68.8	####	3,373	2,550	418	166	24	5	36	15	69.3	77.6	82.1	-1.3	68.4	59.9	60.4	69.6	65.5	52.3	50.2	65.8	52.3	50.4	51.2	56.1
Existing plus Project (AM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	10	34,000	45	75	0	0	1.8%	0.7%	69.9	####	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-1.3	69.5	61.0	61.5	70.6	66.5	53.4	51.3	66.9	53.3	51.5	52.2	57.2
Near-Term 2030 (PM)		6	10	30,800	45	75	0	0	1.8%	0.7%	69.4	####	3,912	2,957	485	192	28	6	42	17	69.3	77.6	82.1	-1.3	69.1	60.5	61.0	70.2	66.1	53.0	50.9	66.4	52.9	51.1	51.8	56.8
Near-Term 2030 plus Project (AM)		6	10	34,736	45	75	0	0	1.8%	0.7%	69.9	####	4,411	3,335	547	217	32	7	47	20	69.3	77.6	82.1	-1.3	69.6	61.1	61.6	70.7	66.6	53.5	51.4	66.9	53.4	51.6	52.3	57.3
Near-Term 2030 plus Project (PM)		6	10	31,680	45	75	0	0	1.8%	0.7%	69.5	####	4,023	3,041	499	198	29	6	43	18	69.3	77.6	82.1	-1.3	69.2	60.7	61.2	70.3	66.2	53.1	51.0	66.5	53.0	51.2	51.9	56.9
Cumulative 2045 (AM)		6	10	42,400	45	75	0	0	1.8%	0.7%	70.8	####	5,385	4,070	667	264	39	8	57	24	69.3	77.6	82.1	-1.3	70.5	61.9	62.4	71.6	67.5	54.3	52.3	67.8	54.3	52.5	53.2	58.2
Cumulative 2045 (PM)		6	10	37,440	45	75	0	0	1.8%	0.7%	70.3	####	4,755	3,594	589	234	34	7	51	21	69.3	77.6	82.1	-1.3	69.9	61.4	61.9	71.1	66.9	53.8	51.7	67.3	53.8	51.9	52.7	57.6
Cumulative 2045 plus Project (AM)		6	10	43,136	45	75	0	0	1.8%	0.7%	70.9	####	5,478	4,141	679	269	39	9	58	24	69.3	77.6	82.1	-1.3	70.5	62.0	62.5	71.7	67.6	54.4	52.3	67.9	54.4	52.6	53.3	58.2
Cumulative 2045 plus Project (PM)		6	10	38,320	45	75	0	0	1.8%	0.7%	70.4	####	4,867	3,679	603	239	35	8	52	22	69.3	77.6	82.1	-1.3	70.0	61.5	62.0	71.2	67.0	53.9	51.8	67.4	53.9	52.0	52.8	57.7
Jefferson Street s/o Indio																																			
Existing (AM)		6	10	15,624	45	75	0	0	1.8%	0.7%	66.5	####	1,984	1,500	246	97	14	3	21	9	69.3	77.6	82.1	-1.3	66.1	57.6	58.1	67.3	63.1	50.0	47.9	63.5	50.0	48.1	48.9	53.8
Existing (PM)		6	10	14,144	45	75	0	0	1.8%	0.7%	66.0	####	1,796	1,358	223	88	13	3	19	8	69.3	77.6	82.1	-1.3	65.7	57.2	57.7	66.8	62.7	49.6	47.5	63.0	49.5	47.7	48.4	53.4
Existing plus Project (AM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	10	19,120	45	75	0	0	1.8%	0.7%	67.4	####	2,428	1,836	301	119	17	4	26	11	69.3	77.6	82.1	-1.3	67.0	58.5	59.0	68.1	64.0	50.9	48.8	64.4	50.8	49.0	49.7	54.7
Near-Term 2030 (PM)		6	10	17,120	45	75	0	0	1.8%	0.7%	66.9	####	2,174	1,644	269	107	16	3	23	10	69.3	77.6	82.1	-1.3	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2
Near-Term 2030 plus Project (AM)		6	10	19,360	45	75	0	0	1.8%	0.7%	67.4	####	2,459	1,859	305	121	18	4	26	11	69.3	77.6	82.1	-1.3	67.1	58.5	59.0	68.2	64.1	50.9	48.9	64.4	50.9	49.1	49.8	54.8
Near-Term 2030 plus Project (PM)		6	10	17,400	45	75	0	0	1.8%	0.7%	66.9	####	2,210	1,670	274	109	16	3	24	10	69.3	77.6	82.1	-1.3	66.6	58.1	58.6	67.7	63.6	50.5	48.4	63.9	50.4	48.6	49.3	54.3
Cumulative 2045 (AM)		6	10	25,280	45	75	0	0	1.8%	0.7%	68.6	####	3,211	2,427	398	158	23	5	34	14	69.3	77.6	82.1	-1.3	68.2	59.7	60.2	69.4	65.2	52.1	50.0	65.6	52.0	50.2	51.0	55.9
Cumulative 2045 (PM)		6	10	22,400	45	75	0	0	1.8%	0.7%	68.0	####	2,845	2,150	353	140	20	4	30	13	69.3	77.6	82.1	-1.3	67.7	59.2	59.7	68.8	64.7	51.6	49.5	65.0	51.5	49.7	50.4	55.4
Cumulative 2045 plus Project (AM)		6	10	25,520	45	75	0	0	1.8%	0.7%	68.6	####	3,241	2,450	402	159	23	5	35	14	69.3	77.6	82.1	-1.3	68.3	59.7	60.2	69.4	65.3	52.1	50.1	65.6	52.1	50.3	51.0	56.0
Cumulative 2045 plus Project (PM)		6	10	22,680	45	75	0	0	1.8%	0.7%	68.1	####	2,880	2,177	357	141	21	5	31	13	69.3	77.6	82.1	-1.3	67.7	59.2	59.7	68.9	64.8	51.6	49.5	65.1	51.6	49.8	50.5	55.4
Indio Boulevard e/o Jefferson																																			
Existing (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Indio Boulevard w/o																																			
Existing (AM)		4	20	23,872	50	75	0	0	1.8%	0.7%	69.2	####	3,032	2,292	376	149	22	5	32	13	71.1	78.8	83.0	-1.5	69.1	59.9	60.2	70.0	66.1	52.4	50.0	66.4	52.9	50.5	50.9	56.3
Existing (PM)		4	20	21,120	50	75	0	0	1.8%	0.7%	68.7	####	2,682	2,028	332	132	19	4	29	12	71.1	78.8	83.0	-1.5	68.5	59.4	59.6	69.5	65.6	51.8	49.5	65.8	52.4	50.0	50.4	55.8
Existing plus Project (AM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	20	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	20	26,560	50	75	0	0	1.8%	0.7%	69.7	####	3,373	2,550	418	166	24	5	36	15	71.1	78.8	83.0	-1.5	69.5	60.4	60.6	70.5	66.6	52.8	50.4	66.8	53.4	51.0	51.4	56.8
Near-Term 2030 (PM)		4	20	23,440	50	75	0	0	1.8%	0.7%	69.2	####	2,977	2,250	369	146	21	5	32	13	71.1	78.8	83.0	-1.5	69.0	59.9	60.1	70.0	66.0	52.3	49.9	66.3	52.8	50.4	50.8	56.3
Near-Term 2030 plus Project (AM)		4	20	27,056	50	75	0	0	1.8%	0.7%	69.8	####	3,436	2,597	426	169	25	5	37	15	71.1	78.8	83.0	-1.5	69.6	60.5	60.7	70.6	66.6	52.9	50.5	66.9	53.4	51.0	51.5	56.9
Near-Term 2030 plus Project (PM)		4	20	24,040	50	75	0	0	1.8%	0.7%	69.3	####	3,053	2,308	378	150	22	5	33	14	71.1	78.8	83.0	-1.5	69.1	60.0	60.2	70.1	66.1	52.4	50.0	66.4	52.9	50.5	50.9	56.4
Cumulative 2045 (AM)		4	20	30,560	50	75	0	0	1.8%	0.7%	70.3	####	3,881	2,934	481	191	28	6	41	17	71.1	78.8	83.0	-1.5	70.2	61.0	61.2	71.1	67.2	53.4	51.1	67.5	54.0	51.6	52.0	57.4

Cumulative 2045 (PM)	4	20	26,560	50	75	0	0	1.8%	0.7%	69.7	####	3,373	2,550	418	166	24	5	36	15	71.1	78.8	83.0	-1.5	69.5	60.4	60.6	70.5	66.6	52.8	50.4	66.8	53.4	51.0	51.4	56.8
Cumulative 2045 plus Project (AM)	4	20	31,056	50	75	0	0	1.8%	0.7%	70.4	####	3,944	2,981	489	194	28	6	42	18	71.1	78.8	83.0	-1.5	70.2	61.1	61.3	71.2	67.2	53.5	51.1	67.5	54.0	51.6	52.1	57.5
Cumulative 2045 plus Project (PM)	4	20	27,160	50	75	0	0	1.8%	0.7%	69.8	####	3,449	2,607	427	169	25	5	37	15	71.1	78.8	83.0	-1.5	69.6	60.5	60.7	70.6	66.7	52.9	50.5	66.9	53.5	51.0	51.5	56.9

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 11

Jefferson St/Avenue 42/Country Club Dr

Jefferson St

Southbound

	right	through	left
Existing (AM)	482	1,106	46
Existing (PM)	272	1,009	47
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	540	1,240	60
Near-Term 2030 (PM)	310	1,100	60
Near-Term 2030 plus Project (AM)	546	1,276	60
Near-Term 2030 plus Project (PM)	314	1,126	60
Cumulative 2045 (AM)	630	1,470	60
Cumulative 2045 (PM)	360	1,490	60
Cumulative 2045 plus Project (AM)	636	1,506	60
Cumulative 2045 plus Project (PM)	364	1,516	60

Ave 42/Country Club

Eastbound

	left	through	right
Existing (AM)	266	172	461
Existing (PM)	375	282	506
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	330	200	510
Near-Term 2030 (PM)	420	320	560
Near-Term 2030 plus Project (AM)	332	200	510
Near-Term 2030 plus Project (PM)	425	320	560
Cumulative 2045 (AM)	350	230	600
Cumulative 2045 (PM)	490	370	650
Cumulative 2045 plus Project (AM)	352	230	600
Cumulative 2045 plus Project (PM)	495	370	650

Northbound

	left	through	right
Existing (AM)	563	1,030	17
Existing (PM)	315	909	12
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	630	1,110	30
Near-Term 2030 (PM)	350	1,050	20
Near-Term 2030 plus Project (AM)	630	1128	30
Near-Term 2030 plus Project (PM)	350	1,090	20
Cumulative 2045 (AM)	730	1,520	40
Cumulative 2045 (PM)	410	1,200	20
Cumulative 2045 plus Project (AM)	730	1,538	40
Cumulative 2045 plus Project (PM)	410	1,240	20

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	26	151	44
Existing (PM)	23	63	47
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	40	180	50
Near-Term 2030 (PM)	30	80	60
Near-Term 2030 plus Project (AM	40	180	50
Near-Term 2030 plus Project (PM	30	80	60
Cumulative 2045 (AM)	40	210	50
Cumulative 2045 (PM)	40	90	60
Cumulative 2045 plus Project (AM	40	210	50
Cumulative 2045 plus Project (PM	40	90	60

ADT

Road	Jefferson St		Ave 42/Country Club Dr	
Leg	North of	South of	East of	West of
Cross Street	Ave 42/Country Club Dr		Jefferson St	
Existing (AM)	23,648.0	25,768.0	3,648.0	16,760.0
Existing (PM)	21,080.0	22,384.0	3,792.0	14,504.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	26,560.0	28,560.0	4,480.0	19,120.0
Near-Term 2030 (PM)	23,760.0	25,120.0	4,560.0	16,320.0
Near-Term 2030 plus Project	27,056.0	28,992.0	4,480.0	19,184.0
Near-Term 2030 plus Project	24,360.0	25,648.0	4,560.0	16,392.0
Cumulative 2045 (AM)	32,560.0	35,280.0	5,040.0	22,000.0
Cumulative 2045 (PM)	29,120.0	30,640.0	5,120.0	18,960.0
Cumulative 2045 plus Project	33,056.0	35,712.0	5,040.0	22,064.0
Cumulative 2045 plus Project	29,720.0	31,168.0	5,120.0	19,032.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Jefferson Street n/o Ave																																			
Existing (AM)		6	10	23,648	45	75	0	0	1.8%	0.7%	68.3	####	3,003	2,270	372	147	21	5	32	13	69.3	77.6	82.1	-1.3	67.9	59.4	59.9	69.1	64.9	51.8	49.7	65.3	51.8	49.9	50.7	55.6
Existing (PM)		6	10	21,080	45	75	0	0	1.8%	0.7%	67.8	####	2,677	2,024	332	131	19	4	29	12	69.3	77.6	82.1	-1.3	67.4	58.9	59.4	68.6	64.5	51.3	49.2	64.8	51.3	49.4	50.2	55.1
Existing plus Project (AM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	10	26,560	45	75	0	0	1.8%	0.7%	68.8	####	3,373	2,550	418	166	24	5	36	15	69.3	77.6	82.1	-1.3	68.4	59.9	60.4	69.6	65.5	52.3	50.2	65.8	52.3	50.4	51.2	56.1
Near-Term 2030 (PM)		6	10	23,760	45	75	0	0	1.8%	0.7%	68.3	####	3,018	2,281	374	148	22	5	32	13	69.3	77.6	82.1	-1.3	68.0	59.4	59.9	69.1	65.0	51.8	49.8	65.3	51.8	50.0	50.7	55.6
Near-Term 2030 plus Project (AM)		6	10	27,056	45	75	0	0	1.8%	0.7%	68.9	####	3,436	2,597	426	169	25	5	37	15	69.3	77.6	82.1	-1.3	68.5	60.0	60.5	69.6	65.5	52.4	50.3	65.9	52.3	50.5	51.2	56.2
Near-Term 2030 plus Project (PM)		6	10	24,360	45	75	0	0	1.8%	0.7%	68.4	####	3,094	2,339	383	152	22	5	33	14	69.3	77.6	82.1	-1.3	68.1	59.5	60.0	69.2	65.1	51.9	49.9	65.4	51.9	50.1	50.8	55.8
Cumulative 2045 (AM)		6	10	32,560	45	75	0	0	1.8%	0.7%	69.7	####	4,135	3,126	512	203	30	6	44	18	69.3	77.6	82.1	-1.3	69.3	60.8	61.3	70.4	66.3	53.2	51.1	66.7	53.1	51.3	52.1	57.0
Cumulative 2045 (PM)		6	10	29,120	45	75	0	0	1.8%	0.7%	69.2	####	3,698	2,796	458	182	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	70.0	65.9	52.7	50.6	66.2	52.7	50.8	51.6	56.5
Cumulative 2045 plus Project (AM)		6	10	33,056	45	75	0	0	1.8%	0.7%	69.7	####	4,198	3,173	520	206	30	7	45	19	69.3	77.6	82.1	-1.3	69.4	60.9	61.4	70.5	66.4	53.3	51.2	66.7	53.2	51.4	52.1	57.1
Cumulative 2045 plus Project (PM)		6	10	29,720	45	75	0	0	1.8%	0.7%	69.3	####	3,774	2,853	468	185	27	6	40	17	69.3	77.6	82.1	-1.3	68.9	60.4	60.9	70.1	65.9	52.8	50.7	66.3	52.7	50.9	51.7	56.6
Jefferson Street s/o Ave																																			
Existing (AM)		6	10	25,768	45	75	0	0	1.8%	0.7%	68.7	####	3,273	2,474	406	161	23	5	35	15	69.3	77.6	82.1	-1.3	68.3	59.8	60.3	69.4	65.3	52.2	50.1	65.7	52.1	50.3	51.0	56.0
Existing (PM)		6	10	22,384	45	75	0	0	1.8%	0.7%	68.0	####	2,843	2,149	352	140	20	4	30	13	69.3	77.6	82.1	-1.3	67.7	59.2	59.7	68.8	64.7	51.6	49.5	65.0	51.5	49.7	50.4	55.4
Existing plus Project (AM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	10	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.3	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	10	28,560	45	75	0	0	1.8%	0.7%	69.1	####	3,627	2,742	449	178	26	6	39	16	69.3	77.6	82.1	-1.3	68.7	60.2	60.7	69.9	65.8	52.6	50.6	66.1	52.6	50.8	51.5	56.4
Near-Term 2030 (PM)		6	10	25,120	45	75	0	0	1.8%	0.7%	68.5	####	3,190	2,412	395	157	23	5	34	14	69.3	77.6	82.1	-1.3	68.2	59.7	60.2	69.3	65.2	52.1	50.0	65.5	52.0	50.2	50.9	55.9
Near-Term 2030 plus Project (AM)		6	10	28,992	45	75	0	0	1.8%	0.7%	69.2	####	3,682	2,783	456	181	26	6	39	16	69.3	77.6	82.1	-1.3	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.2	52.6	50.8	51.5	56.5
Near-Term 2030 plus Project (PM)		6	10	25,648	45	75	0	0	1.8%	0.7%	68.6	####	3,257	2,462	404	160	23	5	35	14	69.3	77.6	82.1	-1.3	68.3	59.7	60.2	69.4	65.3	52.2	50.1	65.6	52.1	50.3	51.0	56.0
Cumulative 2045 (AM)		6	10	35,280	45	75	0	0	1.8%	0.7%	70.0	####	4,481	3,387	555	220	32	7	48	20	69.3	77.6	82.1	-1.3	69.7	61.1	61.6	70.8	66.7	53.6	51.5	67.0	53.5	51.7	52.4	57.4
Cumulative 2045 (PM)		6	10	30,640	45	75	0	0	1.8%	0.7%	69.4	####	3,891	2,941	482	191	28	6	41	17	69.3	77.6	82.1	-1.3	69.1	60.5	61.0	70.2	66.1	52.9	50.9	66.4	52.9	51.1	51.8	56.7
Cumulative 2045 plus Project (AM)		6	10	35,712	45	75	0	0	1.8%	0.7%	70.1	####	4,535	3,428	562	223	32	7	48	20	69.3	77.6	82.1	-1.3	69.7	61.2	61.7	70.9	66.7	53.6	51.5	67.1	53.5	51.7	52.5	57.4
Cumulative 2045 plus Project (PM)		6	10	31,168	45	75	0	0	1.8%	0.7%	69.5	####	3,958	2,992	491	194	28	6	42	18	69.3	77.6	82.1	-1.3	69.1	60.6	61.1	70.3	66.1	53.0	50.9	66.5	53.0	51.1	51.9	56.8
Ave 42/Country Club Dr e/o																																			
Existing (AM)		4	15	3,648	40	75	0	0	1.8%	0.7%	58.7	2,834	463	350	57	23	3	1	5	2	67.4	76.3	81.2	-1.6	58.1	50.2	51.0	59.4	55.1	42.6	40.9	55.5	41.9	40.8	41.8	46.3
Existing (PM)		4	15	3,792	40	75	0	0	1.8%	0.7%	58.8	2,946	482	364	60	24	3	1	5	2	67.4	76.3	81.2	-1.6	58.2	50.4	51.2	59.6	55.3	42.8	41.0	55.7	42.1	40.9	42.0	46.5
Existing plus Project (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	4,480	40	75	0	0	1.8%	0.7%	59.6	3,481	569	430	71	28	4	1	6	3	67.4	76.3	81.2	-1.6	59.0	51.1	51.9	60.3	56.0	43.5	41.8	56.4	42.8	41.7	42.7	47.2
Near-Term 2030 (PM)		4	15	4,560	40	75	0	0	1.8%	0.7%	59.6	3,543	579	438	72	28	4	1	6	3	67.4	76.3	81.2	-1.6	59.0	51.2	52.0	60.4	56.1	43.6	41.8	56.5	42.9	41.7	42.8	47.3
Near-Term 2030 plus Project (AM)		4	15	4,480	40	75	0	0	1.8%	0.7%	59.6	3,481	569	430	71	28	4	1	6	3	67.4	76.3	81.2	-1.6	59.0	51.1	51.9	60.3	56.0	43.5	41.8	56.4	42.8	41.7	42.7	47.2
Near-Term 2030 plus Project (PM)		4	15	4,560	40	75	0	0	1.8%	0.7%	59.6	3,543	579	438	72	28	4	1	6	3	67.4	76.3	81.2	-1.6	59.0	51.2	52.0	60.4	56.1	43.6	41.8	56.5	42.9	41.7	42.8	47.3
Cumulative 2045 (AM)		4	15	5,040	40	75	0	0	1.8%	0.7%	60.1	3,916	640	484	79	31	5	1	7	3	67.4	76.3	81.2	-1.6	59.5	51.6	52.4	60.8	56.5	44.0	42.3	56.9	43.3	42.2	43.2	47.7
Cumulative 2045 (PM)		4	15	5,120	40	75	0	0	1.8%	0.7%	60.1	3,978	650	492	81	32	5	1	7	3	67.4	76.3	81.2	-1.6	59.5	51.7	52.5	60.9	56.6	44.1	42.3	57.0	43.4	42.2	43.3	47.8
Cumulative 2045 plus Project (AM)		4	15	5,040	40	75	0	0	1.8%	0.7%	60.1	3,916	640	484	79	31	5	1	7	3	67.4	76.3	81.2	-1.6	59.5	51.6	52.4	60.8	56.5	44.0	42.3	56.9	43.3	42.2	43.2	47.7
Cumulative 2045 plus Project (PM)		4	15	5,120	40	75	0	0	1.8%	0.7%	60.1	3,978	650	492	81	32	5	1	7	3	67.4	76.3	81.2	-1.6	59.5	51.7	52.5	60.9	56.6	44.1	42.3	57.0	43.4	42.2	43.3	47.8
Ave 42/Country Club Dr w/o																																			
Existing (AM)		4	15	16,760	40	75	0	0	1.8%	0.7%	65.3	####	2,129	1,609	264	105	15	3	23	9	67.4	76.3	81.2	-1.6	64.7	56.8	57.7	66.0	61.7	49.3	47.5	62.1	48.5	47.4	48.4	52.9
Existing (PM)		4	15	14,504	40	75	0	0	1.8%	0.7%	64.7	####	1,842	1,392	228	90	13	3	20	8	67.4	76.3	81.2	-1.6	64.1	56.2	57.0	65.4	61.1	48.6	46.9	61.5	47.9	46.8	47.8	52.3
Existing plus Project (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	19,120	40	75	0	0	1.8%	0.7%	65.9	####	2,428	1,836	301	119	17	4	26	11	67.4	76.3	81.2	-1.6	65.3	57.4	58.2	66.6	62.3	49.8	48.1	62.7	49.1	48.0	49.0	53.5
Near-Term 2030 (PM)		4	15	16,320	40	75	0	0	1.8%	0.7%	65.2	####	2,073	1,567	257	102	15	3	22	9	67.4	76.3	81.2	-1.6	64.6	56.7	57.5	65.9	61.6	49.1	47.4	62.0	48.4	47.3	48.3	52.8
Near-Term 2030 plus Project (AM)		4	15	19,184	40	75	0	0	1.8%	0.7%	65.9	####	2,436	1,842	302	120	17	4	26	11	67.4	76.3	81.2	-1.6	65.3	57.4	58.3	66.6	62.3	49.8	48.1	62.7	49.1	48.0	49.0	53.5
Near-Term 2030 plus Project (PM)		4	15	16,392	40	75	0	0	1.8%	0.7%	65.2	####	2,082	1,574	258	102	15	3	22	9	67.4	76.3	81.2	-1.6	64.6	56.7	57.6	65.9	61.6	49.2	47.4	62.0	48.4	47.3	48.3	52.8
Cumulative 2045 (AM)		4	15	22,000	40	75	0	0	1.8%	0.7%	66.5	####	2,794	2,112	346	137	20	4	30	12	67.4	76.3	81.2	-1.6	65.9	58.0	58.8	67.2	62.9	50.4	48.7	63.3	49.7	48.6	49.6	54.1

Cumulative 2045 (PM)	4	15	18,960	40	75	0	0	1.8%	0.7%	65.8	####	2,408	1,820	298	118	17	4	26	11	67.4	76.3	81.2	-1.6	65.2	57.4	58.2	66.6	62.3	49.8	48.0	62.6	49.1	47.9	49.0	53.4
Cumulative 2045 plus Project (AM)	4	15	22,064	40	75	0	0	1.8%	0.7%	66.5	####	2,802	2,118	347	138	20	4	30	12	67.4	76.3	81.2	-1.6	65.9	58.0	58.9	67.2	62.9	50.4	48.7	63.3	49.7	48.6	49.6	54.1
Cumulative 2045 plus Project (PM)	4	15	19,032	40	75	0	0	1.8%	0.7%	65.8	####	2,417	1,827	300	119	17	4	26	11	67.4	76.3	81.2	-1.6	65.2	57.4	58.2	66.6	62.3	49.8	48.1	62.7	49.1	47.9	49.0	53.5

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 12

Jefferson St/Fred Waring Dr

Jefferson St

Southbound

	right	through	left
Existing (AM)	372	1,152	76
Existing (PM)	212	1,133	100
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	420	1,300	90
Near-Term 2030 (PM)	240	1,220	120
Near-Term 2030 plus Project (AM)	430	1,326	90
Near-Term 2030 plus Project (PM)	247	1,239	120
Cumulative 2045 (AM)	490	1,550	110
Cumulative 2045 (PM)	280	1,380	130
Cumulative 2045 plus Project (AM)	500	1,576	110
Cumulative 2045 plus Project (PM)	287	1,399	130

Eastbound

Fred Waring Dr

	left	through	right
Existing (AM)	302	422	138
Existing (PM)	250	730	236
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	340	470	160
Near-Term 2030 (PM)	280	800	270
Near-Term 2030 plus Project (AM)	344	470	160
Near-Term 2030 plus Project (PM)	290	800	270
Cumulative 2045 (AM)	400	550	180
Cumulative 2045 (PM)	320	930	310
Cumulative 2045 plus Project (AM)	404	550	180
Cumulative 2045 plus Project (PM)	330	930	310

Northbound

	left	through	right
Existing (AM)	280	1,168	147
Existing (PM)	235	893	199
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	310	1,260	190
Near-Term 2030 (PM)	270	950	270
Near-Term 2030 plus Project (AM)	310	1274	190
Near-Term 2030 plus Project (PM)	270	980	270
Cumulative 2045 (AM)	360	1,410	260
Cumulative 2045 (PM)	310	1,030	390
Cumulative 2045 plus Project (AM)	360	1,424	260
Cumulative 2045 plus Project (PM)	310	1,060	390

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	109	892	236
Existing (PM)	86	435	204
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	120	990	280
Near-Term 2030 (PM)	100	480	240
Near-Term 2030 plus Project (AM	120	990	280
Near-Term 2030 plus Project (PM	100	480	240
Cumulative 2045 (AM)	140	1150	340
Cumulative 2045 (PM)	120	560	500
Cumulative 2045 plus Project (AM	140	1,150	340
Cumulative 2045 plus Project (PM	120	560	300

ADT

Road	Jefferson St		Fred Waring Dr	
Leg	North of	South of	East of	West of
Cross Street	Fred Waring Dr		Jefferson St	
Existing (AM)	25,432.0	24,968.0	15,056.0	19,248.0
Existing (PM)	21,392.0	23,200.0	14,032.0	16,784.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	28,240.0	28,000.0	17,120.0	21,520.0
Near-Term 2030 (PM)	23,280.0	25,760.0	16,080.0	18,720.0
Near-Term 2030 plus Project	28,672.0	28,320.0	17,120.0	21,632.0
Near-Term 2030 plus Project	23,808.0	26,152.0	16,080.0	18,856.0
Cumulative 2045 (AM)	32,800.0	32,800.0	20,400.0	25,040.0
Cumulative 2045 (PM)	26,080.0	31,360.0	21,040.0	21,680.0
Cumulative 2045 plus Project	33,232.0	33,120.0	20,400.0	25,152.0
Cumulative 2045 plus Project	26,608.0	30,152.0	19,440.0	21,816.0

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NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Jefferson Street n/o Fred																																			
Existing (AM)		6	15	25,432	50	75	0	0	1.8%	0.7%	69.8	####	3,230	2,441	400	159	23	5	34	14	71.1	78.8	83.0	-1.2	69.7	60.5	60.7	70.6	66.7	52.9	50.6	67.0	53.5	51.1	51.5	56.9
Existing (PM)		6	15	21,392	50	75	0	0	1.8%	0.7%	69.1	####	2,717	2,054	337	133	19	4	29	12	71.1	78.8	83.0	-1.2	68.9	59.8	60.0	69.9	65.9	52.2	49.8	66.2	52.7	50.3	50.7	56.2
Existing plus Project (AM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	15	28,240	50	75	0	0	1.8%	0.7%	70.3	####	3,586	2,711	444	176	26	6	38	16	71.1	78.8	83.0	-1.2	70.1	61.0	61.2	71.1	67.1	53.4	51.0	67.4	53.9	51.5	51.9	57.4
Near-Term 2030 (PM)		6	15	23,280	50	75	0	0	1.8%	0.7%	69.4	####	2,957	2,235	366	145	21	5	32	13	71.1	78.8	83.0	-1.2	69.3	60.1	60.3	70.2	66.3	52.6	50.2	66.6	53.1	50.7	51.1	56.5
Near-Term 2030 plus Project (AM)		6	15	28,672	50	75	0	0	1.8%	0.7%	70.3	####	3,641	2,753	451	179	26	6	39	16	71.1	78.8	83.0	-1.2	70.2	61.0	61.2	71.1	67.2	53.5	51.1	67.5	54.0	51.6	52.0	57.4
Near-Term 2030 plus Project (PM)		6	15	23,808	50	75	0	0	1.8%	0.7%	69.5	####	3,024	2,286	375	148	22	5	32	13	71.1	78.8	83.0	-1.2	69.4	60.2	60.4	70.3	66.4	52.6	50.3	66.7	53.2	50.8	51.2	56.6
Cumulative 2045 (AM)		6	15	32,800	50	75	0	0	1.8%	0.7%	70.9	####	4,166	3,149	516	205	30	7	44	19	71.1	78.8	83.0	-1.2	70.8	61.6	61.8	71.7	67.8	54.0	51.7	68.1	54.6	52.2	52.6	58.0
Cumulative 2045 (PM)		6	15	26,080	50	75	0	0	1.8%	0.7%	69.9	####	3,312	2,504	410	163	24	5	35	15	71.1	78.8	83.0	-1.2	69.8	60.6	60.8	70.7	66.8	53.0	50.7	67.1	53.6	51.2	51.6	57.0
Cumulative 2045 plus Project (AM)		6	15	33,232	50	75	0	0	1.8%	0.7%	71.0	####	4,220	3,190	523	207	30	7	45	19	71.1	78.8	83.0	-1.2	70.8	61.7	61.9	71.8	67.8	54.1	51.7	68.1	54.6	52.2	52.7	58.1
Cumulative 2045 plus Project (PM)		6	15	26,608	50	75	0	0	1.8%	0.7%	70.0	####	3,379	2,554	419	166	24	5	36	15	71.1	78.8	83.0	-1.2	69.9	60.7	60.9	70.8	66.9	53.1	50.8	67.2	53.7	51.3	51.7	57.1
Jefferson Street s/o Fred																																			
Existing (AM)		6	15	24,968	50	75	0	0	1.8%	0.7%	69.7	####	3,171	2,397	393	156	23	5	34	14	71.1	78.8	83.0	-1.2	69.6	60.4	60.6	70.5	66.6	52.9	50.5	66.9	53.4	51.0	51.4	56.8
Existing (PM)		6	15	23,200	50	75	0	0	1.8%	0.7%	69.4	####	2,946	2,227	365	145	21	5	31	13	71.1	78.8	83.0	-1.2	69.3	60.1	60.3	70.2	66.3	52.5	50.2	66.6	53.1	50.7	51.1	56.5
Existing plus Project (AM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	15	28,000	50	75	0	0	1.8%	0.7%	70.2	####	3,556	2,688	441	175	25	6	38	16	71.1	78.8	83.0	-1.2	70.1	60.9	61.1	71.0	67.1	53.4	51.0	67.4	53.9	51.5	51.9	57.3
Near-Term 2030 (PM)		6	15	25,760	50	75	0	0	1.8%	0.7%	69.9	####	3,272	2,473	405	161	23	5	35	15	71.1	78.8	83.0	-1.2	69.7	60.6	60.8	70.7	66.7	53.0	50.6	67.0	53.5	51.1	51.5	57.0
Near-Term 2030 plus Project (AM)		6	15	28,320	50	75	0	0	1.8%	0.7%	70.3	####	3,597	2,719	446	177	26	6	38	16	71.1	78.8	83.0	-1.2	70.1	61.0	61.2	71.1	67.1	53.4	51.0	67.4	53.9	51.5	52.0	57.4
Near-Term 2030 plus Project (PM)		6	15	26,152	50	75	0	0	1.8%	0.7%	69.9	####	3,321	2,511	412	163	24	5	35	15	71.1	78.8	83.0	-1.2	69.8	60.6	60.8	70.7	66.8	53.1	50.7	67.1	53.6	51.2	51.6	57.0
Cumulative 2045 (AM)		6	15	32,800	50	75	0	0	1.8%	0.7%	70.9	####	4,166	3,149	516	205	30	7	44	19	71.1	78.8	83.0	-1.2	70.8	61.6	61.8	71.7	67.8	54.0	51.7	68.1	54.6	52.2	52.6	58.0
Cumulative 2045 (PM)		6	15	31,360	50	75	0	0	1.8%	0.7%	70.7	####	3,983	3,011	494	196	29	6	42	18	71.1	78.8	83.0	-1.2	70.6	61.4	61.6	71.5	67.6	53.8	51.5	67.9	54.4	52.0	52.4	57.8
Cumulative 2045 plus Project (AM)		6	15	33,120	50	75	0	0	1.8%	0.7%	71.0	####	4,206	3,180	521	207	30	7	45	19	71.1	78.8	83.0	-1.2	70.8	61.7	61.9	71.8	67.8	54.1	51.7	68.1	54.6	52.2	52.6	58.1
Cumulative 2045 plus Project (PM)		6	15	30,152	50	75	0	0	1.8%	0.7%	70.6	####	3,829	2,895	475	188	27	6	41	17	71.1	78.8	83.0	-1.2	70.4	61.3	61.5	71.4	67.4	53.7	51.3	67.7	54.2	51.8	52.2	57.7
Fred Waring Drive e/o																																			
Existing (AM)		6	15	15,056	50	75	0	0	1.8%	0.7%	67.5	####	1,912	1,445	237	94	14	3	20	8	71.1	78.8	83.0	-1.2	67.4	58.2	58.4	68.3	64.4	50.7	48.3	64.7	51.2	48.8	49.2	54.6
Existing (PM)		6	15	14,032	50	75	0	0	1.8%	0.7%	67.2	####	1,782	1,347	221	88	13	3	19	8	71.1	78.8	83.0	-1.2	67.1	57.9	58.1	68.0	64.1	50.4	48.0	64.4	50.9	48.5	48.9	54.3
Existing plus Project (AM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	15	17,120	50	75	0	0	1.8%	0.7%	68.1	####	2,174	1,644	269	107	16	3	23	10	71.1	78.8	83.0	-1.2	67.9	58.8	59.0	68.9	65.0	51.2	48.8	65.2	51.8	49.3	49.8	55.2
Near-Term 2030 (PM)		6	15	16,080	50	75	0	0	1.8%	0.7%	67.8	####	2,042	1,544	253	100	15	3	22	9	71.1	78.8	83.0	-1.2	67.7	58.5	58.7	68.6	64.7	50.9	48.6	65.0	51.5	49.1	49.5	54.9
Near-Term 2030 plus Project (AM)		6	15	17,120	50	75	0	0	1.8%	0.7%	68.1	####	2,174	1,644	269	107	16	3	23	10	71.1	78.8	83.0	-1.2	67.9	58.8	59.0	68.9	65.0	51.2	48.8	65.2	51.8	49.3	49.8	55.2
Near-Term 2030 plus Project (PM)		6	15	16,080	50	75	0	0	1.8%	0.7%	67.8	####	2,042	1,544	253	100	15	3	22	9	71.1	78.8	83.0	-1.2	67.7	58.5	58.7	68.6	64.7	50.9	48.6	65.0	51.5	49.1	49.5	54.9
Cumulative 2045 (AM)		6	15	20,400	50	75	0	0	1.8%	0.7%	68.9	####	2,591	1,958	321	127	19	4	28	12	71.1	78.8	83.0	-1.2	68.7	59.6	59.8	69.7	65.7	52.0	49.6	66.0	52.5	50.1	50.5	56.0
Cumulative 2045 (PM)		6	15	21,040	50	75	0	0	1.8%	0.7%	69.0	####	2,672	2,020	331	131	19	4	28	12	71.1	78.8	83.0	-1.2	68.8	59.7	59.9	69.8	65.9	52.1	49.7	66.1	52.7	50.2	50.7	56.1
Cumulative 2045 plus Project (AM)		6	15	20,400	50	75	0	0	1.8%	0.7%	68.9	####	2,591	1,958	321	127	19	4	28	12	71.1	78.8	83.0	-1.2	68.7	59.6	59.8	69.7	65.7	52.0	49.6	66.0	52.5	50.1	50.5	56.0
Cumulative 2045 plus Project (PM)		6	15	19,440	50	75	0	0	1.8%	0.7%	68.6	####	2,469	1,866	306	121	18	4	26	11	71.1	78.8	83.0	-1.2	68.5	59.4	59.6	69.5	65.5	51.8	49.4	65.8	52.3	49.9	50.3	55.7
Fred Waring Drive w/o																																			
Existing (AM)		6	15	19,248	50	75	0	0	1.8%	0.7%	68.6	####	2,444	1,848	303	120	17	4	26	11	71.1	78.8	83.0	-1.2	68.4	59.3	59.5	69.4	65.5	51.7	49.3	65.7	52.3	49.9	50.3	55.7
Existing (PM)		6	15	16,784	50	75	0	0	1.8%	0.7%	68.0	####	2,132	1,611	264	105	15	3	23	9	71.1	78.8	83.0	-1.2	67.8	58.7	58.9	68.8	64.9	51.1	48.8	65.2	51.7	49.3	49.7	55.1
Existing plus Project (AM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		6	15	0	50	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	71.1	78.8	83.0	-1.2	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		6	15	21,520	50	75	0	0	1.8%	0.7%	69.1	####	2,733	2,066	339	134	20	4	29	12	71.1	78.8	83.0	-1.2	68.9	59.8	60.0	69.9	65.9	52.2	49.8	66.2	52.8	50.3	50.8	56.2
Near-Term 2030 (PM)		6	15	18,720	50	75	0	0	1.8%	0.7%	68.5	####	2,377	1,797	295	117	17	4	25	11	71.1	78.8	83.0	-1.2	68.3	59.2	59.4	69.3	65.3	51.6	49.2	65.6	52.1	49.7	50.2	55.6
Near-Term 2030 plus Project (AM)		6	15	21,632	50	75	0	0	1.8%	0.7%	69.1	####	2,747	2,077	340	135	20	4	29	12	71.1	78.8	83.0	-1.2	69.0	59.8	60.0	69.9	66.0	52.2	49.9	66.3	52.8	50.4	50.8	56.2
Near-Term 2030 plus Project (PM)		6	15	18,856	50	75	0	0	1.8%	0.7%	68.5	####	2,395	1,810	297	118	17	4	26	11	71.1	78.8	83.0	-1.2	68.4	59.2	59.4	69.3	65.4	51.6	49.3	65.7	52.2	49.8	50.2	55.6
Cumulative 2045 (AM)		6	15	25,040	50	75	0	0	1.8%	0.7%	69.7	####	3,180	2,404	394	156	23	5	34	14	71.1	78.8	83.0	-1.2	69.6	60.5	60.7	70.6	66.6	52.9	50.5	66.9	53.4	51.0	51.4	56.8

Cumulative 2045 (PM)	6	15	21,680	50	75	0	0	1.8%	0.7%	69.1	####	2,753	2,081	341	135	20	4	29	12	71.1	78.8	83.0	-1.2	69.0	59.8	60.0	69.9	66.0	52.2	49.9	66.3	52.8	50.4	50.8	56.2
Cumulative 2045 plus Project (AM)	6	15	25,152	50	75	0	0	1.8%	0.7%	69.8	####	3,194	2,415	396	157	23	5	34	14	71.1	78.8	83.0	-1.2	69.6	60.5	60.7	70.6	66.6	52.9	50.5	66.9	53.4	51.0	51.4	56.9
Cumulative 2045 plus Project (PM)	6	15	21,816	50	75	0	0	1.8%	0.7%	69.1	####	2,771	2,094	343	136	20	4	30	12	71.1	78.8	83.0	-1.2	69.0	59.9	60.1	70.0	66.0	52.3	49.9	66.3	52.8	50.4	50.8	56.2

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 13

Monroe St/Avenue 41

Monroe St

Southbound

	right	through	left
Existing (AM)		301	132
Existing (PM)		253	97
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		340	150
Near-Term 2030 (PM)		280	110
Near-Term 2030 plus Project (AM)		410	150
Near-Term 2030 plus Project (PM)		328	110
Cumulative 2045 (AM)		400	180
Cumulative 2045 (PM)		330	130
Cumulative 2045 plus Project (AM)		470	180
Cumulative 2045 plus Project (PM)		378	130

Eastbound

Avenue 41

	left	through	right
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

Northbound

	left	through	right
Existing (AM)		291	50
Existing (PM)		157	118
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		320	60
Near-Term 2030 (PM)		180	140
Near-Term 2030 plus Project (AM)		355	60
Near-Term 2030 plus Project (PM)		256	140
Cumulative 2045 (AM)		350	70
Cumulative 2045 (PM)		210	160
Cumulative 2045 plus Project (AM)		385	70
Cumulative 2045 plus Project (PM)		286	160

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	274		111
Existing (PM)	83		48
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	310		130
Near-Term 2030 (PM)	190		60
Near-Term 2030 plus Project (AM	310		130
Near-Term 2030 plus Project (PM	190		60
Cumulative 2045 (AM)	360		160
Cumulative 2045 (PM)	370		70
Cumulative 2045 plus Project (AM	360		160
Cumulative 2045 plus Project (PM	370		70

ADT

Road	Monroe St		Avenue 41	
Leg	North of	South of	East of	West of
Cross Street	Avenue 41		Monroe St	
Existing (AM)	7,984.0	6,024.0	4,536.0	0.0
Existing (PM)	4,720.0	4,608.0	2,768.0	0.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	8,960.0	6,800.0	5,200.0	0.0
Near-Term 2030 (PM)	6,080.0	5,280.0	4,000.0	0.0
Near-Term 2030 plus Project	9,800.0	7,640.0	5,200.0	0.0
Near-Term 2030 plus Project	7,072.0	6,272.0	4,000.0	0.0
Cumulative 2045 (AM)	10,320.0	7,840.0	6,160.0	0.0
Cumulative 2045 (PM)	8,320.0	6,160.0	5,840.0	0.0
Cumulative 2045 plus Project	11,160.0	8,680.0	6,160.0	0.0
Cumulative 2045 plus Project	9,312.0	7,152.0	5,840.0	0.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	dB(A) CNEL	Traffic Volumes: Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels: A	MT	HT	Dist Adj	Ld: A	MT	HT	Le: Total	A	MT	HT	Ln: Total	A	MT	HT	Total
Monroe Street n/o Avenue 41																																				
Existing (AM)		4	15	7,984	45	75	0	0	1.8%	0.7%	63.3	6,204	1,014	766	126	50	7	2	11	5	69.3	77.6	82.1	-1.6	62.9	54.4	54.9	64.1	60.0	46.8	44.7	60.3	46.8	45.0	45.7	50.6
Existing (PM)		4	15	4,720	45	75	0	0	1.8%	0.7%	61.0	3,667	599	453	74	29	4	1	6	3	69.3	77.6	82.1	-1.6	60.7	52.1	52.6	61.8	57.7	44.5	42.5	58.0	44.5	42.7	43.4	48.4
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	8,960	45	75	0	0	1.8%	0.7%	63.8	6,962	1,138	860	141	56	8	2	12	5	69.3	77.6	82.1	-1.6	63.4	54.9	55.4	64.6	60.5	47.3	45.2	60.8	47.3	45.5	46.2	51.1
Near-Term 2030 (PM)		4	15	6,080	45	75	0	0	1.8%	0.7%	62.1	4,724	772	584	96	38	6	1	8	3	69.3	77.6	82.1	-1.6	61.8	53.2	53.7	62.9	58.8	45.6	43.6	59.1	45.6	43.8	44.5	49.5
Near-Term 2030 plus Project (AM)		4	15	9,800	45	75	0	0	1.8%	0.7%	64.2	7,615	1,245	941	154	61	9	2	13	6	69.3	77.6	82.1	-1.6	63.8	55.3	55.8	65.0	60.9	47.7	45.6	61.2	47.7	45.8	46.6	51.5
Near-Term 2030 plus Project (PM)		4	15	7,072	45	75	0	0	1.8%	0.7%	62.8	5,495	898	679	111	44	6	1	10	4	69.3	77.6	82.1	-1.6	62.4	53.9	54.4	63.6	59.4	46.3	44.2	59.8	46.2	44.4	45.2	50.1
Cumulative 2045 (AM)		4	15	10,320	45	75	0	0	1.8%	0.7%	64.4	8,019	1,311	991	162	64	9	2	14	6	69.3	77.6	82.1	-1.6	64.1	55.5	56.0	65.2	61.1	47.9	45.9	61.4	47.9	46.1	46.8	51.8
Cumulative 2045 (PM)		4	15	8,320	45	75	0	0	1.8%	0.7%	63.5	6,465	1,057	799	131	52	8	2	11	5	69.3	77.6	82.1	-1.6	63.1	54.6	55.1	64.3	60.1	47.0	44.9	60.5	47.0	45.1	45.9	50.8
Cumulative 2045 plus Project (AM)		4	15	11,160	45	75	0	0	1.8%	0.7%	64.8	8,671	1,417	1,071	176	70	10	2	15	6	69.3	77.6	82.1	-1.6	64.4	55.9	56.4	65.5	61.4	48.3	46.2	61.8	48.2	46.4	47.1	52.1
Cumulative 2045 plus Project (PM)		4	15	9,312	45	75	0	0	1.8%	0.7%	64.0	7,235	1,183	894	147	58	8	2	13	5	69.3	77.6	82.1	-1.6	63.6	55.1	55.6	64.7	60.6	47.5	45.4	61.0	47.4	45.6	46.3	51.3
Monroe Street s/o Avenue 41																																				
Existing (AM)		4	15	6,024	45	75	0	0	1.8%	0.7%	62.1	4,681	765	578	95	38	5	1	8	3	69.3	77.6	82.1	-1.6	61.7	53.2	53.7	62.9	58.7	45.6	43.5	59.1	45.5	43.7	44.5	49.4
Existing (PM)		4	15	4,608	45	75	0	0	1.8%	0.7%	60.9	3,580	585	442	73	29	4	1	6	3	69.3	77.6	82.1	-1.6	60.6	52.0	52.5	61.7	57.6	44.4	42.4	57.9	44.4	42.6	43.3	48.3
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	6,800	45	75	0	0	1.8%	0.7%	62.6	5,284	864	653	107	42	6	1	9	4	69.3	77.6	82.1	-1.6	62.2	53.7	54.2	63.4	59.3	46.1	44.1	59.6	46.1	44.3	45.0	49.9
Near-Term 2030 (PM)		4	15	5,280	45	75	0	0	1.8%	0.7%	61.5	4,103	671	507	83	33	5	1	7	3	69.3	77.6	82.1	-1.6	61.2	52.6	53.1	62.3	58.2	45.0	43.0	58.5	45.0	43.2	43.9	48.8
Near-Term 2030 plus Project (AM)		4	15	7,640	45	75	0	0	1.8%	0.7%	63.1	5,936	970	733	120	48	7	2	10	4	69.3	77.6	82.1	-1.6	62.8	54.2	54.7	63.9	59.8	46.6	44.6	60.1	46.6	44.8	45.5	50.4
Near-Term 2030 plus Project (PM)		4	15	6,272	45	75	0	0	1.8%	0.7%	62.2	4,873	797	602	99	39	6	1	8	4	69.3	77.6	82.1	-1.6	61.9	53.4	53.9	63.0	58.9	45.8	43.7	59.2	45.7	43.9	44.6	49.6
Cumulative 2045 (AM)		4	15	7,840	45	75	0	0	1.8%	0.7%	63.2	6,092	996	753	123	49	7	2	11	4	69.3	77.6	82.1	-1.6	62.9	54.3	54.8	64.0	59.9	46.8	44.7	60.2	46.7	44.9	45.6	50.6
Cumulative 2045 (PM)		4	15	6,160	45	75	0	0	1.8%	0.7%	62.2	4,786	782	591	97	38	6	1	8	3	69.3	77.6	82.1	-1.6	61.8	53.3	53.8	63.0	58.8	45.7	43.6	59.2	45.6	43.8	44.6	49.5
Cumulative 2045 plus Project (AM)		4	15	8,680	45	75	0	0	1.8%	0.7%	63.7	6,744	1,102	833	137	54	8	2	12	5	69.3	77.6	82.1	-1.6	63.3	54.8	55.3	64.4	60.3	47.2	45.1	60.7	47.1	45.3	46.0	51.0
Cumulative 2045 plus Project (PM)		4	15	7,152	45	75	0	0	1.8%	0.7%	62.8	5,557	908	687	113	45	7	1	10	4	69.3	77.6	82.1	-1.6	62.5	53.9	54.4	63.6	59.5	46.4	44.3	59.8	46.3	44.5	45.2	50.2
Avenue 41 e/o Monroe Street																																				
Existing (AM)		4	15	4,536	45	75	0	0	1.8%	0.7%	60.8	3,524	576	435	71	28	4	1	6	3	69.3	77.6	82.1	-1.6	60.5	52.0	52.5	61.6	57.5	44.4	42.3	57.8	44.3	42.5	43.2	48.2
Existing (PM)		4	15	2,768	45	75	0	0	1.8%	0.7%	58.7	2,151	352	266	44	17	3	1	4	2	69.3	77.6	82.1	-1.6	58.3	49.8	50.3	59.5	55.4	42.2	40.1	55.7	42.2	40.4	41.1	46.0
Existing plus Project (AM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	5,200	45	75	0	0	1.8%	0.7%	61.4	4,040	660	499	82	32	5	1	7	3	69.3	77.6	82.1	-1.6	61.1	52.6	53.1	62.2	58.1	45.0	42.9	58.4	44.9	43.1	43.8	48.8
Near-Term 2030 (PM)		4	15	4,000	45	75	0	0	1.8%	0.7%	60.3	3,108	508	384	63	25	4	1	5	2	69.3	77.6	82.1	-1.6	59.9	51.4	51.9	61.1	57.0	43.8	41.7	57.3	43.8	42.0	42.7	47.6
Near-Term 2030 plus Project (AM)		4	15	5,200	45	75	0	0	1.8%	0.7%	61.4	4,040	660	499	82	32	5	1	7	3	69.3	77.6	82.1	-1.6	61.1	52.6	53.1	62.2	58.1	45.0	42.9	58.4	44.9	43.1	43.8	48.8
Near-Term 2030 plus Project (PM)		4	15	4,000	45	75	0	0	1.8%	0.7%	60.3	3,108	508	384	63	25	4	1	5	2	69.3	77.6	82.1	-1.6	59.9	51.4	51.9	61.1	57.0	43.8	41.7	57.3	43.8	42.0	42.7	47.6
Cumulative 2045 (AM)		4	15	6,160	45	75	0	0	1.8%	0.7%	62.2	4,786	782	591	97	38	6	1	8	3	69.3	77.6	82.1	-1.6	61.8	53.3	53.8	63.0	58.8	45.7	43.6	59.2	45.6	43.8	44.6	49.5
Cumulative 2045 (PM)		4	15	5,840	45	75	0	0	1.8%	0.7%	61.9	4,538	742	561	92	36	5	1	8	3	69.3	77.6	82.1	-1.6	61.6	53.1	53.6	62.7	58.6	45.5	43.4	58.9	45.4	43.6	44.3	49.3
Cumulative 2045 plus Project (AM)		4	15	6,160	45	75	0	0	1.8%	0.7%	62.2	4,786	782	591	97	38	6	1	8	3	69.3	77.6	82.1	-1.6	61.8	53.3	53.8	63.0	58.8	45.7	43.6	59.2	45.6	43.8	44.6	49.5
Cumulative 2045 plus Project (PM)		4	15	5,840	45	75	0	0	1.8%	0.7%	61.9	4,538	742	561	92	36	5	1	8	3	69.3	77.6	82.1	-1.6	61.6	53.1	53.6	62.7	58.6	45.5	43.4	58.9	45.4	43.6	44.3	49.3
Avenue 41 w/o Monroe Street																																				
Existing (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####

Cumulative 2045 (PM)	2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (AM)	2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 plus Project (PM)	2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 14

Monroe St/Avenue 42

Monroe St

Southbound

	right	through	left
Existing (AM)	49	358	114
Existing (PM)	23	212	158
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	90	370	120
Near-Term 2030 (PM)	50	280	180
Near-Term 2030 plus Project (AM)	90	410	150
Near-Term 2030 plus Project (PM)	50	307	201
Cumulative 2045 (AM)	150	570	130
Cumulative 2045 (PM)	80	400	210
Cumulative 2045 plus Project (AM)	150	610	160
Cumulative 2045 plus Project (PM)	80	427	231

Avenue 42

Eastbound

	left	through	right
Existing (AM)	14	140	35
Existing (PM)	53	223	49
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	20	180	60
Near-Term 2030 (PM)	100	270	110
Near-Term 2030 plus Project (AM)	20	180	60
Near-Term 2030 plus Project (PM)	100	270	110
Cumulative 2045 (AM)	30	230	100
Cumulative 2045 (PM)	160	330	210
Cumulative 2045 plus Project (AM)	30	230	100
Cumulative 2045 plus Project (PM)	160	330	210

Northbound

	left	through	right
Existing (AM)	93	236	158
Existing (PM)	50	261	226
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	180	270	180
Near-Term 2030 (PM)	70	350	250
Near-Term 2030 plus Project (AM)	180	289	180
Near-Term 2030 plus Project (PM)	70	393	250
Cumulative 2045 (AM)	300	460	200
Cumulative 2045 (PM)	160	540	280
Cumulative 2045 plus Project (AM)	300	479	200
Cumulative 2045 plus Project (PM)	160	583	280

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)		172	315
Existing (PM)		104	151
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		250	340
Near-Term 2030 (PM)		140	170
Near-Term 2030 plus Project (AM)		250	340
Near-Term 2030 plus Project (PM)		140	170
Cumulative 2045 (AM)	80	390	370
Cumulative 2045 (PM)	80	190	180
Cumulative 2045 plus Project (AM	96	390	370
Cumulative 2045 plus Project (PM	113	190	180

ADT

Road	Monroe St		Avenue 42	
Leg	North of	South of	East of	West of
Cross Street	Avenue 42		Monroe St	
Existing (AM)	6,168.0	9,560.0	7,192.0	4,024.0
Existing (PM)	5,656.0	7,592.0	6,896.0	4,016.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	6,960.0	11,200.0	8,560.0	6,240.0
Near-Term 2030 (PM)	7,680.0	9,840.0	8,080.0	5,920.0
Near-Term 2030 plus Project	7,672.0	11,672.0	8,800.0	6,240.0
Near-Term 2030 plus Project	8,408.0	10,400.0	8,248.0	5,920.0
Cumulative 2045 (AM)	11,360.0	16,000.0	11,200.0	9,600.0
Cumulative 2045 (PM)	11,760.0	14,160.0	10,160.0	9,040.0
Cumulative 2045 plus Project	12,200.0	16,472.0	11,568.0	9,600.0
Cumulative 2045 plus Project	12,752.0	14,720.0	10,592.0	9,040.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels A	MT	HT	Dist Adj	Ld A	MT	HT	Le Total	A	MT	HT	Ln Total	A	MT	HT	Total
Monroe Street n/o Avenue 42																																			
Existing (AM)		4	0	6,168	45	75	0	0	1.8%	0.7%	62.0	4,793	783	592	97	38	6	1	8	3	69.3	77.6	82.1	-1.7	61.7	53.2	53.7	62.8	58.7	45.6	43.5	59.0	45.5	43.7	44.4	49.4
Existing (PM)		4	0	5,656	45	75	0	0	1.8%	0.7%	61.7	4,395	718	543	89	35	5	1	8	3	69.3	77.6	82.1	-1.7	61.3	52.8	53.3	62.4	58.3	45.2	43.1	58.7	45.1	43.3	44.0	49.0
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	6,960	45	75	0	0	1.8%	0.7%	62.6	5,408	884	668	110	43	6	1	9	4	69.3	77.6	82.1	-1.7	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.6	46.0	44.2	44.9	49.9
Near-Term 2030 (PM)		4	0	7,680	45	75	0	0	1.8%	0.7%	63.0	5,967	975	737	121	48	7	2	10	4	69.3	77.6	82.1	-1.7	62.6	54.1	54.6	63.8	59.7	46.5	44.4	60.0	46.5	44.7	45.4	50.3
Near-Term 2030 plus Project (AM)		4	0	7,672	45	75	0	0	1.8%	0.7%	63.0	5,961	974	737	121	48	7	2	10	4	69.3	77.6	82.1	-1.7	62.6	54.1	54.6	63.8	59.7	46.5	44.4	60.0	46.5	44.6	45.4	50.3
Near-Term 2030 plus Project (PM)		4	0	8,408	45	75	0	0	1.8%	0.7%	63.4	6,533	1,068	807	132	52	8	2	11	5	69.3	77.6	82.1	-1.7	63.0	54.5	55.0	64.2	60.1	46.9	44.8	60.4	46.9	45.0	45.8	50.7
Cumulative 2045 (AM)		4	0	11,360	45	75	0	0	1.8%	0.7%	64.7	8,827	1,443	1,091	179	71	10	2	15	6	69.3	77.6	82.1	-1.7	64.3	55.8	56.3	65.5	61.4	48.2	46.1	61.7	48.2	46.4	47.1	52.0
Cumulative 2045 (PM)		4	0	11,760	45	75	0	0	1.8%	0.7%	64.8	9,138	1,494	1,129	185	73	11	2	16	7	69.3	77.6	82.1	-1.7	64.5	56.0	56.5	65.6	61.5	48.4	46.3	61.8	48.3	46.5	47.2	52.2
Cumulative 2045 plus Project (AM)		4	0	12,200	45	75	0	0	1.8%	0.7%	65.0	9,479	1,549	1,171	192	76	11	2	17	7	69.3	77.6	82.1	-1.7	64.7	56.1	56.6	65.8	61.7	48.5	46.5	62.0	48.5	46.7	47.4	52.3
Cumulative 2045 plus Project (PM)		4	0	12,752	45	75	0	0	1.8%	0.7%	65.2	9,908	1,620	1,224	201	80	12	3	17	7	69.3	77.6	82.1	-1.7	64.8	56.3	56.8	66.0	61.9	48.7	46.6	62.2	48.7	46.9	47.6	52.5
Monroe Street s/o Avenue 42																																			
Existing (AM)		4	0	9,560	45	75	0	0	1.8%	0.7%	63.9	7,428	1,214	918	150	60	9	2	13	5	69.3	77.6	82.1	-1.7	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3
Existing (PM)		4	0	7,592	45	75	0	0	1.8%	0.7%	62.9	5,899	964	729	119	47	7	2	10	4	69.3	77.6	82.1	-1.7	62.6	54.1	54.6	63.7	59.6	46.5	44.4	59.9	46.4	44.6	45.3	50.3
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	11,200	45	75	0	0	1.8%	0.7%	64.6	8,702	1,422	1,075	176	70	10	2	15	6	69.3	77.6	82.1	-1.7	64.3	55.7	56.2	65.4	61.3	48.2	46.1	61.6	48.1	46.3	47.0	52.0
Near-Term 2030 (PM)		4	0	9,840	45	75	0	0	1.8%	0.7%	64.1	7,646	1,250	945	155	61	9	2	13	6	69.3	77.6	82.1	-1.7	63.7	55.2	55.7	64.8	60.7	47.6	45.5	61.1	47.5	45.7	46.4	51.4
Near-Term 2030 plus Project (AM)		4	0	11,672	45	75	0	0	1.8%	0.7%	64.8	9,069	1,482	1,121	184	73	11	2	16	7	69.3	77.6	82.1	-1.7	64.5	55.9	56.4	65.6	61.5	48.3	46.3	61.8	48.3	46.5	47.2	52.2
Near-Term 2030 plus Project (PM)		4	0	10,400	45	75	0	0	1.8%	0.7%	64.3	8,081	1,321	998	164	65	9	2	14	6	69.3	77.6	82.1	-1.7	64.0	55.4	55.9	65.1	61.0	47.8	45.8	61.3	47.8	46.0	46.7	51.6
Cumulative 2045 (AM)		4	0	16,000	45	75	0	0	1.8%	0.7%	66.2	####	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-1.7	65.8	57.3	57.8	67.0	62.8	49.7	47.6	63.2	49.7	47.8	48.6	53.5
Cumulative 2045 (PM)		4	0	14,160	45	75	0	0	1.8%	0.7%	65.6	####	1,798	1,359	223	88	13	3	19	8	69.3	77.6	82.1	-1.7	65.3	56.8	57.3	66.4	62.3	49.2	47.1	62.6	49.1	47.3	48.0	53.0
Cumulative 2045 plus Project (AM)		4	0	16,472	45	75	0	0	1.8%	0.7%	66.3	####	2,092	1,581	259	103	15	3	22	9	69.3	77.6	82.1	-1.7	66.0	57.4	57.9	67.1	63.0	49.8	47.8	63.3	49.8	48.0	48.7	53.6
Cumulative 2045 plus Project (PM)		4	0	14,720	45	75	0	0	1.8%	0.7%	65.8	####	1,869	1,413	232	92	13	3	20	8	69.3	77.6	82.1	-1.7	65.5	56.9	57.4	66.6	62.5	49.3	47.3	62.8	49.3	47.5	48.2	53.2
Avenue 42 e/o Monroe Street																																			
Existing (AM)		4	20	7,192	45	75	0	0	1.8%	0.7%	62.9	5,588	913	690	113	45	7	1	10	4	69.3	77.6	82.1	-1.5	62.6	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.2
Existing (PM)		4	20	6,896	45	75	0	0	1.8%	0.7%	62.7	5,358	876	662	109	43	6	1	9	4	69.3	77.6	82.1	-1.5	62.4	53.8	54.3	63.5	59.4	46.3	44.2	59.7	46.2	44.4	45.1	50.1
Existing plus Project (AM)		4	20	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	20	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	20	8,560	45	75	0	0	1.8%	0.7%	63.7	6,651	1,087	822	135	53	8	2	12	5	69.3	77.6	82.1	-1.5	63.3	54.8	55.3	64.4	60.3	47.2	45.1	60.7	47.1	45.3	46.0	51.0
Near-Term 2030 (PM)		4	20	8,080	45	75	0	0	1.8%	0.7%	63.4	6,278	1,026	776	127	50	7	2	11	5	69.3	77.6	82.1	-1.5	63.1	54.5	55.0	64.2	60.1	46.9	44.9	60.4	46.9	45.1	45.8	50.8
Near-Term 2030 plus Project (AM)		4	20	8,800	45	75	0	0	1.8%	0.7%	63.8	6,838	1,118	845	138	55	8	2	12	5	69.3	77.6	82.1	-1.5	63.4	54.9	55.4	64.6	60.4	47.3	45.2	60.8	47.3	45.4	46.2	51.1
Near-Term 2030 plus Project (PM)		4	20	8,248	45	75	0	0	1.8%	0.7%	63.5	6,409	1,047	792	130	51	7	2	11	5	69.3	77.6	82.1	-1.5	63.1	54.6	55.1	64.3	60.2	47.0	44.9	60.5	47.0	45.2	45.9	50.8
Cumulative 2045 (AM)		4	20	11,200	45	75	0	0	1.8%	0.7%	64.8	8,702	1,422	1,075	176	70	10	2	15	6	69.3	77.6	82.1	-1.5	64.5	55.9	56.4	65.6	61.5	48.4	46.3	61.8	48.3	46.5	47.2	52.2
Cumulative 2045 (PM)		4	20	10,160	45	75	0	0	1.8%	0.7%	64.4	7,894	1,290	975	160	63	9	2	14	6	69.3	77.6	82.1	-1.5	64.1	55.5	56.0	65.2	61.1	47.9	45.9	61.4	47.9	46.1	46.8	51.7
Cumulative 2045 plus Project (AM)		4	20	11,568	45	75	0	0	1.8%	0.7%	65.0	8,988	1,469	1,111	182	72	11	2	16	7	69.3	77.6	82.1	-1.5	64.6	56.1	56.6	65.7	61.6	48.5	46.4	62.0	48.4	46.6	47.3	52.3
Cumulative 2045 plus Project (PM)		4	20	10,592	45	75	0	0	1.8%	0.7%	64.6	8,230	1,345	1,017	167	66	10	2	14	6	69.3	77.6	82.1	-1.5	64.2	55.7	56.2	65.4	61.3	48.1	46.0	61.6	48.1	46.2	47.0	51.9
Avenue 42 w/o Monroe Street																																			
Existing (AM)		4	20	4,024	45	75	0	0	1.8%	0.7%	60.4	3,127	511	386	63	25	4	1	5	2	69.3	77.6	82.1	-1.5	60.0	51.5	52.0	61.2	57.1	43.9	41.8	57.4	43.9	42.0	42.8	47.7
Existing (PM)		4	20	4,016	45	75	0	0	1.8%	0.7%	60.4	3,120	510	386	63	25	4	1	5	2	69.3	77.6	82.1	-1.5	60.0	51.5	52.0	61.2	57.0	43.9	41.8	57.4	43.8	42.0	42.8	47.7
Existing plus Project (AM)		4	20	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	20	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.5	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	20	6,240	45	75	0	0	1.8%	0.7%	62.3	4,848	792	599	98	39	6	1	8	4	69.3	77.6	82.1	-1.5	61.9	53.4	53.9	63.1	59.0	45.8	43.7	59.3	45.8	43.9	44.7	49.6
Near-Term 2030 (PM)		4	20	5,920	45	75	0	0	1.8%	0.7%	62.1	4,600	752	568	93	37	5	1	8	3	69.3	77.6	82.1	-1.5	61.7	53.2	53.7	62.8	58.7	45.6	43.5	59.1	45.5	43.7	44.4	49.4
Near-Term 2030 plus Project (AM)		4	20	6,240	45	75	0	0	1.8%	0.7%	62.3	4,848	792	599	98	39	6	1	8	4	69.3	77.6	82.1	-1.5	61.9	53.4	53.9	63.1	59.0	45.8	43.7	59.3	45.8	43.9	44.7	49.6
Near-Term 2030 plus Project (PM)		4	20	5,920	45	75	0	0	1.8%	0.7%	62.1	4,600	752	568	93	37	5	1	8	3	69.3	77.6	82.1	-1.5	61.7	53.2	53.7	62.8	58.7	45.6	43.5	59.1	45.5	43.7	44.4	49.4
Cumulative 2045 (AM)		4	20	9,600	45	75	0	0	1.8%	0.7%	64.2	7,459	1,219	922	151	60	9	2	13	5	69.3	77.6	82.1	-1.5	63.8	55.3	55.8	64.9	60.8	47.7	45.6	61.2	47.6	45.8	46.5	51.5

Cumulative 2045 (PM)	4	20	9,040	45	75	0	0	1.8%	0.7%	63.9	7,024	1,148	868	142	56	8	2	12	5	69.3	77.6	82.1	-1.5	63.5	55.0	55.5	64.7	60.6	47.4	45.3	60.9	47.4	45.6	46.3	51.2
Cumulative 2045 plus Project (AM)	4	20	9,600	45	75	0	0	1.8%	0.7%	64.2	7,459	1,219	922	151	60	9	2	13	5	69.3	77.6	82.1	-1.5	63.8	55.3	55.8	64.9	60.8	47.7	45.6	61.2	47.6	45.8	46.5	51.5
Cumulative 2045 plus Project (PM)	4	20	9,040	45	75	0	0	1.8%	0.7%	63.9	7,024	1,148	868	142	56	8	2	12	5	69.3	77.6	82.1	-1.5	63.5	55.0	55.5	64.7	60.6	47.4	45.3	60.9	47.4	45.6	46.3	51.2

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 15

Monroe St/Buena Vista Ave

Monroe St

Southbound

	right	through	left
Existing (AM)		702	6
Existing (PM)		389	4
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		760	10
Near-Term 2030 (PM)		550	10
Near-Term 2030 plus Project (AM)		800	10
Near-Term 2030 plus Project (PM)		577	10
Cumulative 2045 (AM)	40	990	10
Cumulative 2045 (PM)	50	730	10
Cumulative 2045 plus Project (AM)	40	1,030	10
Cumulative 2045 plus Project (PM)	50	757	10

Buena Vista Ave

Eastbound

	left	through	right
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)	70	0	10
Cumulative 2045 (PM)	70	0	10
Cumulative 2045 plus Project (AM)	70	0	10
Cumulative 2045 plus Project (PM)	70	0	10

Northbound

	left	through	right
Existing (AM)		484	165
Existing (PM)		591	273
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		600	190
Near-Term 2030 (PM)		640	310
Near-Term 2030 plus Project (AM)		619	190
Near-Term 2030 plus Project (PM)		683	310
Cumulative 2045 (AM)	40	850	220
Cumulative 2045 (PM)	30	870	360
Cumulative 2045 plus Project (AM)	40	869	220
Cumulative 2045 plus Project (PM)	30	913	360

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)		22	219
Existing (PM)		24	301
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	30		290
Near-Term 2030 (PM)	30		390
Near-Term 2030 plus Project (AM	30		290
Near-Term 2030 plus Project (PM	30		390
Cumulative 2045 (AM)	40	0	410
Cumulative 2045 (PM)	40	0	440
Cumulative 2045 plus Project (AM	40	0	410
Cumulative 2045 plus Project (PM	40	0	440

ADT

Road	Monroe St		Buena Vista Ave	
Leg	North of	South of	East of	West of
Cross Street	Buena Vista Ave		Monroe St	
Existing (AM)	9,536.0	12,560.0	3,296.0	176.0
Existing (PM)	7,872.0	12,432.0	4,816.0	192.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	11,200.0	14,720.0	4,160.0	0.0
Near-Term 2030 (PM)	9,840.0	15,120.0	5,920.0	0.0
Near-Term 2030 plus Project	11,672.0	15,192.0	4,160.0	0.0
Near-Term 2030 plus Project	10,400.0	15,680.0	5,920.0	0.0
Cumulative 2045 (AM)	16,000.0	20,160.0	5,440.0	1,280.0
Cumulative 2045 (PM)	14,160.0	19,520.0	6,800.0	1,280.0
Cumulative 2045 plus Project	16,472.0	20,632.0	5,440.0	1,280.0
Cumulative 2045 plus Project	14,720.0	20,080.0	6,800.0	1,280.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels A	MT	HT	Dist Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Monroe Street n/o Buena																																			
Existing (AM)		4	0	9,536	45	75	0	0	1.8%	0.7%	63.9	7,409	1,211	915	150	59	9	2	13	5	69.3	77.6	82.1	-1.7	63.6	55.0	55.5	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3
Existing (PM)		4	0	7,872	45	75	0	0	1.8%	0.7%	63.1	6,117	1,000	756	124	49	7	2	11	4	69.3	77.6	82.1	-1.7	62.7	54.2	54.7	63.9	59.8	46.6	44.5	60.1	46.6	44.8	45.5	50.4
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	11,200	45	75	0	0	1.8%	0.7%	64.6	8,702	1,422	1,075	176	70	10	2	15	6	69.3	77.6	82.1	-1.7	64.3	55.7	56.2	65.4	61.3	48.2	46.1	61.6	48.1	46.3	47.0	52.0
Near-Term 2030 (PM)		4	0	9,840	45	75	0	0	1.8%	0.7%	64.1	7,646	1,250	945	155	61	9	2	13	6	69.3	77.6	82.1	-1.7	63.7	55.2	55.7	64.8	60.7	47.6	45.5	61.1	47.5	45.7	46.4	51.4
Near-Term 2030 plus Project (AM)		4	0	11,672	45	75	0	0	1.8%	0.7%	64.8	9,069	1,482	1,121	184	73	11	2	16	7	69.3	77.6	82.1	-1.7	64.5	55.9	56.4	65.6	61.5	48.3	46.3	61.8	48.3	46.5	47.2	52.2
Near-Term 2030 plus Project (PM)		4	0	10,400	45	75	0	0	1.8%	0.7%	64.3	8,081	1,321	998	164	65	9	2	14	6	69.3	77.6	82.1	-1.7	64.0	55.4	55.9	65.1	61.0	47.8	45.8	61.3	47.8	46.0	46.7	51.6
Cumulative 2045 (AM)		4	0	16,000	45	75	0	0	1.8%	0.7%	66.2	####	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-1.7	65.8	57.3	57.8	67.0	62.8	49.7	47.6	63.2	49.7	47.8	48.6	53.5
Cumulative 2045 (PM)		4	0	14,160	45	75	0	0	1.8%	0.7%	65.6	####	1,798	1,359	223	88	13	3	19	8	69.3	77.6	82.1	-1.7	65.3	56.8	57.3	66.4	62.3	49.2	47.1	62.6	49.1	47.3	48.0	53.0
Cumulative 2045 plus Project (AM)		4	0	16,472	45	75	0	0	1.8%	0.7%	66.3	####	2,092	1,581	259	103	15	3	22	9	69.3	77.6	82.1	-1.7	66.0	57.4	57.9	67.1	63.0	49.8	47.8	63.3	49.8	48.0	48.7	53.6
Cumulative 2045 plus Project (PM)		4	0	14,720	45	75	0	0	1.8%	0.7%	65.8	####	1,869	1,413	232	92	13	3	20	8	69.3	77.6	82.1	-1.7	65.5	56.9	57.4	66.6	62.5	49.3	47.3	62.8	49.3	47.5	48.2	53.2
Monroe Street s/o Buena																																			
Existing (AM)		4	0	12,560	45	75	0	0	1.8%	0.7%	65.1	9,759	1,595	1,206	198	78	11	2	17	7	69.3	77.6	82.1	-1.7	64.8	56.2	56.7	65.9	61.8	48.7	46.6	62.1	48.6	46.8	47.5	52.5
Existing (PM)		4	0	12,432	45	75	0	0	1.8%	0.7%	65.1	9,660	1,579	1,193	196	78	11	2	17	7	69.3	77.6	82.1	-1.7	64.7	56.2	56.7	65.9	61.8	48.6	46.5	62.1	48.6	46.7	47.5	52.4
Existing plus Project (AM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	45	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	69.3	77.6	82.1	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	14,720	45	75	0	0	1.8%	0.7%	65.8	####	1,869	1,413	232	92	13	3	20	8	69.3	77.6	82.1	-1.7	65.5	56.9	57.4	66.6	62.5	49.3	47.3	62.8	49.3	47.5	48.2	53.2
Near-Term 2030 (PM)		4	0	15,120	45	75	0	0	1.8%	0.7%	65.9	####	1,920	1,452	238	94	14	3	20	9	69.3	77.6	82.1	-1.7	65.6	57.0	57.5	66.7	62.6	49.5	47.4	62.9	49.4	47.6	48.3	53.3
Near-Term 2030 plus Project (AM)		4	0	15,192	45	75	0	0	1.8%	0.7%	66.0	####	1,929	1,458	239	95	14	3	21	9	69.3	77.6	82.1	-1.7	65.6	57.1	57.6	66.7	62.6	49.5	47.4	63.0	49.4	47.6	48.3	53.3
Near-Term 2030 plus Project (PM)		4	0	15,680	45	75	0	0	1.8%	0.7%	66.1	####	1,991	1,505	247	98	14	3	21	9	69.3	77.6	82.1	-1.7	65.7	57.2	57.7	66.9	62.8	49.6	47.5	63.1	49.6	47.8	48.5	53.4
Cumulative 2045 (AM)		4	0	20,160	45	75	0	0	1.8%	0.7%	67.2	####	2,560	1,935	317	126	18	4	27	11	69.3	77.6	82.1	-1.7	66.8	58.3	58.8	68.0	63.9	50.7	48.6	64.2	50.7	48.8	49.6	54.5
Cumulative 2045 (PM)		4	0	19,520	45	75	0	0	1.8%	0.7%	67.0	####	2,479	1,874	307	122	18	4	26	11	69.3	77.6	82.1	-1.7	66.7	58.2	58.7	67.8	63.7	50.6	48.5	64.0	50.5	48.7	49.4	54.4
Cumulative 2045 plus Project (AM)		4	0	20,632	45	75	0	0	1.8%	0.7%	67.3	####	2,620	1,981	325	129	19	4	28	12	69.3	77.6	82.1	-1.7	66.9	58.4	58.9	68.1	64.0	50.8	48.7	64.3	50.8	48.9	49.7	54.6
Cumulative 2045 plus Project (PM)		4	0	20,080	45	75	0	0	1.8%	0.7%	67.2	####	2,550	1,928	316	125	18	4	27	11	69.3	77.6	82.1	-1.7	66.8	58.3	58.8	67.9	63.8	50.7	48.6	64.2	50.6	48.8	49.5	54.5
Buena Vista Ave e/o Monroe																																			
Existing (AM)		4	15	3,296	40	75	0	0	1.8%	0.7%	58.2	2,561	419	316	52	21	3	1	4	2	67.4	76.3	81.2	-1.6	57.6	49.8	50.6	59.0	54.7	42.2	40.4	55.0	41.5	40.3	41.4	45.8
Existing (PM)		4	15	4,816	40	75	0	0	1.8%	0.7%	59.9	3,742	612	462	76	30	4	1	7	3	67.4	76.3	81.2	-1.6	59.3	51.4	52.2	60.6	56.3	43.8	42.1	56.7	43.1	42.0	43.0	47.5
Existing plus Project (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	4,160	40	75	0	0	1.8%	0.7%	59.2	3,232	528	399	65	26	4	1	6	2	67.4	76.3	81.2	-1.6	58.6	50.8	51.6	60.0	55.7	43.2	41.4	56.1	42.5	41.3	42.4	46.9
Near-Term 2030 (PM)		4	15	5,920	40	75	0	0	1.8%	0.7%	60.8	4,600	752	568	93	37	5	1	8	3	67.4	76.3	81.2	-1.6	60.2	52.3	53.1	61.5	57.2	44.7	43.0	57.6	44.0	42.9	43.9	48.4
Near-Term 2030 plus Project (AM)		4	15	4,160	40	75	0	0	1.8%	0.7%	59.2	3,232	528	399	65	26	4	1	6	2	67.4	76.3	81.2	-1.6	58.6	50.8	51.6	60.0	55.7	43.2	41.4	56.1	42.5	41.3	42.4	46.9
Near-Term 2030 plus Project (PM)		4	15	5,920	40	75	0	0	1.8%	0.7%	60.8	4,600	752	568	93	37	5	1	8	3	67.4	76.3	81.2	-1.6	60.2	52.3	53.1	61.5	57.2	44.7	43.0	57.6	44.0	42.9	43.9	48.4
Cumulative 2045 (AM)		4	15	5,440	40	75	0	0	1.8%	0.7%	60.4	4,227	691	522	86	34	5	1	7	3	67.4	76.3	81.2	-1.6	59.8	51.9	52.8	61.1	56.8	44.4	42.6	57.2	43.6	42.5	43.5	48.0
Cumulative 2045 (PM)		4	15	6,800	40	75	0	0	1.8%	0.7%	61.4	5,284	864	653	107	42	6	1	9	4	67.4	76.3	81.2	-1.6	60.8	52.9	53.7	62.1	57.8	45.3	43.6	58.2	44.6	43.5	44.5	49.0
Cumulative 2045 plus Project (AM)		4	15	5,440	40	75	0	0	1.8%	0.7%	60.4	4,227	691	522	86	34	5	1	7	3	67.4	76.3	81.2	-1.6	59.8	51.9	52.8	61.1	56.8	44.4	42.6	57.2	43.6	42.5	43.5	48.0
Cumulative 2045 plus Project (PM)		4	15	6,800	40	75	0	0	1.8%	0.7%	61.4	5,284	864	653	107	42	6	1	9	4	67.4	76.3	81.2	-1.6	60.8	52.9	53.7	62.1	57.8	45.3	43.6	58.2	44.6	43.5	44.5	49.0
Buena Vista Ave w/o Monroe																																			
Existing (AM)		4	15	176	40	75	0	0	1.8%	0.7%	45.5	137	22	17	3	1	0	0	0	0	67.4	76.3	81.2	-1.6	44.9	37.0	37.9	46.2	41.9	29.5	27.7	42.3	28.7	27.6	28.6	33.1
Existing (PM)		4	15	192	40	75	0	0	1.8%	0.7%	45.9	149	24	18	3	1	0	0	0	0	67.4	76.3	81.2	-1.6	45.3	37.4	38.3	46.6	42.3	29.8	28.1	42.7	29.1	28.0	29.0	33.5
Existing plus Project (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (AM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 plus Project (PM)		4	15	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.6	####	####	####	####	####	####	####	####	####	####	####	####
Cumulative 2045 (AM)		4	15	1,280	40	75	0	0	1.8%	0.7%	54.1	995	163	123	20	8	1	0	2	1	67.4	76.3	81.2	-1.6	53.5	45.7	46.5	54.9	50.5	38.1	36.3	50.9	37.3	36.2	37.3	41.7

Cumulative 2045 (PM)	4	15	1,280	40	75	0	0	1.8%	0.7%	54.1	995	163	123	20	8	1	0	2	1	67.4	76.3	81.2	-1.6	53.5	45.7	46.5	54.9	50.5	38.1	36.3	50.9	37.3	36.2	37.3	41.7
Cumulative 2045 plus Project (AM)	4	15	1,280	40	75	0	0	1.8%	0.7%	54.1	995	163	123	20	8	1	0	2	1	67.4	76.3	81.2	-1.6	53.5	45.7	46.5	54.9	50.5	38.1	36.3	50.9	37.3	36.2	37.3	41.7
Cumulative 2045 plus Project (PM)	4	15	1,280	40	75	0	0	1.8%	0.7%	54.1	995	163	123	20	8	1	0	2	1	67.4	76.3	81.2	-1.6	53.5	45.7	46.5	54.9	50.5	38.1	36.3	50.9	37.3	36.2	37.3	41.7

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 16

Monroe St/I-10 WB Ramps

Monroe St

Southbound

	right	through	left
Existing (AM)	381	540	
Existing (PM)	172	518	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	410	640	
Near-Term 2030 (PM)	190	750	
Near-Term 2030 plus Project (AM)	410	680	
Near-Term 2030 plus Project (PM)	190	777	
Cumulative 2045 (AM)	440	970	
Cumulative 2045 (PM)	220	960	
Cumulative 2045 plus Project (AM)	440	1,010	
Cumulative 2045 plus Project (PM)	220	987	

Eastbound

I-10 WB Ramps

	left	through	right
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

Northbound

	left	through	right
Existing (AM)	391	556	
Existing (PM)	228	762	
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	420	610	
Near-Term 2030 (PM)	250	810	
Near-Term 2030 plus Project (AM)	420	623	
Near-Term 2030 plus Project (PM)	250	837	
Cumulative 2045 (AM)	450	790	
Cumulative 2045 (PM)	280	1,070	
Cumulative 2045 plus Project (AM)	450	803	
Cumulative 2045 plus Project (PM)	280	1,097	

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)	93	0	114
Existing (PM)	102	0	157
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	180	0	240
Near-Term 2030 (PM)	140	0	300
Near-Term 2030 plus Project (AM	186	0	240
Near-Term 2030 plus Project (PM	156	0	300
Cumulative 2045 (AM)	320	0	550
Cumulative 2045 (PM)	190	0	440
Cumulative 2045 plus Project (AM	326	0	550
Cumulative 2045 plus Project (PM	206	0	440

ADT

Road	Monroe St		I-10 WB Ramps	
Leg	North of	South of	East of	West of
Cross Street	I-10 WB Ramps		Monroe St	
Existing (AM)	12,560.0	12,808.0	1,656.0	6,176.0
Existing (PM)	12,432.0	13,320.0	2,072.0	3,200.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	14,720.0	15,280.0	3,360.0	6,640.0
Near-Term 2030 (PM)	15,120.0	16,880.0	3,520.0	3,520.0
Near-Term 2030 plus Project	15,192.0	15,704.0	3,408.0	6,640.0
Near-Term 2030 plus Project	15,680.0	17,312.0	3,648.0	3,520.0
Cumulative 2045 (AM)	20,160.0	22,080.0	6,960.0	7,120.0
Cumulative 2045 (PM)	19,520.0	22,000.0	5,040.0	4,000.0
Cumulative 2045 plus Project	20,632.0	22,504.0	7,008.0	7,120.0
Cumulative 2045 plus Project	20,080.0	22,432.0	5,168.0	4,000.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels A	MT	HT	Dist Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Monroe Street n/o I-10 WB																																			
Existing (AM)		4	0	12,560	40	75	0	0	1.8%	0.7%	63.9	9,759	1,595	1,206	198	78	11	2	17	7	67.4	76.3	81.2	-1.7	63.3	55.4	56.3	64.6	60.3	47.9	46.1	60.7	47.1	46.0	47.0	51.5
Existing (PM)		4	0	12,432	40	75	0	0	1.8%	0.7%	63.9	9,660	1,579	1,193	196	78	11	2	17	7	67.4	76.3	81.2	-1.7	63.3	55.4	56.2	64.6	60.3	47.8	46.1	60.7	47.1	45.9	47.0	51.5
Existing plus Project (AM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	14,720	40	75	0	0	1.8%	0.7%	64.6	####	1,869	1,413	232	92	13	3	20	8	67.4	76.3	81.2	-1.7	64.0	56.1	57.0	65.3	61.0	48.6	46.8	61.4	47.8	46.7	47.7	52.2
Near-Term 2030 (PM)		4	0	15,120	40	75	0	0	1.8%	0.7%	64.7	####	1,920	1,452	238	94	14	3	20	9	67.4	76.3	81.2	-1.7	64.1	56.3	57.1	65.5	61.1	48.7	46.9	61.5	47.9	46.8	47.8	52.3
Near-Term 2030 plus Project (AM)		4	0	15,192	40	75	0	0	1.8%	0.7%	64.7	####	1,929	1,458	239	95	14	3	21	9	67.4	76.3	81.2	-1.7	64.1	56.3	57.1	65.5	61.1	48.7	46.9	61.5	48.0	46.8	47.9	52.3
Near-Term 2030 plus Project (PM)		4	0	15,680	40	75	0	0	1.8%	0.7%	64.9	####	1,991	1,505	247	98	14	3	21	9	67.4	76.3	81.2	-1.7	64.3	56.4	57.2	65.6	61.3	48.8	47.1	61.7	48.1	47.0	48.0	52.5
Cumulative 2045 (AM)		4	0	20,160	40	75	0	0	1.8%	0.7%	66.0	####	2,560	1,935	317	126	18	4	27	11	67.4	76.3	81.2	-1.7	65.4	57.5	58.3	66.7	62.4	49.9	48.2	62.8	49.2	48.0	49.1	53.6
Cumulative 2045 (PM)		4	0	19,520	40	75	0	0	1.8%	0.7%	65.8	####	2,479	1,874	307	122	18	4	26	11	67.4	76.3	81.2	-1.7	65.2	57.4	58.2	66.6	62.2	49.8	48.0	62.6	49.0	47.9	49.0	53.4
Cumulative 2045 plus Project (AM)		4	0	20,632	40	75	0	0	1.8%	0.7%	66.1	####	2,620	1,981	325	129	19	4	28	12	67.4	76.3	81.2	-1.7	65.5	57.6	58.4	66.8	62.5	50.0	48.3	62.9	49.3	48.1	49.2	53.7
Cumulative 2045 plus Project (PM)		4	0	20,080	40	75	0	0	1.8%	0.7%	65.9	####	2,550	1,928	316	125	18	4	27	11	67.4	76.3	81.2	-1.7	65.3	57.5	58.3	66.7	62.4	49.9	48.1	62.8	49.2	48.0	49.1	53.6
Monroe Street s/o I-10 WB																																			
Existing (AM)		3	0	12,808	40	75	0	0	1.8%	0.7%	63.9	9,952	1,627	1,230	202	80	12	3	17	7	67.4	76.3	81.2	-1.8	63.3	55.5	56.3	64.7	60.3	47.9	46.1	60.7	47.1	46.0	47.0	51.5
Existing (PM)		3	0	13,320	40	75	0	0	1.8%	0.7%	64.1	####	1,692	1,279	210	83	12	3	18	8	67.4	76.3	81.2	-1.8	63.5	55.6	56.5	64.8	60.5	48.0	46.3	60.9	47.3	46.2	47.2	51.7
Existing plus Project (AM)		3	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		3	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		3	0	15,280	40	75	0	0	1.8%	0.7%	64.7	####	1,941	1,467	240	95	14	3	21	9	67.4	76.3	81.2	-1.8	64.1	56.2	57.1	65.4	61.1	48.6	46.9	61.5	47.9	46.8	47.8	52.3
Near-Term 2030 (PM)		3	0	16,880	40	75	0	0	1.8%	0.7%	65.1	####	2,144	1,620	266	105	15	3	23	10	67.4	76.3	81.2	-1.8	64.5	56.7	57.5	65.9	61.5	49.1	47.3	61.9	48.3	47.2	48.2	52.7
Near-Term 2030 plus Project (AM)		3	0	15,704	40	75	0	0	1.8%	0.7%	64.8	####	1,994	1,508	247	98	14	3	21	9	67.4	76.3	81.2	-1.8	64.2	56.3	57.2	65.5	61.2	48.8	47.0	61.6	48.0	46.9	47.9	52.4
Near-Term 2030 plus Project (PM)		3	0	17,312	40	75	0	0	1.8%	0.7%	65.2	####	2,199	1,662	272	108	16	3	23	10	67.4	76.3	81.2	-1.8	64.6	56.8	57.6	66.0	61.6	49.2	47.4	62.0	48.4	47.3	48.4	52.8
Cumulative 2045 (AM)		3	0	22,080	40	75	0	0	1.8%	0.7%	66.3	####	2,804	2,120	347	138	20	4	30	12	67.4	76.3	81.2	-1.8	65.7	57.8	58.7	67.0	62.7	50.2	48.5	63.1	49.5	48.4	49.4	53.9
Cumulative 2045 (PM)		3	0	22,000	40	75	0	0	1.8%	0.7%	66.3	####	2,794	2,112	346	137	20	4	30	12	67.4	76.3	81.2	-1.8	65.7	57.8	58.6	67.0	62.7	50.2	48.5	63.1	49.5	48.4	49.4	53.9
Cumulative 2045 plus Project (AM)		3	0	22,504	40	75	0	0	1.8%	0.7%	66.4	####	2,858	2,160	354	140	20	4	30	13	67.4	76.3	81.2	-1.8	65.8	57.9	58.7	67.1	62.8	50.3	48.6	63.2	49.6	48.5	49.5	54.0
Cumulative 2045 plus Project (PM)		3	0	22,432	40	75	0	0	1.8%	0.7%	66.3	####	2,849	2,153	353	140	20	4	30	13	67.4	76.3	81.2	-1.8	65.7	57.9	58.7	67.1	62.8	50.3	48.6	63.2	49.6	48.4	49.5	54.0
I-10 WB Ramps e/o Monroe																																			
Existing (AM)		2	0	1,656	40	75	0	0	1.8%	0.7%	55.0	1,287	210	159	26	10	2	0	2	1	67.4	76.3	81.2	-1.8	54.4	46.5	47.4	55.7	51.4	38.9	37.2	51.8	38.2	37.1	38.1	42.6
Existing (PM)		2	0	2,072	40	75	0	0	1.8%	0.7%	56.0	1,610	263	199	33	13	2	0	3	1	67.4	76.3	81.2	-1.8	55.4	47.5	48.3	56.7	52.4	39.9	38.2	52.8	39.2	38.1	39.1	43.6
Existing plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	3,360	40	75	0	0	1.8%	0.7%	58.1	2,611	427	323	53	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.5	49.6	50.4	58.8	54.5	42.0	40.3	54.9	41.3	40.1	41.2	45.7
Near-Term 2030 (PM)		2	0	3,520	40	75	0	0	1.8%	0.7%	58.3	2,735	447	338	55	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.8	50.6	59.0	54.7	42.2	40.5	55.1	41.5	40.4	41.4	45.9
Near-Term 2030 plus Project (AM)		2	0	3,408	40	75	0	0	1.8%	0.7%	58.1	2,648	433	327	54	21	3	1	5	2	67.4	76.3	81.2	-1.8	57.5	49.7	50.5	58.9	54.5	42.1	40.3	54.9	41.3	40.2	41.3	45.7
Near-Term 2030 plus Project (PM)		2	0	3,648	40	75	0	0	1.8%	0.7%	58.4	2,834	463	350	57	23	3	1	5	2	67.4	76.3	81.2	-1.8	57.8	50.0	50.8	59.2	54.8	42.4	40.6	55.2	41.6	40.5	41.6	46.0
Cumulative 2045 (AM)		2	0	6,960	40	75	0	0	1.8%	0.7%	61.2	5,408	884	668	110	43	6	1	9	4	67.4	76.3	81.2	-1.8	60.6	52.8	53.6	62.0	57.6	45.2	43.4	58.0	44.4	43.3	44.4	48.8
Cumulative 2045 (PM)		2	0	5,040	40	75	0	0	1.8%	0.7%	59.8	3,916	640	484	79	31	5	1	7	3	67.4	76.3	81.2	-1.8	59.2	51.4	52.2	60.6	56.2	43.8	42.0	56.6	43.0	41.9	43.0	47.4
Cumulative 2045 plus Project (AM)		2	0	7,008	40	75	0	0	1.8%	0.7%	61.3	5,445	890	673	110	44	6	1	9	4	67.4	76.3	81.2	-1.8	60.7	52.8	53.6	62.0	57.7	45.2	43.5	58.1	44.5	43.3	44.4	48.9
Cumulative 2045 plus Project (PM)		2	0	5,168	40	75	0	0	1.8%	0.7%	59.9	4,016	656	496	81	32	5	1	7	3	67.4	76.3	81.2	-1.8	59.3	51.5	52.3	60.7	56.4	43.9	42.1	56.7	43.2	42.0	43.1	47.5
I-10 WB Ramps w/o Monroe																																			
Existing (AM)		2	0	6,176	40	75	0	0	1.8%	0.7%	60.7	4,799	784	593	97	39	6	1	8	3	67.4	76.3	81.2	-1.8	60.1	52.2	53.1	61.4	57.1	44.7	42.9	57.5	43.9	42.8	43.8	48.3
Existing (PM)		2	0	3,200	40	75	0	0	1.8%	0.7%	57.8	2,486	406	307	50	20	3	1	4	2	67.4	76.3	81.2	-1.8	57.2	49.4	50.2	58.6	54.3	41.8	40.1	54.7	41.1	39.9	41.0	45.5
Existing plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	6,640	40	75	0	0	1.8%	0.7%	61.0	5,159	843	637	104	41	6	1	9	4	67.4	76.3	81.2	-1.8	60.4	52.6	53.4	61.8	57.4	45.0	43.2	57.8	44.2	43.1	44.2	48.6
Near-Term 2030 (PM)		2	0	3,520	40	75	0	0	1.8%	0.7%	58.3	2,735	447	338	55	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.8	50.6	59.0	54.7	42.2	40.5	55.1	41.5	40.4	41.4	45.9
Near-Term 2030 plus Project (AM)		2	0	6,640	40	75	0	0	1.8%	0.7%	61.0	5,159	843	637	104	41	6	1	9	4	67.4	76.3	81.2	-1.8	60.4	52.6	53.4	61.8	57.4	45.0	43.2	57.8	44.2	43.1	44.2	48.6
Near-Term 2030 plus Project (PM)		2	0	3,520	40	75	0	0	1.8%	0.7%	58.3	2,735	447	338	55	22	3	1	5	2	67.4	76.3	81.2	-1.8	57.7	49.8	50.6	59.0	54.7	42.2	40.5	55.1	41.5	40.4	41.4	45.9
Cumulative 2045 (AM)		2	0	7,120	40	75	0	0	1.8%	0.7%	61.3	5,532	904	684	112	44	6	1	10	4	67.4	76.3	81.2	-1.8	60.7	52.9	53.7	62.1	57.7	45.3	43.5	58.1	44.5	43.4	44.5	48.9

Cumulative 2045 (PM)	2	0	4,000	40	75	0	0	1.8%	0.7%	58.8	3,108	508	384	63	25	4	1	5	2	67.4	76.3	81.2	-1.8	58.2	50.4	51.2	59.6	55.2	42.8	41.0	55.6	42.0	40.9	42.0	46.4
Cumulative 2045 plus Project (AM)	2	0	7,120	40	75	0	0	1.8%	0.7%	61.3	5,532	904	684	112	44	6	1	10	4	67.4	76.3	81.2	-1.8	60.7	52.9	53.7	62.1	57.7	45.3	43.5	58.1	44.5	43.4	44.5	48.9
Cumulative 2045 plus Project (PM)	2	0	4,000	40	75	0	0	1.8%	0.7%	58.8	3,108	508	384	63	25	4	1	5	2	67.4	76.3	81.2	-1.8	58.2	50.4	51.2	59.6	55.2	42.8	41.0	55.6	42.0	40.9	42.0	46.4

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name rev. (Date)

Weekday AM/PM Peak Hour Volumes

Intersection: 17

Monroe St/I-10 EB Ramps

Monroe St

Southbound

	right	through	left
Existing (AM)		597	57
Existing (PM)		586	89
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		790	90
Near-Term 2030 (PM)		910	140
Near-Term 2030 plus Project (AM)		816	104
Near-Term 2030 plus Project (PM)		928	149
Cumulative 2045 (AM)		1,330	190
Cumulative 2045 (PM)		1,180	220
Cumulative 2045 plus Project (AM)		1,356	204
Cumulative 2045 plus Project (PM)		1,198	229

Eastbound

I-10 EB Ramps

	left	through	right
Existing (AM)	143	3	262
Existing (PM)	310	2	326
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)	170	0	300
Near-Term 2030 (PM)	340	0	360
Near-Term 2030 plus Project (AM)	170	0	300
Near-Term 2030 plus Project (PM)	340	0	360
Cumulative 2045 (AM)	210	0	370
Cumulative 2045 (PM)	370	0	410
Cumulative 2045 plus Project (AM)	210	0	370
Cumulative 2045 plus Project (PM)	370	0	410

Northbound

	left	through	right
Existing (AM)		804	93
Existing (PM)		680	126
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)		860	220
Near-Term 2030 (PM)		720	320
Near-Term 2030 plus Project (AM)		873	220
Near-Term 2030 plus Project (PM)		747	320
Cumulative 2045 (AM)		1,030	440
Cumulative 2045 (PM)		980	670
Cumulative 2045 plus Project (AM)		1,043	440
Cumulative 2045 plus Project (PM)		1,007	670

If Peak Hour = 6% of ADT, Scaling Factor = 16.667
If Peak Hour = 7% of ADT, Scaling Factor = 14.286
If Peak Hour = 8% of ADT, Scaling Factor = 12.5
If Peak Hour = 9% of ADT, Scaling Factor = 11.111
If Peak Hour = 10% of ADT, Scaling Factor = 10

Westbound

	right	through	left
Existing (AM)			
Existing (PM)			
Existing plus Project (AM)			
Existing plus Project (PM)			
Near-Term 2030 (AM)			
Near-Term 2030 (PM)			
Near-Term 2030 plus Project (AM)			
Near-Term 2030 plus Project (PM)			
Cumulative 2045 (AM)			
Cumulative 2045 (PM)			
Cumulative 2045 plus Project (AM)			
Cumulative 2045 plus Project (PM)			

ADT

Road	Monroe St		I-10 EB Ramps	
Leg	North of	South of	East of	West of
Cross Street	I-10 EB Ramps		Monroe St	
Existing (AM)	12,808.0	14,048.0	1,224.0	3,264.0
Existing (PM)	13,320.0	13,744.0	1,736.0	5,104.0
Existing plus Project (AM)	0.0	0.0	0.0	0.0
Existing plus Project (PM)	0.0	0.0	0.0	0.0
Near-Term 2030 (AM)	15,280.0	17,360.0	2,480.0	3,760.0
Near-Term 2030 (PM)	16,880.0	18,480.0	3,680.0	5,600.0
Near-Term 2030 plus Project	15,704.0	17,672.0	2,592.0	3,760.0
Near-Term 2030 plus Project	17,312.0	18,840.0	3,752.0	5,600.0
Cumulative 2045 (AM)	22,080.0	25,360.0	5,040.0	4,640.0
Cumulative 2045 (PM)	22,000.0	25,920.0	7,120.0	6,240.0
Cumulative 2045 plus Project	22,504.0	25,672.0	5,152.0	4,640.0
Cumulative 2045 plus Project	22,432.0	26,280.0	7,192.0	6,240.0

2

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels Dist A	MT	HT	Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total
Monroe Street n/o I-10 EB																																			
Existing (AM)		4	0	12,808	40	75	0	0	1.8%	0.7%	64.0	9,952	1,627	1,230	202	80	12	3	17	7	67.4	76.3	81.2	-1.7	63.4	55.5	56.4	64.7	60.4	47.9	46.2	60.8	47.2	46.1	47.1	51.6
Existing (PM)		4	0	13,320	40	75	0	0	1.8%	0.7%	64.2	####	1,692	1,279	210	83	12	3	18	8	67.4	76.3	81.2	-1.7	63.6	55.7	56.5	64.9	60.6	48.1	46.4	61.0	47.4	46.2	47.3	51.8
Existing plus Project (AM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	15,280	40	75	0	0	1.8%	0.7%	64.8	####	1,941	1,467	240	95	14	3	21	9	67.4	76.3	81.2	-1.7	64.2	56.3	57.1	65.5	61.2	48.7	47.0	61.6	48.0	46.8	47.9	52.4
Near-Term 2030 (PM)		4	0	16,880	40	75	0	0	1.8%	0.7%	65.2	####	2,144	1,620	266	105	15	3	23	10	67.4	76.3	81.2	-1.7	64.6	56.7	57.6	65.9	61.6	49.1	47.4	62.0	48.4	47.3	48.3	52.8
Near-Term 2030 plus Project (AM)		4	0	15,704	40	75	0	0	1.8%	0.7%	64.9	####	1,994	1,508	247	98	14	3	21	9	67.4	76.3	81.2	-1.7	64.3	56.4	57.2	65.6	61.3	48.8	47.1	61.7	48.1	47.0	48.0	52.5
Near-Term 2030 plus Project (PM)		4	0	17,312	40	75	0	0	1.8%	0.7%	65.3	####	2,199	1,662	272	108	16	3	23	10	67.4	76.3	81.2	-1.7	64.7	56.8	57.7	66.0	61.7	49.3	47.5	62.1	48.5	47.4	48.4	52.9
Cumulative 2045 (AM)		4	0	22,080	40	75	0	0	1.8%	0.7%	66.4	####	2,804	2,120	347	138	20	4	30	12	67.4	76.3	81.2	-1.7	65.8	57.9	58.7	67.1	62.8	50.3	48.6	63.2	49.6	48.4	49.5	54.0
Cumulative 2045 (PM)		4	0	22,000	40	75	0	0	1.8%	0.7%	66.3	####	2,794	2,112	346	137	20	4	30	12	67.4	76.3	81.2	-1.7	65.7	57.9	58.7	67.1	62.8	50.3	48.5	63.2	49.6	48.4	49.5	54.0
Cumulative 2045 plus Project (AM)		4	0	22,504	40	75	0	0	1.8%	0.7%	66.4	####	2,858	2,160	354	140	20	4	30	13	67.4	76.3	81.2	-1.7	65.8	58.0	58.8	67.2	62.9	50.4	48.6	63.2	49.7	48.5	49.6	54.1
Cumulative 2045 plus Project (PM)		4	0	22,432	40	75	0	0	1.8%	0.7%	66.4	####	2,849	2,153	353	140	20	4	30	13	67.4	76.3	81.2	-1.7	65.8	58.0	58.8	67.2	62.8	50.4	48.6	63.2	49.6	48.5	49.6	54.0
Monroe Street s/o I-10 EB																																			
Existing (AM)		4	0	14,048	40	75	0	0	1.8%	0.7%	64.4	####	1,784	1,349	221	88	13	3	19	8	67.4	76.3	81.2	-1.7	63.8	55.9	56.8	65.1	60.8	48.3	46.6	61.2	47.6	46.5	47.5	52.0
Existing (PM)		4	0	13,744	40	75	0	0	1.8%	0.7%	64.3	####	1,745	1,319	216	86	12	3	19	8	67.4	76.3	81.2	-1.7	63.7	55.8	56.7	65.0	60.7	48.3	46.5	61.1	47.5	46.4	47.4	51.9
Existing plus Project (AM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		4	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.7	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		4	0	17,360	40	75	0	0	1.8%	0.7%	65.3	####	2,205	1,667	273	108	16	3	23	10	67.4	76.3	81.2	-1.7	64.7	56.9	57.7	66.1	61.7	49.3	47.5	62.1	48.5	47.4	48.4	52.9
Near-Term 2030 (PM)		4	0	18,480	40	75	0	0	1.8%	0.7%	65.6	####	2,347	1,774	291	115	17	4	25	10	67.4	76.3	81.2	-1.7	65.0	57.1	58.0	66.3	62.0	49.5	47.8	62.4	48.8	47.7	48.7	53.2
Near-Term 2030 plus Project (AM)		4	0	17,672	40	75	0	0	1.8%	0.7%	65.4	####	2,244	1,697	278	110	16	4	24	10	67.4	76.3	81.2	-1.7	64.8	56.9	57.8	66.1	61.8	49.3	47.6	62.2	48.6	47.5	48.5	53.0
Near-Term 2030 plus Project (PM)		4	0	18,840	40	75	0	0	1.8%	0.7%	65.7	####	2,393	1,809	296	118	17	4	26	11	67.4	76.3	81.2	-1.7	65.1	57.2	58.0	66.4	62.1	49.6	47.9	62.5	48.9	47.8	48.8	53.3
Cumulative 2045 (AM)		4	0	25,360	40	75	0	0	1.8%	0.7%	67.0	####	3,221	2,435	399	158	23	5	34	14	67.4	76.3	81.2	-1.7	66.4	58.5	59.3	67.7	63.4	50.9	49.2	63.8	50.2	49.0	50.1	54.6
Cumulative 2045 (PM)		4	0	25,920	40	75	0	0	1.8%	0.7%	67.0	####	3,292	2,488	408	162	24	5	35	15	67.4	76.3	81.2	-1.7	66.4	58.6	59.4	67.8	63.5	51.0	49.3	63.9	50.3	49.1	50.2	54.7
Cumulative 2045 plus Project (AM)		4	0	25,672	40	75	0	0	1.8%	0.7%	67.0	####	3,260	2,465	404	160	23	5	35	14	67.4	76.3	81.2	-1.7	66.4	58.6	59.4	67.7	63.4	51.0	49.2	63.8	50.2	49.1	50.1	54.6
Cumulative 2045 plus Project (PM)		4	0	26,280	40	75	0	0	1.8%	0.7%	67.1	####	3,338	2,523	414	164	24	5	36	15	67.4	76.3	81.2	-1.7	66.5	58.7	59.5	67.9	63.5	51.1	49.3	63.9	50.3	49.2	50.2	54.7
I-10 EB Ramps e/o Monroe																																			
Existing (AM)		2	0	1,224	40	75	0	0	1.8%	0.7%	53.7	951	155	118	19	8	1	0	2	1	67.4	76.3	81.2	-1.8	53.1	45.2	46.0	54.4	50.1	37.6	35.9	50.5	36.9	35.8	36.8	41.3
Existing (PM)		2	0	1,736	40	75	0	0	1.8%	0.7%	55.2	1,349	220	167	27	11	2	0	2	1	67.4	76.3	81.2	-1.8	54.6	46.7	47.6	55.9	51.6	39.2	37.4	52.0	38.4	37.3	38.3	42.8
Existing plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	2,480	40	75	0	0	1.8%	0.7%	56.7	1,927	315	238	39	15	2	0	3	1	67.4	76.3	81.2	-1.8	56.1	48.3	49.1	57.5	53.2	40.7	38.9	53.6	40.0	38.8	39.9	44.4
Near-Term 2030 (PM)		2	0	3,680	40	75	0	0	1.8%	0.7%	58.5	2,859	467	353	58	23	3	1	5	2	67.4	76.3	81.2	-1.8	57.9	50.0	50.8	59.2	54.9	42.4	40.7	55.3	41.7	40.5	41.6	46.1
Near-Term 2030 plus Project (AM)		2	0	2,592	40	75	0	0	1.8%	0.7%	56.9	2,014	329	249	41	16	2	1	4	1	67.4	76.3	81.2	-1.8	56.3	48.5	49.3	57.7	53.4	40.9	39.1	53.7	40.2	39.0	40.1	44.6
Near-Term 2030 plus Project (PM)		2	0	3,752	40	75	0	0	1.8%	0.7%	58.5	2,915	477	360	59	23	3	1	5	2	67.4	76.3	81.2	-1.8	57.9	50.1	50.9	59.3	55.0	42.5	40.7	55.4	41.8	40.6	41.7	46.2
Cumulative 2045 (AM)		2	0	5,040	40	75	0	0	1.8%	0.7%	59.8	3,916	640	484	79	31	5	1	7	3	67.4	76.3	81.2	-1.8	59.2	51.4	52.2	60.6	56.2	43.8	42.0	56.6	43.0	41.9	43.0	47.4
Cumulative 2045 (PM)		2	0	7,120	40	75	0	0	1.8%	0.7%	61.3	5,532	904	684	112	44	6	1	10	4	67.4	76.3	81.2	-1.8	60.7	52.9	53.7	62.1	57.7	45.3	43.5	58.1	44.5	43.4	44.5	48.9
Cumulative 2045 plus Project (AM)		2	0	5,152	40	75	0	0	1.8%	0.7%	59.9	4,003	654	495	81	32	5	1	7	3	67.4	76.3	81.2	-1.8	59.3	51.5	52.3	60.7	56.3	43.9	42.1	56.7	43.1	42.0	43.1	47.5
Cumulative 2045 plus Project (PM)		2	0	7,192	40	75	0	0	1.8%	0.7%	61.4	5,588	913	690	113	45	7	1	10	4	67.4	76.3	81.2	-1.8	60.8	52.9	53.7	62.1	57.8	45.3	43.6	58.2	44.6	43.5	44.5	49.0
I-10 EB Ramps w/o Monroe																																			
Existing (AM)		2	0	3,264	40	75	0	0	1.8%	0.7%	57.9	2,536	415	313	51	20	3	1	4	2	67.4	76.3	81.2	-1.8	57.3	49.5	50.3	58.7	54.4	41.9	40.1	54.7	41.2	40.0	41.1	45.6
Existing (PM)		2	0	5,104	40	75	0	0	1.8%	0.7%	59.9	3,966	648	490	80	32	5	1	7	3	67.4	76.3	81.2	-1.8	59.3	51.4	52.2	60.6	56.3	43.8	42.1	56.7	43.1	42.0	43.0	47.5
Existing plus Project (AM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project (PM)		2	0	0	40	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	67.4	76.3	81.2	-1.8	####	####	####	####	####	####	####	####	####	####	####	####
Near-Term 2030 (AM)		2	0	3,760	40	75	0	0	1.8%	0.7%	58.5	2,922	478	361	59	23	3	1	5	2	67.4	76.3	81.2	-1.8	58.0	50.1	50.9	59.3	55.0	42.5	40.8	55.4	41.8	40.6	41.7	46.2
Near-Term 2030 (PM)		2	0	5,600	40	75	0	0	1.8%	0.7%	60.3	4,351	711	538	88	35	5	1	8	3	67.4	76.3	81.2	-1.8	59.7	51.8	52.7	61.0	56.7	44.2	42.5	57.1	43.5	42.4	43.4	47.9
Near-Term 2030 plus Project (AM)		2	0	3,760	40	75	0	0	1.8%	0.7%	58.5	2,922	478	361	59	23	3	1	5	2	67.4	76.3	81.2	-1.8	58.0	50.1	50.9	59.3	55.0	42.5	40.8	55.4	41.8	40.6	41.7	46.2
Near-Term 2030 plus Project (PM)		2	0	5,600	40	75	0	0	1.8%	0.7%	60.3	4,351	711	538	88	35	5	1	8	3	67.4	76.3	81.2	-1.8	59.7	51.8	52.7	61.0	56.7	44.2	42.5	57.1	43.5	42.4	43.4	47.9
Cumulative 2045 (AM)		2	0	4,640	40	75	0	0	1.8%	0.7%	59.5	3,605	589	445	73	29	4	1	6	3	67.4	76.3	81.2	-1.8	58.9	51.0	51.8	60.2	55.9	43.4	41.7	56.3	42.7	41.6	42.6	47.1

Cumulative 2045 (PM)	2	0	6,240	40	75	0	0	1.8%	0.7%	60.7	4,848	792	599	98	39	6	1	8	4	67.4	76.3	81.2	-1.8	60.2	52.3	53.1	61.5	57.2	44.7	43.0	57.6	44.0	42.8	43.9	48.4
Cumulative 2045 plus Project (AM)	2	0	4,640	40	75	0	0	1.8%	0.7%	59.5	3,605	589	445	73	29	4	1	6	3	67.4	76.3	81.2	-1.8	58.9	51.0	51.8	60.2	55.9	43.4	41.7	56.3	42.7	41.6	42.6	47.1
Cumulative 2045 plus Project (PM)	2	0	6,240	40	75	0	0	1.8%	0.7%	60.7	4,848	792	599	98	39	6	1	8	4	67.4	76.3	81.2	-1.8	60.2	52.3	53.1	61.5	57.2	44.7	43.0	57.6	44.0	42.8	43.9	48.4

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

APPENDIX J.2

Construction Noise Worksheets

Mass Grading

Receiver	Fl	Leq-1h/dB(A)	Source	Source type	Time slice	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	l or A m,m²	Kl dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADI dB	dLrefl dB	Ls dB(A)	dLw dB	Cmet dB	ZR dB	Lr dB(A)
80640 40th Avenue	G	79.2	Mass Grading	Area	Leq-1h			86.7	148.5	1510688.9	0	0	3	608.17	-66.7	-4.7	0	-1		0	0	79.2	0	0	0	79.2
Residential community across Ave 40	G	78.7	Mass Grading	Area	Leq-1h			86.7	143.4	1510688.9	0	0	3	453.23	-64.1	-4.5	-3.5	-0.7		0	0	78.7	0	0	0	78.7
Residential community across Madison St	G	78.6	Mass Grading	Area	Leq-1h			86.7	148.5	1510688.9	0	0	3	472.08	-64.5	-4.7	-0.1	-0.7		0	0	78.6	0	0	0	78.6
Residential community to the north across Ave 38	G	77.9	Mass Grading	Area	Leq-1h			86.7	148.5	1510688.9	0	0	3	525.07	-65.4	-4.8	-2.5	-0.9		0	0	77.9	0	0	0	77.9
Residential to the west	G	76.2	Mass Grading	Area	Leq-1h			86.7	148.5	1510688.9	0	0	3	807.24	-69.1	-4.7	0	-1.4		0	0	76.2	0	0	0	76.2
Shadow Hills High School	G	76.7	Mass Grading	Area	Leq-1h			86.7	148.5	1510688.9	0	0	3	757.09	-68.6	-4.5	-0.5	-1.2		0	0	76.7	0	0	0	76.7

Precise Grading

Receiver	Fl	Leq-1h/dB(A)	Source	Source type	Time slice	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	l or A m,m²	Kl dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADl dB	dLrefl dB(A)	Ls dB(A)	dLw dB	Cmet dB	ZR dB	Lr dB(A)
80640 40th Avenue	G	74.1	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	608.17	-66.7	-4.7	0	-1		0	0	74.1	0	0	0	74.1
Residential community across Ave 40	G	73.6	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	453.23	-64.1	-4.5	-3.5	-0.7		0	0	73.6	0	0	0	73.6
Residential community across Madison St	G	73.5	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	472.08	-64.5	-4.7	-0.1	-0.7		0	0	73.5	0	0	0	73.5
Residential community to the north across Ave 38	G	72.8	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	525.07	-65.4	-4.8	-2.5	-0.9		0	0	72.8	0	0	0	72.8
Residential to the west	G	71.1	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	807.24	-69.1	-4.7	0	-1.4		0	0	71.1	0	0	0	71.1
Shadow Hills High School	G	71.6	Precise Grading	Area	Leq-1h			81.6	143.4	1510688.9	0	0	3	757.09	-68.6	-4.5	-0.5	-1.2		0	0	71.6	0	0	0	71.6

Building Construction

Receiver	Fl	Leq-1h/dB(A)	Source	Source type	Time slice	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	l or A m,m²	Kl dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADl dB	dLrefl dB(A	Ls dB(A)	dLw dB	Cmet dB	ZR dB	Lr dB(A)
80640 40th Avenue	G	73.8	Building Construction	Area	Leq-1h			81.3	143.1	1510688.9	0	0	3	608.17	-66.7	-4.7	0	-1		0	0	73.8	0	0	0	73.8
Residential community across Ave 40	G	73.3	Building Construction	Area	Leq-1h			81.3	143.4	1510688.9	0	0	3	453.23	-64.1	-4.5	-3.5	-0.7		0	0	73.3	0	0	0	73.3
Residential community across Madison St	G	73.2	Building Construction	Area	Leq-1h			81.3	143.1	1510688.9	0	0	3	472.08	-64.5	-4.7	-0.1	-0.7		0	0	73.2	0	0	0	73.2
Residential community to the north across Ave 38	G	72.5	Building Construction	Area	Leq-1h			81.3	143.1	1510688.9	0	0	3	525.07	-65.4	-4.8	-2.5	-0.9		0	0	72.5	0	0	0	72.5
Residential to the west	G	70.8	Building Construction	Area	Leq-1h			81.3	143.1	1510688.9	0	0	3	807.24	-69.1	-4.7	0	-1.4		0	0	70.8	0	0	0	70.8
Shadow Hills High School	G	71.3	Building Construction	Area	Leq-1h			81.3	143.1	1510688.9	0	0	3	757.09	-68.6	-4.5	-0.5	-1.2		0	0	71.3	0	0	0	71.3

Paving

Receiver	Fl	Leq-1h/dB(A)	Source	Source type	Time slice	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	l or A m,m²	Kl dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADI dB	dLrefl dB(A)	Ls dB(A)	dLw dB	Cmet dB	ZR dB	Lr dB(A)
80640 40th Avenue	G	72.7	Precise Grading	Area	Leq-1h			80.2	142	1510688.9	0	0	3	608.17	-66.7	-4.7	0	-1		0	0	72.7	0	0	0	72.7
Residential community across Ave 40	G	72.2	Precise Grading	Area	Leq-1h			80.2	143.4	1510688.9	0	0	3	453.23	-64.1	-4.5	-3.5	-0.7		0	0	72.2	0	0	0	72.2
Residential community across Madison St	G	72.1	Precise Grading	Area	Leq-1h			80.2	142	1510688.9	0	0	3	472.08	-64.5	-4.7	-0.1	-0.7		0	0	72.1	0	0	0	72.1
Residential community to the north across Ave 38	G	71.4	Precise Grading	Area	Leq-1h			80.2	142	1510688.9	0	0	3	525.07	-65.4	-4.8	-2.5	-0.9		0	0	71.4	0	0	0	71.4
Residential to the west	G	69.7	Precise Grading	Area	Leq-1h			80.2	142	1510688.9	0	0	3	807.24	-69.1	-4.7	0	-1.4		0	0	69.7	0	0	0	69.7
Shadow Hills High School	G	70.2	Precise Grading	Area	Leq-1h			80.2	142	1510688.9	0	0	3	757.09	-68.6	-4.5	-0.5	-1.2		0	0	70.2	0	0	0	70.2

Finishing

Receiver	Fl	Leq-1h/dB(A)	Source	Source type	Time slice	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	l or A m,m²	KI dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADl dB	dLrefl dB(A)	Ls dB(A)	dLw dB	Cmet dB	ZR dB	Lr dB(A)
80640 40th Avenue	G	71	Finishing	Area	Leq-1h			78.5	140.3	1510688.9	0	0	3	608.17	-66.7	-4.7	0	-1		0	0	71	0	0	0	71
Residential community across Ave 40	G	70.5	Finishing	Area	Leq-1h			78.5	143.4	1510688.9	0	0	3	453.23	-64.1	-4.5	-3.5	-0.7		0	0	70.5	0	0	0	70.5
Residential community across Madison St	G	70.4	Finishing	Area	Leq-1h			78.5	140.3	1510688.9	0	0	3	472.08	-64.5	-4.7	-0.1	-0.7		0	0	70.4	0	0	0	70.4
Residential community to the north across Ave 38	G	69.7	Finishing	Area	Leq-1h			78.5	140.3	1510688.9	0	0	3	525.07	-65.4	-4.8	-2.5	-0.9		0	0	69.7	0	0	0	69.7
Residential to the west	G	68	Finishing	Area	Leq-1h			78.5	140.3	1510688.9	0	0	3	807.24	-69.1	-4.7	0	-1.4		0	0	68	0	0	0	68
Shadow Hills High School	G	68.5	Finishing	Area	Leq-1h			78.5	140.3	1510688.9	0	0	3	757.09	-68.6	-4.5	-0.5	-1.2		0	0	68.5	0	0	0	68.5

APPENDIX J.3

Construction Vibration Model

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(Residential Community to the north Across Ave 38)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	110	0.010	0.002	68
Jackhammer		1	0.035	110	0.004	0.001	60
Large bulldozer		1	0.089	110	0.010	0.002	68
Loaded trucks		1	0.076	110	0.008	0.002	66
Pile Drive (impact)		1	0.644	110	0.070	0.017	85
Vibratory Roller		1	0.210	110	0.023	0.006	75
Small bulldozer		1	0.003	110	0.000	0.000	38

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(80640 40th Avenue)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	425	0.001	0.000	50
Jackhammer		1	0.035	425	0.000	0.000	42
Large bulldozer		1	0.089	425	0.001	0.000	50
Loaded trucks		1	0.076	425	0.001	0.000	49
Pile Drive (impact)		1	0.644	425	0.009	0.002	67
Vibratory Roller		1	0.210	425	0.003	0.001	57
Small bulldozer		1	0.003	425	0.000	0.000	21

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(Residential to the south Across 40th)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	115	0.009	0.002	67
Jackhammer		1	0.035	115	0.004	0.001	59
Large bulldozer		1	0.089	115	0.009	0.002	67
Loaded trucks		1	0.076	115	0.008	0.002	66
Pile Drive (impact)		1	0.644	115	0.065	0.016	84
Vibratory Roller		1	0.210	115	0.021	0.005	75
Small bulldozer		1	0.003	115	0.000	0.000	38

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(Residential to the east across Madison)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	140	0.007	0.002	65
Jackhammer		1	0.035	140	0.003	0.001	56
Large bulldozer		1	0.089	140	0.007	0.002	65
Loaded trucks		1	0.076	140	0.006	0.001	63
Pile Drive (impact)		1	0.644	140	0.049	0.012	82
Vibratory Roller		1	0.210	140	0.016	0.004	72
Small bulldozer		1	0.003	140	0.000	0.000	35

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(Residential to the west along Jefferson St)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	1115	0.000	0.000	37
Jackhammer		1	0.035	1115	0.000	0.000	29
Large bulldozer		1	0.089	1115	0.000	0.000	37
Loaded trucks		1	0.076	1115	0.000	0.000	36
Pile Drive (impact)		1	0.644	1115	0.002	0.001	55
Vibratory Roller		1	0.210	1115	0.001	0.000	45
Small bulldozer		1	0.003	1115	0.000	0.000	8

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC

Desert Retreat Specific Plan
Construction Vibration Model
(Shadow Hills High School)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	225	0.003	0.001	58
Jackhammer		1	0.035	225	0.001	0.000	50
Large bulldozer		1	0.089	225	0.003	0.001	58
Loaded trucks		1	0.076	225	0.003	0.001	57
Pile Drive (impact)		1	0.644	225	0.024	0.006	76
Vibratory Roller		1	0.210	225	0.008	0.002	66
Small bulldozer		1	0.003	225	0.000	0.000	29

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

APPENDIX K

Transportation Study

Desert Retreat Specific Plan Project

Transportation Study

Prepared for:
City of Indio

February 2023

OC21-0857

FEHR PEERS

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Introduction

This report presents the analysis and findings of the Transportation Study prepared for the proposed Desert Retreat Specific Plan ("Project") in the City of Indio, California (City). The Project would develop up to 1,500 single-family active adult dwelling homes within the 361-acre specific plan area. The Project includes a private clubhouse for residents that will not be open for public use.

The Project site is generally bound by Avenue 38 to the north, Madison Street to the east, Avenue 40 to the south, and Jefferson Street to the west. The Project proposes three entrances for residents - one primary entrance and two secondary entrances. Primary access to the site would be provided on Avenue 40 at Camino San Gregorio. The secondary entrances are located on Madison Street at Sun City Boulevard and on Avenue 38 at Talavera Boulevard. There is an additional emergency access road off Avenue 40 west of the primary entrance. A conceptual land use plan is shown on **Figure 1.**

This TIA satisfies the requirements documented in the Riverside County (County) T*ransportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled* (2020), as directed by the City of Indio. The TIA Guidelines requires the preparation of a California Environmental Quality Act (CEQA) Transportation Impact Study and a Local Transportation Study. Both studies are included in this report.

CEQA Transportation Impact Study

In response to California Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) has updated *California Environmental Quality Act Statutes and Guidelines* (Association of Environmental Professionals, 2019) to include new transportation-related evaluation metrics. For the purposes of CEQA, level of service (LOS), a qualitative description of traffic on a roadway facility or intersection, can no longer be used to determine a project's environmental impact. The final proposed Guidelines include a new Section 15064.3 on Vehicle Miles of Travel (VMT) analysis and thresholds for land use developments. OPR also released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) which was applied to this TIA.

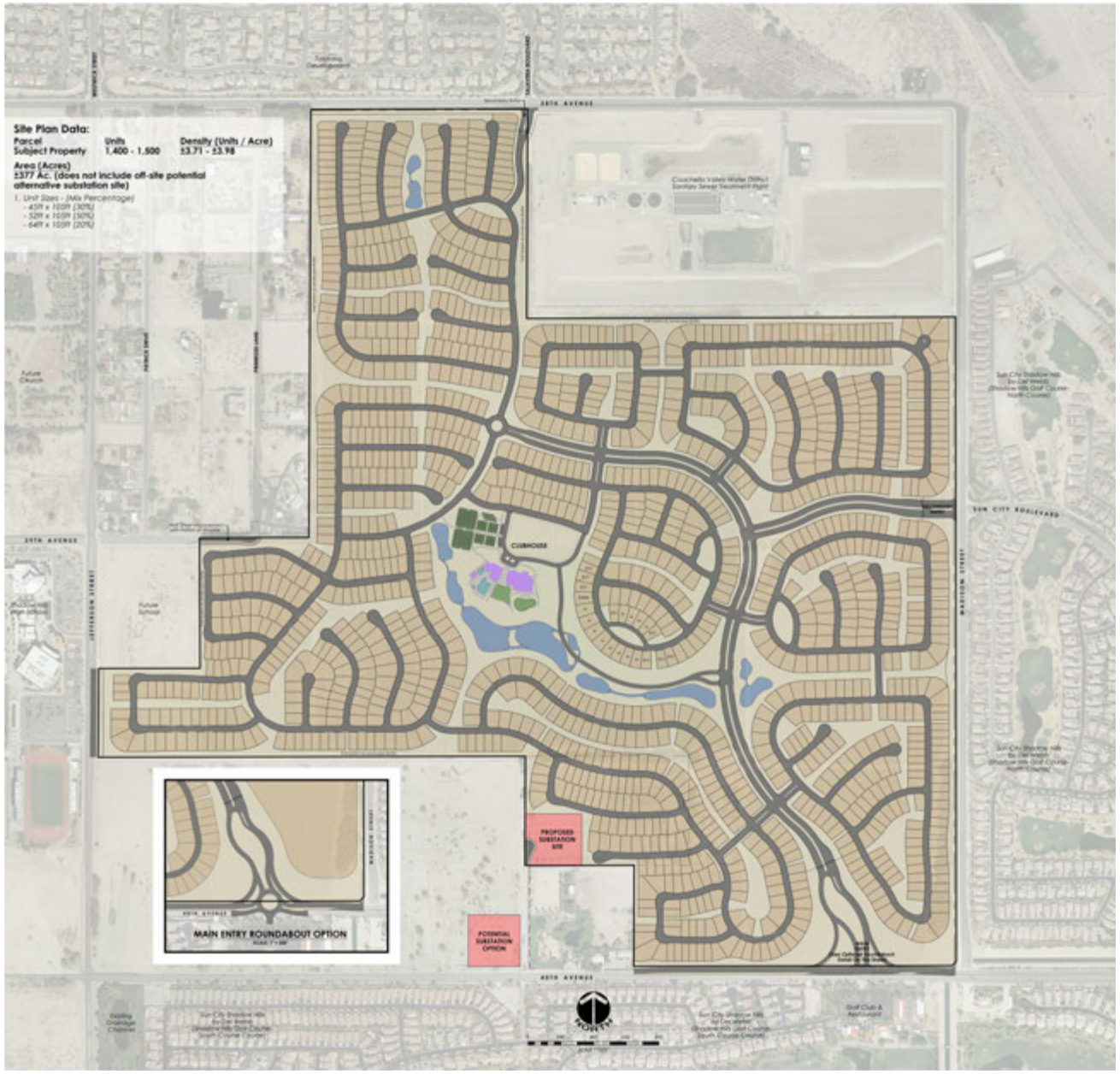
According to current CEQA guidelines and the TIA Guidelines a transportation impact from a project is considered a significant if the associated change to the transportation system with the project will:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle, and pedestrian facilities.

B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

D. Result in inadequate emergency access.



Site Plan Source: MSA Consulting, Inc., March 15, 2022

Figure 1

Conceptual Site Plan

Local Transportation Study

The Local Transportation Study is prepared to provide information to identify any improvements needed to maintain consistency with the City's General Plan LOS policy.

LOS is a qualitative description of traffic flow from a vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (free-flow conditions) to LOS F (over capacity conditions). The City generally strives to maintain LOS D or better as a guideline for intersection and roadway operations, as identified in the *City of Indio General Plan* (General Plan) approved in 2019.

Operations of intersections were evaluated in Synchro 11 (for intersections 1-3 and 7-13) and in the microsimulation software VISSIM 2022 (for intersections 4-6) using the method from the Transportation Research Board's *Highway Capacity Manual, 6th Edition* (HCM), which uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average control delay experienced by motorists traveling through a signalized intersection. Microsimulation/VISSIM was used to analyze intersections 4-6 to evaluate the potential vehicles queues that build up over space and time between these closely spaced intersections, capture the influence of high pedestrian and school activity, and appropriately estimate delay associated with the proposed roundabout in this corridor. Control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 1** summarizes the relationship between average delay per vehicle and LOS for signalized and unsignalized intersections.

Table 1: Intersection Level of Service Criteria

LOS	Description	Signalized	Unsignalized
		Delay (seconds/vehicle)	
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0	> 50.0

Source: *Highway Capacity Manual*, 6th Edition. (Transportation Research Board, 2021)

Operations of roadway segments were evaluated using the Average Daily Traffic (ADT) based thresholds from the County T*ransportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled*. **Table 2** summarizes the relationship between ADT by roadway classification and LOS for roadway segments.

Table 2: Riverside County Roadway Level of Service Criteria

Level of Service	Two-Way Average Daily Traffic (ADT) Volume		
	2-Lane Collector	4-Lane Secondary	4-Lane Major
A – C	≤ 10,400	≤ 20,700	≤ 27,300
D	> 10,400 and ≤ 11,700	> 20,700 and ≤ 23,300	> 27,300 and ≤ 30,700
E	> 11,700 and ≤ 13,000	> 23,300 and ≤ 25,900	> 30,700 and ≤ 34,100
F	> 13,000	> 25,900	> 34,100

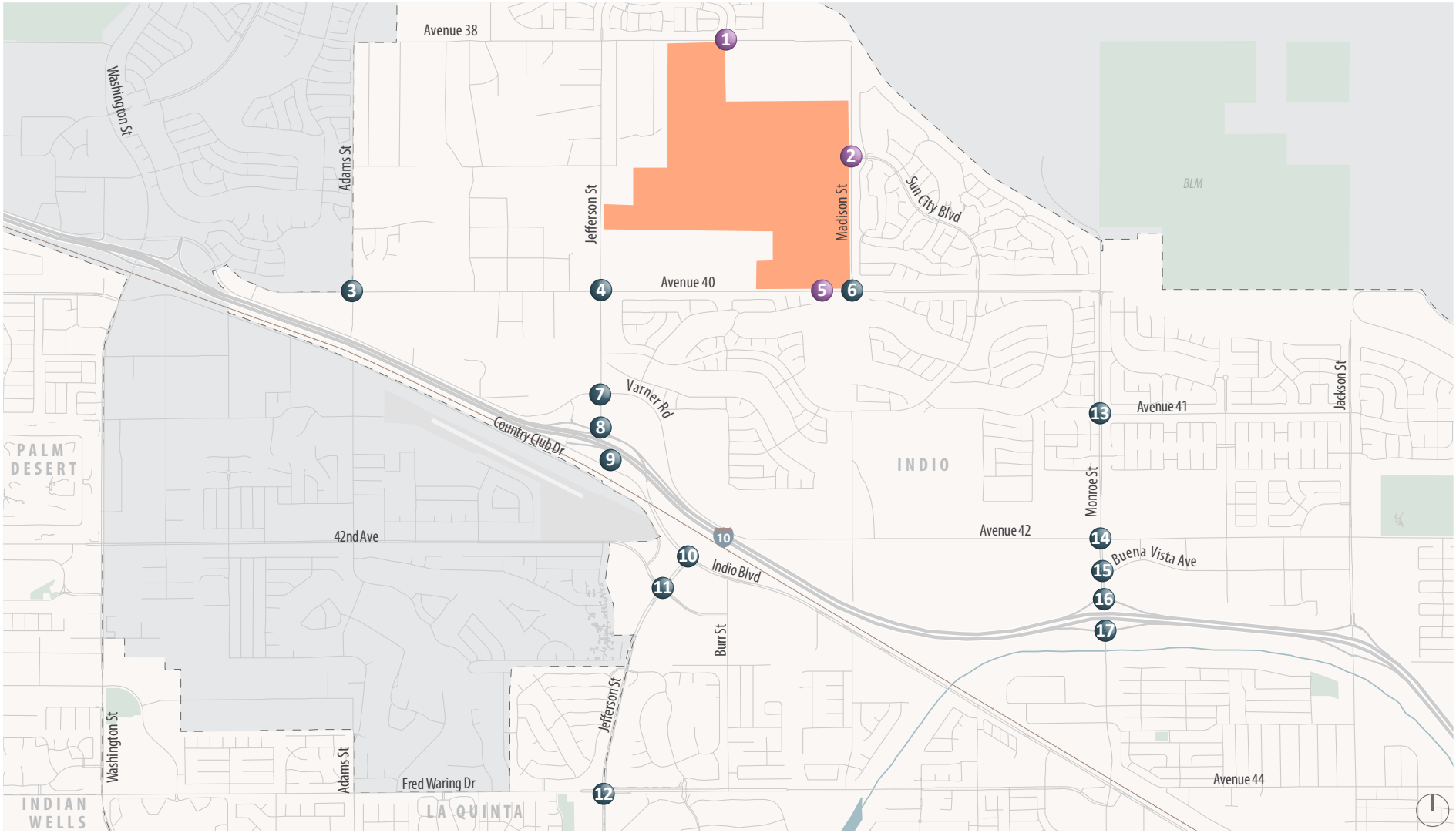
Source: *Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled* (Riverside County, 2020)

Study Area

The study area for the local transportation study includes the area immediately adjacent to the Project site, along with roadways that provide primary access to the regional transportation network. The following seventeen intersections were selected for evaluation in consultation with City of Indio staff:

As shown in **Figure 2**, the proposed study intersections are:

1. Avenue 38 and Talavera Boulevard/Project Driveway
2. Madison Street and Sun City Boulevard/Project Driveway
3. Adams Street and Avenue 40
4. Jefferson Street and Avenue 40
5. Avenue 40 and Camino San Gregorio/Project Driveway
6. Madison Street and Avenue 40
7. Jefferson Street and Varner Road
8. Jefferson Street and I-10 Westbound Ramps
9. Jefferson Street and I-10 Eastbound Ramps
10. Jefferson Street and Indio Boulevard
11. Jefferson Street and Avenue 42/Country Club Drive
12. Jefferson Street and Fred Waring Drive
13. Monroe Street and Avenue 41
14. Monroe Street and Avenue 42
15. Monroe Street and Buena Vista Avenue
16. Monroe Street and I-10 Westbound Ramps
17. Monroe Street and I-10 Eastbound Ramps



Project Site # Study Intersection # Project Driveway Study Intersection

Figure 2

Project Site Vicinity and Study Intersection Locations

Additionally, the traffic study evaluates the four roadway segments surrounding the Project:

1. Avenue 38 from Jefferson Street to Madison Street
2. Madison Street from Avenue 38 to Avenue 40
3. Avenue 40 from Jefferson Street to Madison Street
4. Jefferson Street from Avenue 39 to Avenue 40

Analysis Scenarios

Study locations listed for the local transportation study were evaluated for the following scenarios:

- Existing (2022) Conditions – 2022 traffic turning movement counts collected at study intersections adjusted to reflect non-pandemic conditions.
- Near-Term (2030) without Project Conditions – Projected traffic volumes and near-term roadway improvements expected to occur around time the proposed Project would be operational, without development of the Project.
- Near-Term (2030) with Project Conditions – Projected traffic volumes and near-term roadway improvements expected to occur around time the proposed Project would be operational, with development of the Project.
- Cumulative (2045) without Project Conditions – Projected traffic volumes and future roadway improvements based on the Riverside County Transportation Analysis Model (RIVCOM) under City of Indio General Plan build-out conditions, without development of the Project.
- Cumulative (2045) with Project Conditions – Projected traffic volumes and future roadway improvements based on the RIVCOM under City of Indio General Plan build-out conditions, with development of the Project.

Existing Conditions

This chapter describes the existing transportation conditions in the Project study area, including the roadway network and the transit, pedestrian, and bicycle facilities in the vicinity of the Project site.

Roadway System

Regional access to the study area is provided by Interstate 10 (I-10). Local access to the site is provided by Avenue 38 to the north, Madison Street to the east, and Avenue 40 to the south from Jefferson Street and Monroe Street.

I-10 is the southernmost cross-country federal highway that traverses the states of California, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama, and Florida. I-10 runs through the northern portion of the City, south of the Project site. In the Project study area, I-10 has three mixed-flow lanes in each direction.

Avenue 38 is an east-west collector that extends from Del Webb Boulevard to Madison Street and forms the northern boundary of the Project site. Avenue 38 is generally one lane in each direction and has two lanes in the eastbound direction east of Talavera Boulevard. There are Class II bicycle lanes on Avenue 38 between Dune Palms Road and Madison Street.

Madison Street is a north-south collector that connects Avenue 38 and Avenue 40 and forms the eastern boundary of the Project site. Madison Street is a three-lane facility with two lanes in northbound direction and one lane in southbound direction. There are no bicycle facilities on Madison Street.

Avenue 40 is an east-west boulevard that extends from Fifties Way to Monroe Street and forms the southern boundary of the Project site. Avenue 40 is generally one lane in each direction west of Jefferson Street and two lanes in each direction east of Jefferson Street. There are Class II bicycle lanes on Avenue 40 west of Madison Street.

Jefferson Street is a north-south roadway located west of the Project site that provides direct access to I-10. Jefferson Street is classified as a collector north of Avenue 40 and as an arterial south of Avenue 40. Jefferson Street is generally one lane in each direction north of Sun City Boulevard, and two to three lanes in each direction south of Sun City Boulevard. The I-10/Jefferson Street interchange was recently reconstructed as a partial cloverleaf with three through lanes in each direction on the overcrossing. There are Class II bicycle lanes on the recently completed I-10/Jefferson Street interchange.

Monroe Street is north-south roadway located east of the Project site that provides direct access to I-10. Monroe Street is classified as a boulevard north of Avenue 42 and south of I-10 and as an arterial between Avenue 42 and I-10. Monroe Street is two lanes in each direction north of Villa Palazzo/Colby Way and south of Industrial Place/Avenue 44 and is generally one lanes in each direction between Villa

Palazzo/Colby Way and Industrial Place/Avenue 44. There are Class II bicycle lanes on Monroe street north of Villa Palazzo/Colby Way.

Transit Service

Transit in the study area is provided Sun Line Transit Agency (SLTA), which is the regional transit provider for Riverside County. Currently, Sun Line Transit operates a variety of bus routes in Indio.

Routes 800, 801, 802, and 803 provide school shuttle service to Shadow Hills High School. Each bus operates once on weekday mornings before school starts and once on weekday evenings after school. Bus stops are located directly adjacent to the Project site on the corner of Avenue 38 and Talavera Boulevard, and Avenue 40 and Madison Street.

Route 8 operates weekdays between 5:35 AM and 11:00 PM and provides service between the Walmart Supercenter and the Mecca Health Clinic. The route operates with headways of approximately one hour. The closest bus stop to the Project site served by Route 8, is located near the Walmart Supercenter on the corner of Showcase Parkway and Monroe Street, approximately 2.6 miles away.

Bicycle Facilities

Bicycle facilities in the City are classified as follows:

Class I – Bicycle Path

Shared-use paths are off-street bicycle facilities, such as paved trails, that may be used by all types of non-motorized users.

Class II – Bicycle Lanes

Bicycle lanes are designated street space for bicyclists, typically adjacent to the outer vehicle travel lanes. These lanes may include special lane markings and signage and can also be enhanced by adding buffered striping.

Class III – Bicycle Route

Bicycle routes are designated streets for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route. These routes are typically designated along gaps between bicycle trails or bicycle lanes.

Class IV – Separated Bikeway/Cycle Track

Cycle tracks are a separated bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bicycle lane. Cycle tracks can be adjacent to vehicle traffic but are exclusive to bicycles and must be physically separated from motor vehicle travel lanes.

Adjacent to the Project site, there are Class II bicycle lanes on Avenue 38 between Dune Palms Road and Madison Street, and Class II bicycle lanes on Avenue 40 between Jefferson Street and Monroe Street.

The City's General Plan proposes a Class I bicycle path on Jefferson Street between Avenue 38 and Varner Road and Class II bicycle lanes on Avenue 40 between Fifties Way and Monroe Street.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, and multi-use trails. Sidewalks are provided along most roadways in Indio where land uses have been developed adjacent to the roadway. Within the study area, limited pedestrian facilities are provided. While many signalized intersections in the area have marked crosswalks, pedestrian signals, and push buttons, there are very few sidewalks adjacent to the Project site.

Data Collection

Weekday morning (AM) and evening (PM) peak period intersection turning movement counts were conducted at the study intersections in February 2022 on a typical week with fair weather conditions while school was in session. Traffic counts for the Synchro analysis (for intersections 1-3 and 7-17) were collected on a single day between 7:00 to 9:00 AM and 4:00 to 6:00 PM, including separate counts of pedestrians, and bicyclists. Traffic counts for the VISSIM analysis (for intersections 4-6) were collected for an entire week between 7:00 AM to 7:00 PM, including separate counts of pedestrians, and bicyclists, to ensure that school traffic volumes on Jefferson and Avenue 40 are fully captured and analyzed. Traffic counts are provided in **Appendix A**.

For the study intersections, the single hour with the highest traffic volumes during each count period was identified. For the Synchro analysis, the AM peak hour in the Project study area is generally 7:30 to 8:30 AM and the PM peak hour is generally 4:00 to 5:00 PM. For the VISSIM analysis, the AM peak hour in the Project study area occurred on Wednesday between 7:45 to 8:45 AM and the PM peak hour occurred on Wednesday between 3:15 to 4:15 PM, coinciding with the pick-up/drop-off period at the nearby schools.

To account for abnormal traffic patterns caused by the Coronavirus Disease of 2019 (COVID-19) pandemic, traffic volumes on Jefferson Street and Monroe Street north of I-10 were compared to pre-COVID-19 conditions using Streetlight Data. Streetlight Data uses anonymous in-vehicle navigation system data and cell phone location-based services data that can be aggregated together to obtain trip information. A comparison of daily and peak period traffic count estimates on roadways in the study area from Streetlight Data for the month of February 2020 (i.e., representing pre-COVID-19 conditions) and February 2022 is presented in **Table 3**. For the purpose of relative comparison, the traffic count estimates presented were not calibrated to historical traffic counts and do not represent the actual daily and peak period traffic counts but are useful in identifying historic traffic trends and an appropriate COVID-19 adjustment factor, if needed.

Table 3: Historical Traffic Count Estimate Comparison

Peak Period	ADT Count Estimate		Volume Difference	Percent Difference
	February 2020	February 2022		
Weekday Daily (12:00 AM – 11:59 PM)	39595	41235	+1640	104%
Weekday Peak Hours (7:00 – 8:00 AM; 4:00 – 6:00 PM)	12520	13088	+568	105%

Source: Streetlight Data, February 2020 and 2022; Fehr & Peers, 2022.

Since the weekday daily and peak period traffic count estimates are higher in 2022 than in 2020, no adjustments were made. The peak hour intersection turning movement counts are presented on **Figure 3** along with the existing lane configuration and traffic control.

Intersection Operations

Intersection operations under Existing Conditions were evaluated using the HCM methodology with results summarized in **Table 4**. Observed peak hour factors were used at all intersections, and pedestrian and bicycle activity was factored into the analysis. Under Existing Conditions, all study intersections operate at acceptable service levels in accordance with benchmarks set by the City of Indio during both the weekday morning and evening peak hours, which was confirmed during field observations. Intersection LOS calculation worksheets are provided in **Appendix B**.

Peak Hour Signal Warrant

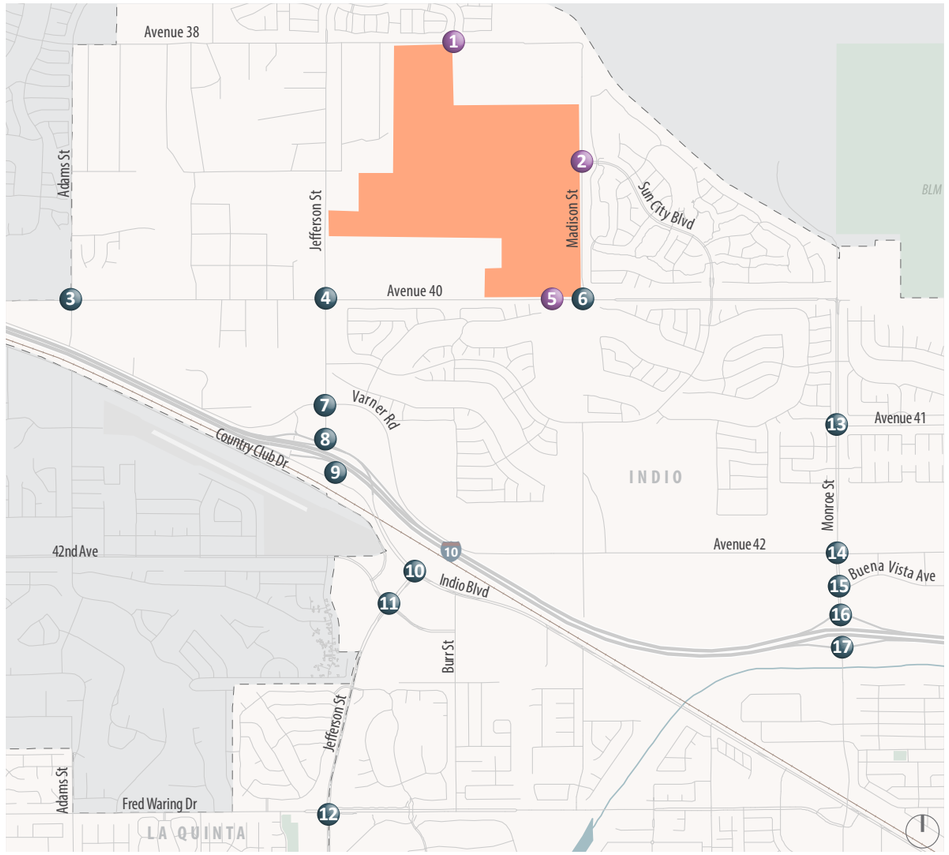
Peak hour traffic signal warrants under Existing Conditions were reviewed at the unsignalized study intersections in **Table 5**. Under Existing Conditions, the peak hour signal warrant is satisfied at:

- Monroe Street and Avenue 41 (Intersection 13)

The City of Indio has plans to construct a traffic signal at this intersection. Signal warrant worksheets are provided in **Appendix C**.

Roadway Segment Operations

Roadway segment operations under Existing Conditions were evaluated using the ADT based thresholds for Riverside County with results summarized in **Table 6**. Under Existing Conditions, all study roadway segments operate at LOS C or better.



XX (YY) AM (PM) Peak Hour Traffic Volumes Signalized Intersection Stop Sign

Project Site Study Intersection Project Driveway Study Intersection

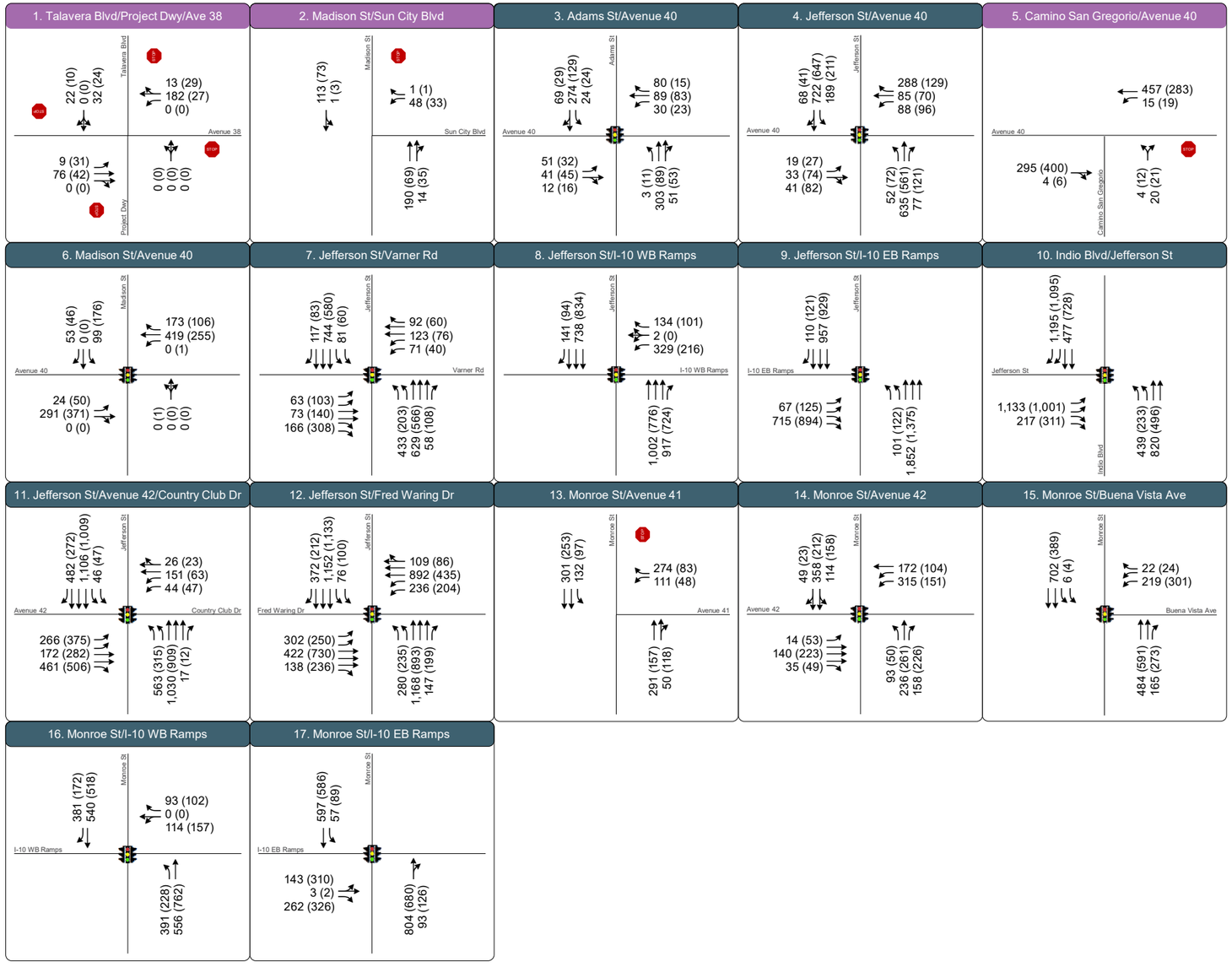


Figure 3

Existing (2022) Peak Hour Intersection Turning Movement Volumes

Table 4: Existing (2022) Intersection Levels of Service

	Intersection	Control[1]	Peak Hour	Existing Conditions	
				LOS[2]	Delay[2]
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	B A	10 8
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	A (B) A (A)	2 (12) 2 (10)
3	Adams Street and Avenue 40	Signal	AM PM	A A	8 7
4	Jefferson Street and Avenue 40	Signal	AM PM	D C	54 29
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	A (A) A (A)	1 (5) 1 (4)
6	Madison Street and Avenue 40	Signal	AM PM	A B	9 12
7	Jefferson Street and Varner Road	Signal	AM PM	D D	41 36
8	Jefferson Street and I-10 Westbound Ramps	Signal	AM PM	A A	7 3
9	Jefferson Street and I-10 Eastbound Ramps	Signal	AM PM	B C	15 28
10	Jefferson Street and Indio Boulevard	Signal	AM PM	C C	35 34
11	Jefferson Street and Avenue 42/Country Club Drive	Signal	AM PM	C C	33 32
12	Jefferson Street and Fred Waring Drive	Signal	AM PM	D C	38 34
13	Monroe Street and Avenue 41	SSSC	AM PM	A (C) A (C)	8 (20) 3 (16)
14	Monroe Street and Avenue 42	Signal	AM PM	C C	28 28
15	Monroe Street and Buena Vista Avenue	Signal	AM PM	A A	8 9
16	Monroe Street and I-10 Westbound Ramps	Signal	AM PM	C A	24 8
17	Monroe Street and I-10 Eastbound Ramps	Signal	AM PM	B C	13 22

Notes:

1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
3. Deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Table 5: Existing (2022) Peak Hour Signal Warrants

	Intersection	Control[1]	Peak Hour	Signal Warrant Met?
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	No No
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	No No
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	No No
13	Monroe Street and Avenue 41	SSSC	AM PM	**Yes** No

Note:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.

Source: Fehr & Peers, 2022.

Table 6: Existing (2022) Roadway Segments

	Roadway Segment	Roadway Classification	Average Daily Traffic (ADT)	LOS
1	Avenue 38 From Jefferson Street to Madison Street	2-Lane Collector	1,600	A – C
2	Madison Street From Avenue 38 to Avenue 40	2-Lane Collector	2,700	A – C
3	Avenue 40 From Jefferson Street to Madison Street	2-Lane Collector	5,400	A – C
4	Jefferson Street From Avenue 39 to Avenue 40	2-Lane Collector	10,200	A – C

Note:
1. Deficient roadway segment operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Project Characteristics

This section provides an overview of the proposed Project and describes the trip generation, trip distribution, and trip assignment characteristics for the Project, which allow for an evaluation of the effect of the Project on the operating conditions of the surrounding roadway network. The amount of Project traffic volume projected to be added to the transportation system was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the site was estimated.
2. **Trip Distribution** – The *direction* trips will use to approach and depart the area was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements based on likely paths of travel.

Project Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project will add to the surrounding roadway system. The *Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers [ITE], 2021) was used to estimate the number of daily, morning (AM) peak hour, and evening (PM) peak hour trips associated with the Project.

The Project would develop up to 1,500 single-family active adult dwelling homes (i.e., age-restricted) within the 361-acre specific plan area. Primary residents within the specific plan area are required to be 55 years or older and no children are allowed to be permanent residents. As such, ITE Land Use Code 251 - Senior Adult Housing was used to estimate the Project's trip generation.

The Project is expected to generate approximately 6,470 daily trips, with 304 trips occurring during the AM peak hour and 367 trips occurring during the PM peak hour, as presented in **Table 7**.

Table 7: Project Trip Generation Estimates

ITE Land Use	Quantity	Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
(251) – Senior Adult Housing – Single-Family[1]	1,500	Dwelling Units	6,470	100	204	304	224	143	367

Notes:

- Based on trip generation rates for ITE land use 251.
  a. Daily = 4.31 * X; X = Dwelling Units
  b. AM: =e^(0.76*(Ln(X)) + 0.16); X = Dwelling Units; 33% Inbound, 67% Outbound
  c. PM: =e^(0.78*(Ln(X)) + 0.2); X = Dwelling Units; 61% Inbound, 39% Outbound

Source: *Trip Generation Manual, 11th Edition* (ITE, 2021); Fehr & Peers, 2022.

Project Trip Distribution

Project trip distribution refers to the directions of approach and departure that vehicles would take to access and leave the Project. Estimates of Project trip distribution were developed using the cumulative year RIVCOM model for the cumulative analysis year as reviewed and verified by City staff. The Project trip distribution is shown in **Figure 4**.

Project Trip Assignment

Project trip assignment refers to the specific route and roadway segments vehicles would take to access and leave the Project. Using the trip distribution percentages on Figure 4, Project trips were then assigned to the roadway network as presented in **Figure 5.**

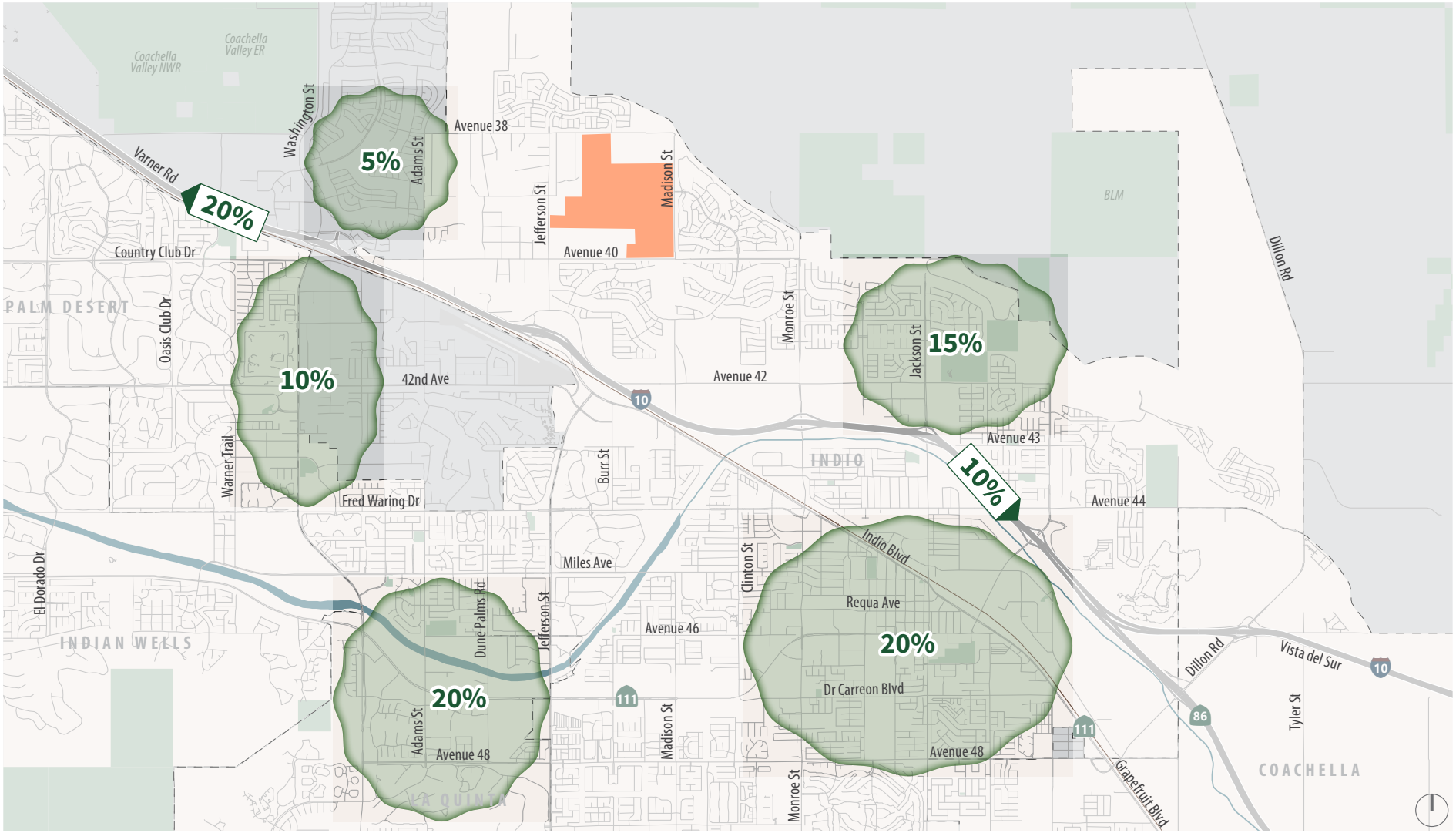
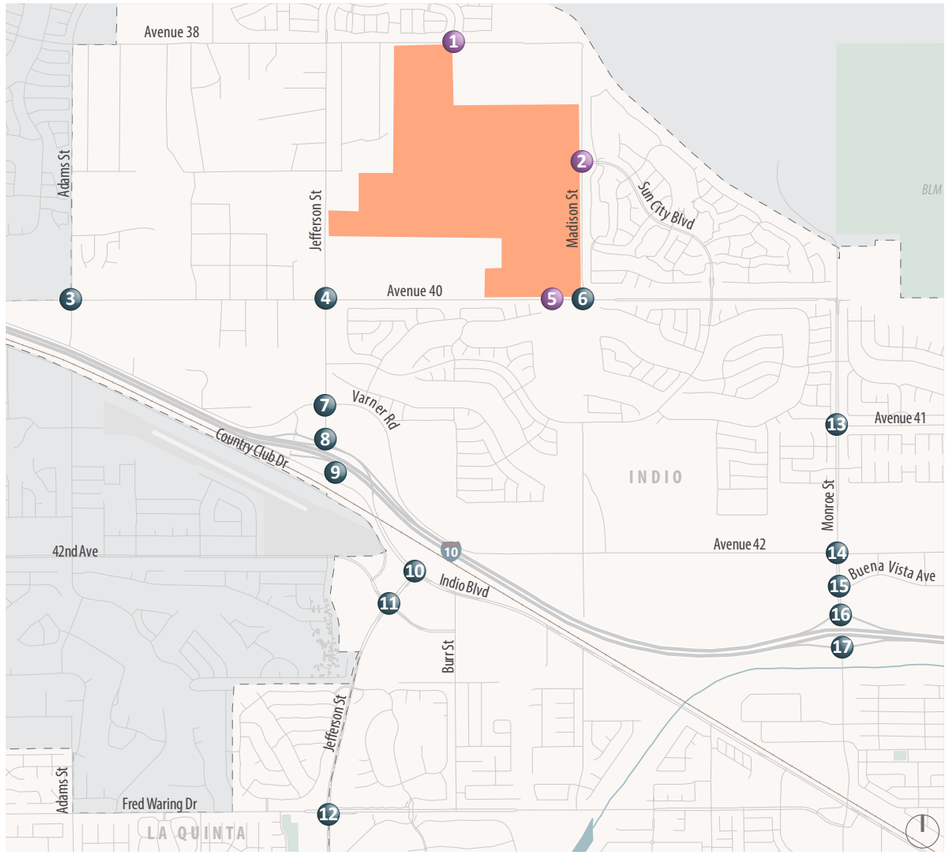


Figure 4

Project Trip Distribution



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Project Driveway Study Intersection

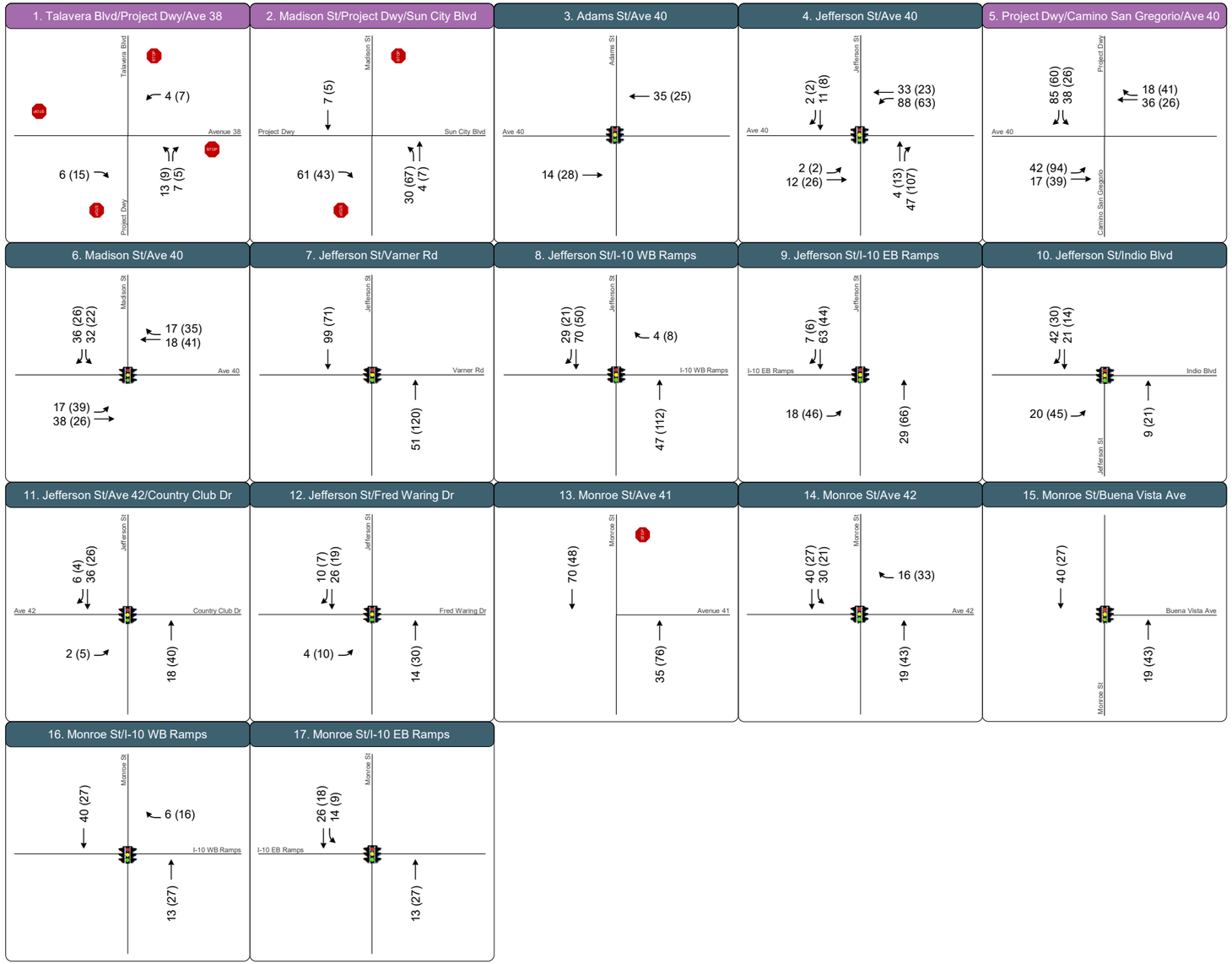


Figure 5

Project Trip Assignment

CEQA Transportation Study

Based on the definitions and determining factors outlined in the CEQA Appendix G Environmental Checklist Form, the Project would have a significant impact on the environment if the Project would:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle, and pedestrian facilities.

B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

D. Result in inadequate emergency access.

A – Programs, Plans, Ordinances, and Policies

The *City of Indio General Plan* (2019) is a comprehensive plan for the growth and development of the City. The General Plan includes policies related to land use and urban design, mobility, economic development, health and equity, parks, recreation, and open space, conversation, infrastructure and public facilities, safety, and noise. An impact is considered significant if the project conflicts with an adopted policy within the Mobility Element (ME) of the General Plan. Policies applicable to the Project include:

<u>Complete Streets Policies:</u>

- **ME-1.2 Users.** Design and build streets that accommodate users of all ages and all abilities. This includes utilizing the layered networks approach to identify key modes that shall be prioritized and enhanced along streets.
- **ME-1.3 Projects and phases.** Design, plan, maintain, and operate streets using complete streets principles for all types of transportation projects including design, planning, construction, maintenance, and operations of new and existing streets and facilities. This includes repurposing unneeded roadway pavement to implement bicycle and pedestrian improvements (e.g. road diets) when Average Daily Traffic (ADT) volumes are less than 15,000 vehicles.
- **ME-1.10 Residential streets.** Design residential streets to minimize traffic volumes and/or speed, as appropriate, without compromising connectivity for emergency first responders, bicycles, and pedestrians. This could be accomplished through management and implementation of complete streets strategies, short block lengths, narrow streets, and/or traffic calming measures.
- **ME-1.12 Compliance.** Require new developments in Indio to comply with the City's Complete Streets Implementation Plan.

Active Transportation Policies:

- **ME-2.2 Facility enhancement.** Enhance the bicycle and pedestrian facilities as identified in Figure 4-1 [of the General Plan] as part of development, private grants, signing of shared routes, maintenance activities, etc.
- **ME-2.4 Intersection and signal enhancements.** Enhance pedestrian and bicycle crossing efficiency and safety, including timing of signals, crosswalks, and intersection design features.

Transit Policies:

- **ME-3.3 Safe linkages.** Encourage convenient and safe pedestrian linkages to and from transit service to provide better first-mile/last-mile connectivity. This includes connectivity to/from existing and new development and along streets providing access to the transit stop.

Vehicle Polices:

- **ME-4.1 Street sections.** Minimize street widths to minimize capital costs, maintenance costs, decrease vehicle speeds, and improve safety for all users of the street while ensuring consistency with the street guidance provided in Table 4-2 [of the General Plan].

Parking Policies:

- **ME-8.1 Off-street parking.** Require new developments to provide sufficient off-street parking (or payment of in-lieu fees) to reduce on-street parking congestion and increase both auto and pedestrian safety. New development shall provide electric vehicle charging stations and preferential parking for carpools, vanpools, and alternative fuel vehicles.
- **ME-8.4 Bicycle parking.** Safe and secure bicycle parking facilities shall be provided with all new development.

Complete Streets Policy Review

The *City of Indio Complete Streets & Drainage Master Plan* (2020) uses a layer network approach to identify preferred travel models on each of the roadways in the City, including roadways adjacent to the proposed Project.

- The high priority pedestrian network includes Avenue 38, Jefferson Street, and Madison Street. Avenue 40 is included in the moderate priority pedestrian network.
- The priority bicycle networks includes all streets adjacent to the Project including Avenue 38, Jefferson Street, Madison Street, and Avenue 40. There are existing bicycle lanes on Avenue 38 and Avenue 40.

- The priority transit network does not include any streets adjacent to the Project.
- The high priority automobile network includes Avenue 40. Avenue 38, Jefferson Street, and Madison Street are included in the moderate priority automobile network.

None of the roadways adjacent to the Project site were identified as Complete Streets priority corridors.

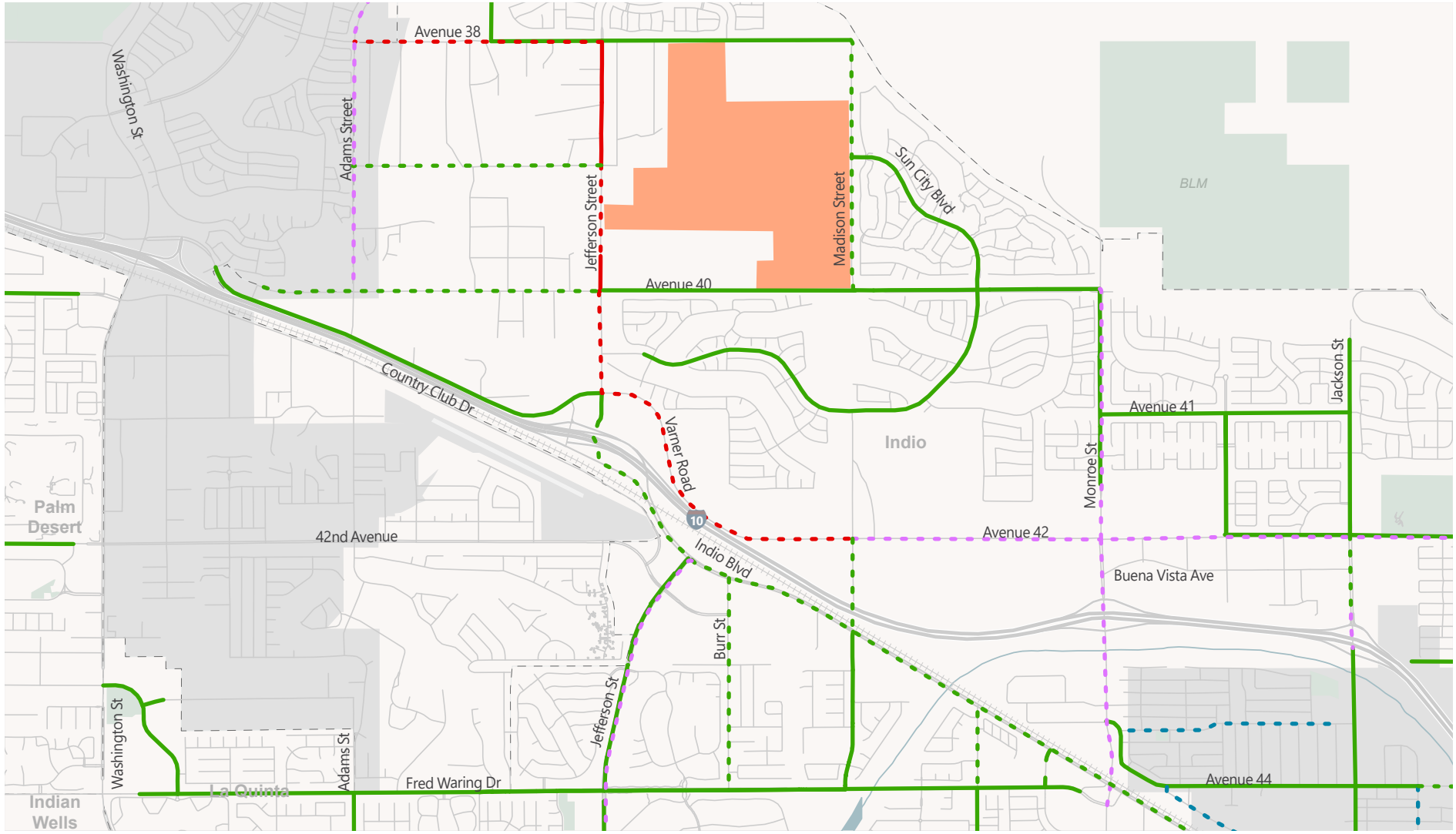
> *The Project would comply with the City's Complete Street Implementation Plan (ME-1.12) and reconstruct the street frontage adjacent to the Project with improvements consistent with the layer network approach, including 1) pedestrian facilities on Avenue 38, Jefferson Street, Madison Street, and Avenue 40, adjacent to the Project and 2) roadway widening on Madison Street to accommodate bicycle lanes (ME-1.2). Existing bicycle lanes on Avenue 38 and Avenue 40 would be maintained.*
>
> *Frontage improvements on local roadways and residential streets internal to the Project site would be designed using complete street principals. The project is considering a roundabout on Avenue 40 at the main entrance to the Project site to provide traffic calming, while prioritizing all modes of access. (ME-1.10). Additionally, the Project does not preclude the repurposing of unneeded roadway pavement to implement road diets for bicycle and pedestrian improvements (ME 1.3).*
>
> *The Project does not disrupt existing Complete Streets improvements, interfere with planned Complete Street improvements, or propose any changes to the Complete Streets network that would be inconsistent with General Plan policies, therefore the Projects impact to the Complete Streets policies is* ***less-than-significant****.*

Active Transportation Policy Review

Pedestrian facilities are provided along most roadways in Indio where land uses have been developed adjacent to the roadway. Within the study area, limited pedestrian facilities are provided. While many signalized intersections in the area have marked crosswalks, pedestrian signals, and push buttons, there are few sidewalks adjacent to the Project site.

> *The Project would construct sidewalks along the Project frontages on Avenue 38, Jefferson Street, Madison Street, and Avenue 40 with ADA accessible crosswalks at intersections (ME-2.2). The project is also considering a roundabout on Avenue 40 at the main entrance to the Project site to provide traffic calming, while prioritizing all modes of access (ME-2.4). The Project does not disrupt existing pedestrian facilities, interfere with planned pedestrian facilities, or propose any changes to the pedestrian system that would be inconsistent with pedestrian system policies, therefore the Project's impact to the pedestrian system is* ***less-than-significant****.*

Bicycle facilities, existing and proposed, are presented on **Figure 6**.



Existing and Proposed Bike Facilities

Existing Bike Facilities
- Class 1
- Class 2

Proposed Bike Facilities
- Class 1
- Class 2
- Class 3
- Class 4

Project Site

Figure 6

Bike Facilities

* Existing bike facilities along Sun City Boulevard are on private roadways.

Source: City of Indio General Plan 2040, and City of Indio Complete Streets Plan 2020, and SCAG 2022

Adjacent to the Project site there are Class II bicycle lanes on Avenue 38 between Dune Palms Road and Madison Street, and Class II bicycle lanes on Avenue 40 between Jefferson Street and Monroe Street.

Adjacent to the Project site, there are Class I bicycle paths proposed on Jefferson Street between Avenue 39 and Varner Road, and Class II bicycle lanes planned on Madison Street between Avenue 38 and Avenue 40.

> *The Project would improve the roadway frontage adjacent to the Project site and widen Madison Street to accommodate bicycle lanes (ME-2.2). The Project is considering a roundabout on Avenue 40 at the main entrance to the Project site to provide traffic calming, while prioritizing all modes of access (ME-2.4). The improvements would be compatible with the planned bicycle facilities in the area, therefore the Project's impact to the bicycle system is* ***less-than-significant****.*

Transit Policy Review

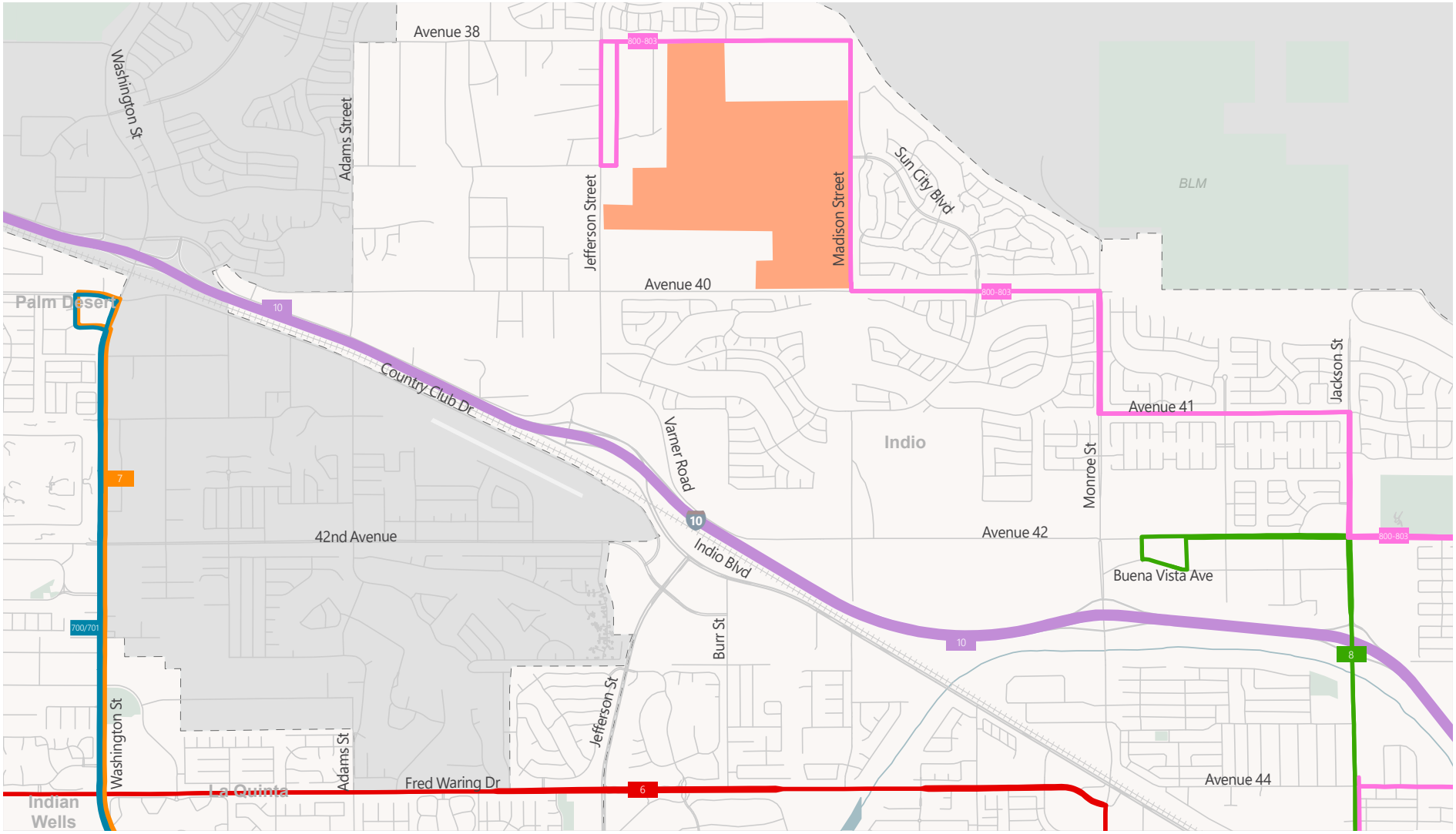
Transit routes are presented on **Figure 7**. Transit in the study area is provided Sun Line Transit Agency (SLTA), which is the regional transit provider for Riverside County. Currently, Sun Line Transit operates a variety of bus routes in Indio. Routes 800, 801, 802, and 803 provide school shuttle service to Shadow Hills High School. Each bus operates once on weekday mornings before school starts and once on weekday evenings after school. Bus stops are located directly adjacent to the Project site on the corner of Avenue 38 and Talavera Boulevard, and Avenue 40 and Madison Street. There are no other bus routes that operate within 1 mile of the Project site.

> *The project will provide pedestrian linkages along the Project frontage to existing bus stops by constructing sidewalks along the Project frontages on Avenue 38, Jefferson Street, Madison Street, and Avenue 40 with ADA accessible crosswalks at intersections (ME-3.3). The Project does not disrupt an existing transit facility or service and would not interfere with the implementation of future transit service, therefore the Project's impact to transit is* ***less-than-significant****.*

Vehicle Circulation Policy Review

The Project proposes three entrances for residents - one primary entrance and two secondary entrances. Primary access to the site would be provided on Avenue 40 at Camino San Gregorio. The secondary entrances are located on Madison Street at Sun City Boulevard and on Avenue 38 at Talavera Boulevard. There is an additional emergency access road off Avenue 40 west of the primary entrance.

> *The Project would widen the roadway along the Project frontage to accommodate the number of vehicle travel lanes indicated in the City's General Plan. The main entrance on Avenue 40, part of the high priority automobile network, and all other Project connections to external roadways will be constructed to minimize capital costs, maintenance costs, decreasing vehicle speeds through the implementation of complete street policies, while prioritizing all modes of access (ME-4.1), therefore the Project's impact to vehicle circulation is* ***less-than-significant****.*



Sunline Transit Agency

0 0.25 0.5 Miles

N

School Tripper

- # Routes 700, 701
- # Routes 800, 801, 802, 803

SunBus

- # Route 6
- # Route 7
- # Route 8

Commuter Link

- # Route 10

Project Site

Figure 7

Transit Routes

Source: Sunline Transit Agency, 2022

Parking Policy Review

The General Plan parking policies direct new developments to limit on-street parking and provide safe and secure bicycle parking.

> *The Project would develop up to 1,500 single-family active adult dwelling homes within the 361-acre specific plan area. Off-street parking for the private clubhouse will be designed to accommodate resident and employee parking and limit on-street parking. Each dwelling home would have a parking garage to limit on-street parking and provide safe and secure bicycle storage (ME-8.1, ME-8.4), therefore the Project's impact to parking is* ***less-than-significant****.*

B – Vehicle Miles Travel

For the purposes of CEQA, level of service cannot be used to determine a project's environmental impact; CEQA Guidelines Section §15064.3 requires Vehicle Miles of Travel (VMT) analysis for land use developments. The City of Indio has adopted Riverside County's *Transportation Analysis Guidelines for Level of Service and Vehicles Miles Traveled* (2020).

Riverside County's Guidelines follow OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018). The updates outline the VMT analysis methodology and screening criteria by which land-development projects can apply when evaluating transportation impacts. An impact is considered significant if the project generates VMT above the existing county-wide average VMT per capita.

Screening Criteria

VMT impacts for the Project will be less than significant if any one of the identified screening criteria outlined below are met:

Criterion #1: Small Project

The total Project would construct up to 1,500 single family dwelling units. The proposed Project does not meet the condition (less than 110 dwelling units) necessary to satisfy Criterion #1.

Criterion #2: Projects Near High Quality Transit

The nearest transit stop to the Project site is approximately 2.6 miles away. The proposed Project does not meet the condition (major transit stop within one-half mile away) necessary to satisfy Criterion #2.

Criterion #3 Affordable Residential Development

The Project would not provide any affordable residential housing. The proposed Project does not meet the condition (high percentage of affordable housing) necessary to satisfy Criterion #3.

Criterion #4: Map-Based Screening

There is no readily available map-based screening tool available for Eastern Riverside County. The proposed Project cannot use a map-based screening tool to satisfy Criterion #4.

Criterion #5: Redevelopment Project

The Project would be constructed on a vacant parcel and would not replace any existing VMT-generating land uses. The proposed Project does not meet the condition necessary to satisfy Criterion #5.

The proposed Project does not satisfy any of the screening criteria as described above.

VMT Impact Criteria

Per the guidelines, projects not screened out are required to complete a VMT analysis using RIVCOM to determine if there would be a significant VMT impact. RIVCOM was released in summer of 2021 and is considered the best tool available for VMT estimation in Riverside County and Indio. RIVCOM has a 2018 base year and 2045 future year, with land uses and roadway networks consistent with the *2020 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy* (2020 SCAG RTP/SCS). For residential projects, the project would create a significant impact if the Project-generated home-based production VMT per capita exceeds the existing county-wide average home-based production VMT per capita. The project generated VMT method relies on tracking trips to/from an individual project. In simple terms, it looks at the total number and distance each trip traveled divided by the population that generated those trips (i.e., residents, employees, students, visitors, etc. as appropriate).

Consistent with guidance from the *Transportation Analysis Guidelines for Level of Service and Vehicles Miles Traveled*, VMT analysis was performed under Baseline conditions for the Project. VMT analysis results under Cumulative (2045) conditions is provided for informational purposes.

VMT Analysis

VMT was estimated using the Baseline and Cumulative RIVCOM, as presented in **Table 8**. VMT is calculated by tracking vehicle trips and trip lengths from origin and destination Transportation Analysis Zones (TAZs) within the model. TAZs are representative of land-uses within a geographic region and vary in size based on the density development and roadway network in the region. Trips are multiplied by trip length to calculate VMT. Home-based VMT was isolated by trip purpose to prepare the VMT analysis below.

The home-based VMT per capita threshold was determined under "No Project" conditions. The proposed Project was then added to the model to evaluate "With Project" conditions. To represent the Project Transportation Analysis Zone (TAZ), 2,700 persons and 1,500 single family households were added, reflective of an estimated persons per household ratio of 1.8 (the original model used a persons per household ratio of roughly 1.5).

> *The Project generated VMT per capita under Baseline conditions (11.6) is 22.0% lower than the county-wide average (14.9). It is anticipated that based on the Project type (senior living) and location (access to regional freeways and other goods and services), that the Project will generate VMT on a per capita basis lower than the County-wide average. The Project generated VMT per*

*capita is below the threshold of the county-wide average, therefore the Project VMT impact is **less-than-significant**.*

Table 8: Project Generated VMT

Scenario	VMT per Capita		Below County Average?
	County-wide Average	Project	
Baseline	14.9	11.6	**Yes**
Cumulative (2045)	15.8	12.0	**Yes**

Source: Fehr & Peers, 2022.

C – Geometric Design Features

Vehicular access to the project site will be provided by a main entry at Avenue 40 and two secondary entrances on Madison Street and Avenue 38. Vehicles can circulate within the project site between the three driveways. On-site vehicle circulation is provided by a network of internal roadways.

The Project is considering a roundabout on Avenue 40 at the main entrance. A roundabout would provide traffic calming on Avenue 40 while prioritizing all modes of access. The proposed roundabout include accommodations for pedestrians, bicyclists, golf carts, vehicles, and emergency vehicles, as shown in the conceptual design in **Appendix D**.

- Vehicles would enter the roundabout by yielding to traffic approaching from the left; only right-turns are permitted.
- Bicyclists have the option to travel within the roundabout or use the sidewalks and crosswalks surrounding the roundabout. Bicycle exit and entrance ramps are proposed to allow bicyclists to shift between the bicycle lane and sidewalk prior to and after departing the roundabout.
- Pedestrians would use the existing sidewalks and new sidewalks that would be constructed by the Project along the frontage and around the roundabout. Crosswalks are proposed on all four legs of the roundabout. Safety features including vehicle deflection angles, yield signs/markers, and raised reflective pavement markers would accompany the pedestrian crossings.

The main entrance and roundabout is proposed across from Camino San Gregorio. Traffic existing the existing driveway at Camino San Gregorio would experience reduced delay (see Intersection Control Evaluation in the Site Plan Assessment) and added safety benefits. The roundabout is designed with deflection angles at each of the entry approaches that require vehicles to slow down prior to entry. This helps reduce vehicle speeds at the proposed pedestrian crossings across each leg of the roundabout. The roundabout would also remove left-turns and the conflicts associated with yielding to two-directions of traffic. These two factors would reduce the severity of collisions should they occur.

Locating the main entrance across from Camino San Gregorio reduces circuity and creates a more direct path of travel for vehicles, bicyclists, and pedestrians. Offsetting the intersection to a different location would create more points of entry on Avenue 40 and create additional conflict points. The roundabout was evaluated in the Intersection Control Evaluation in the Site Plan Assessment for vehicular queueing. Vehicle queuing will not spillback into the adjacent intersection on Avenue 40 at Madison Street.

All Project driveways are aligned perpendicular to the major streets. Parking is restricted on the major streets and there are no additional obstructions that would limit sight distance from the Project driveways. The Project would also provide turn pockets with adequate vehicular storage and deceleration distance. The roadways internal to the Project site would be constructed per City standards.

> *The Project does not propose any substandard design features, therefore the Project's impact to geometric design hazards is considered* ***less-than-significant****.*

D – Emergency Access

Factors such as the number of access points, roadway width, and proximity to fire stations determine whether a project provides enough emergency access. The fire station most likely to serve the site is Riverside County Fire Department Station 80, located at 81024 Avenue 40, directly adjacent to the Project site. Emergency vehicles could travel westbound on Avenue 40 or northbound on Madison Street to access the Project site. Internal roadways are designed to accommodate large trucks and emergency vehicles.

> *Emergency Vehicle Access to the Project sites is proposed is available at the main entry at Avenue 40, two secondary entrances on Madison Street and Avenue 38, and at an additional emergency access road off Avenue 40 west of the main entry. If one entrance is blocked, emergency personnel could access the site from multiple other entry points. The Project's impact to emergency access is* ***less-than-significance****.*

Local Transportation Study

The traffic operations analysis is not related to CEQA. The operational analysis is intended to assess the potential effect of the project on the surrounding roadway network. The City of Indio generally strives to maintain LOS D or better as a guideline for intersection operations, as outlined in the *City of Indio General Plan* (General Plan) approved in 2019.

Near-Term (2030) Conditions

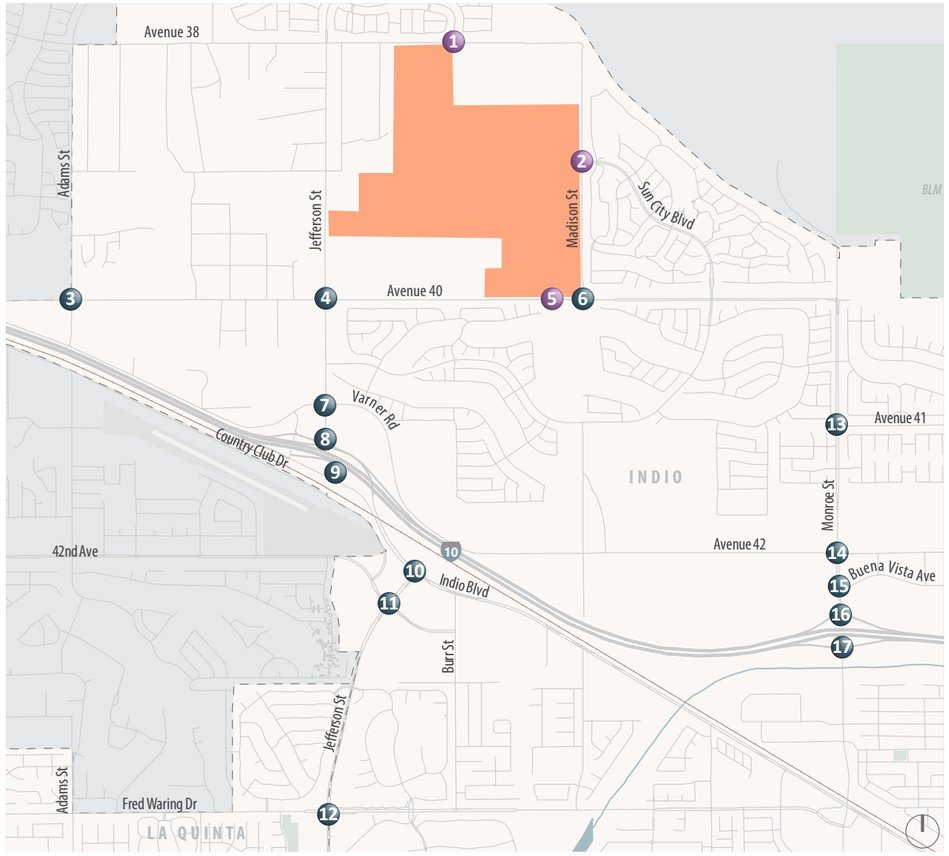
This chapter presents intersection operations under Near-Term (2030) conditions without and with the Project. Near-Term conditions represent projected traffic volumes expected to occur by the time the proposed Project would be built-out. Per the 2020 SCAG RTP/SCS financially constrained project list, the only Near-Term (2030) roadway improvement assumed at study intersections was the completion of I-10/Monroe Street interchange.

Traffic Volume Development

The latest version of RIVCOM was used to develop traffic volume forecasts. Traffic volume forecasts were developed using the "difference methodology". The difference methodology uses the Base Year (2018) and Future Year (2045) model outputs to calculate the annual growth at study facilities. This projected annual growth was added to the Existing (2022) traffic counts to develop initial Near-Term (2030) without Project traffic forecasts. City staff identified a list of approved projects within a 2-mile radius of the Project site, including:

- 267 Multi-family residential units on the west corner of Jefferson Street and Avenue 42,
- 2,056 square foot (sq. ft.) Starbucks with drive-through on the east corner of Jefferson Street and Avenue 42,
- Chandi Square, which includes 5,500 sq. ft. of convenience market, 3,600 sq. ft. of carwash, 10 fuel pump stations, 2,600 sq. ft. of high-turnover sit-down restaurant, and 2,400 sq. ft. of fast-food restaurant with drive-through on the southwest corner of Jefferson Street and Varner Road, and
- 3,820 sq. ft. Raising Canes with drive-through on the southeast corner of Monroe Street and Buena Vista Avenue.

Vehicle trips generated by the approved projects were estimated and assigned to the roadway network, added on top of the existing traffic counts, and then compared to the initial Near-Term (2030) without Project traffic forecasts. If turning movement forecasts were lower at any of the movements, traffic volumes were increased and balanced accordingly to develop the final Near-Term (2030) without Project traffic forecasts. Near-Term (2030) without Project intersection turning movement forecasts are presented in **Figure 8.** Project trips from Figure 5 were then added to develop Near-Term (2030) with Project intersection turning movement forecasts, as presented in **Figure 9.**



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Project Driveway Study Intersection

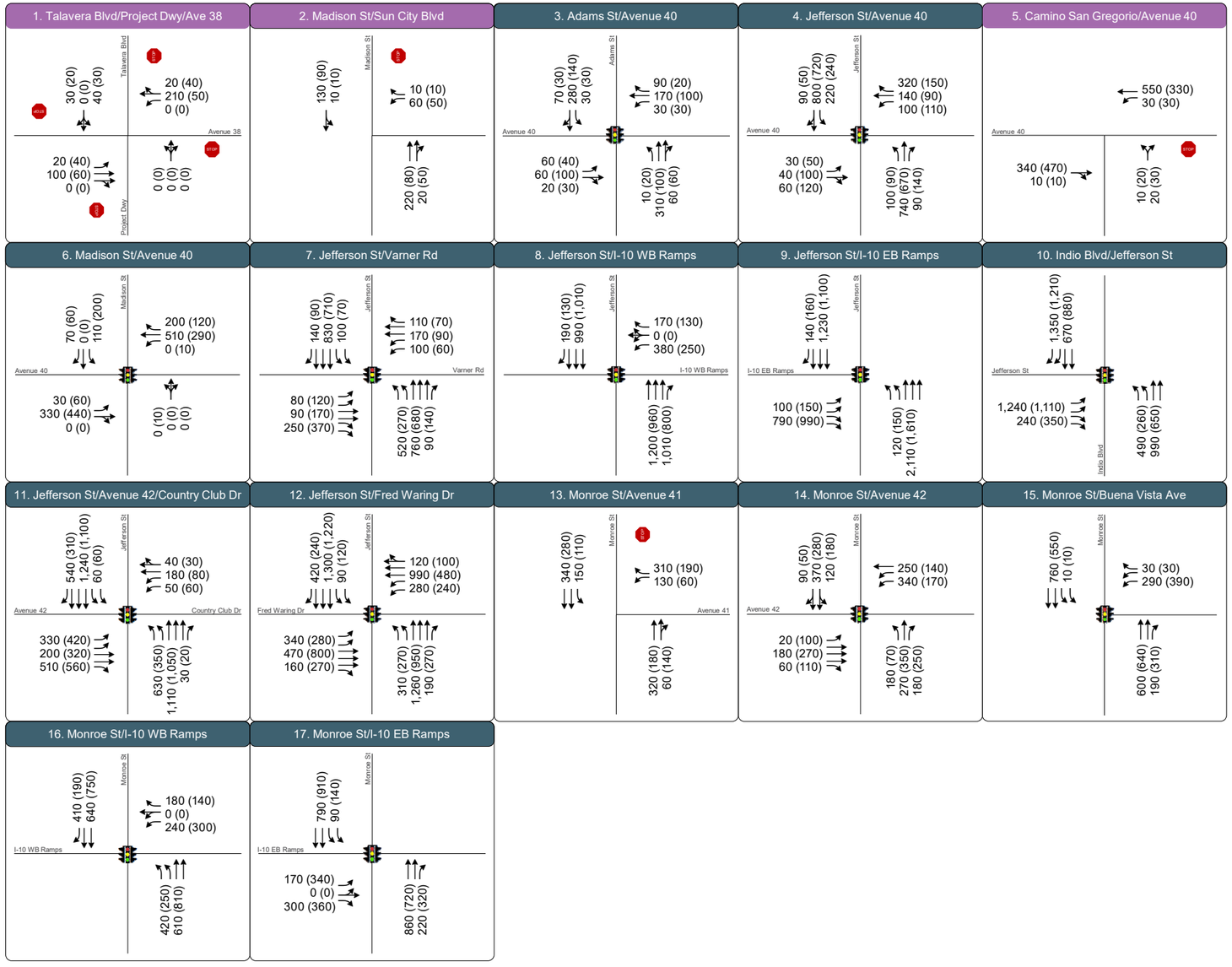
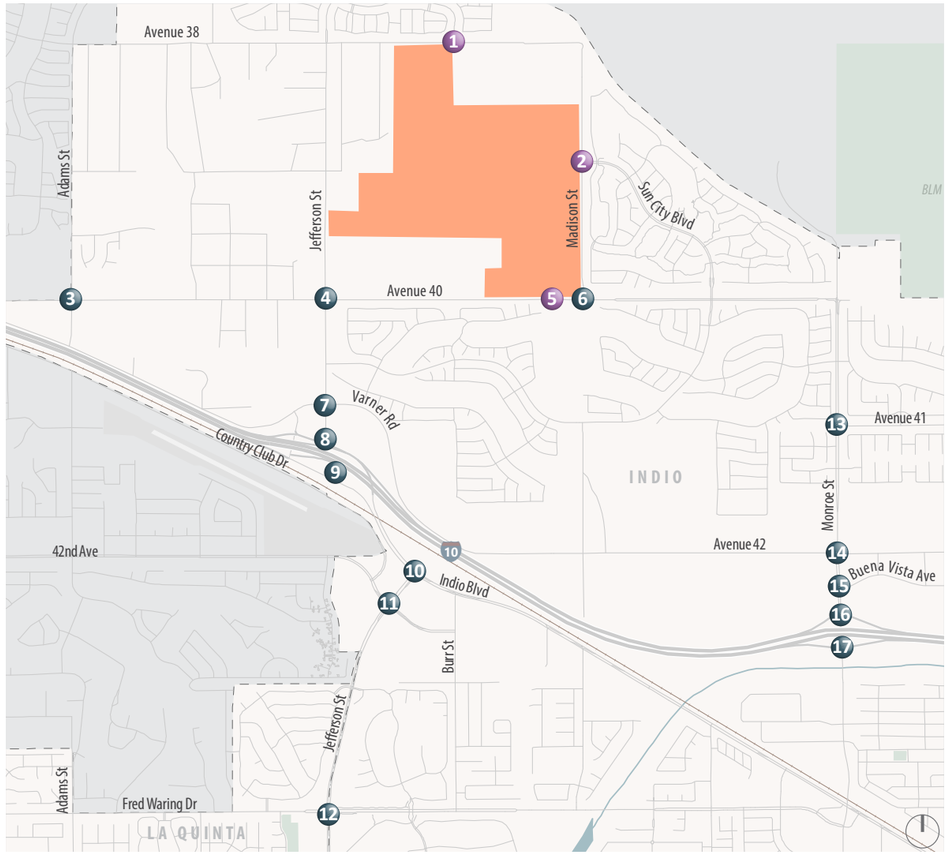


Figure 8

Near-Term (2030) without Project Intersection Turning Movement Volumes



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Project Driveway Study Intersection

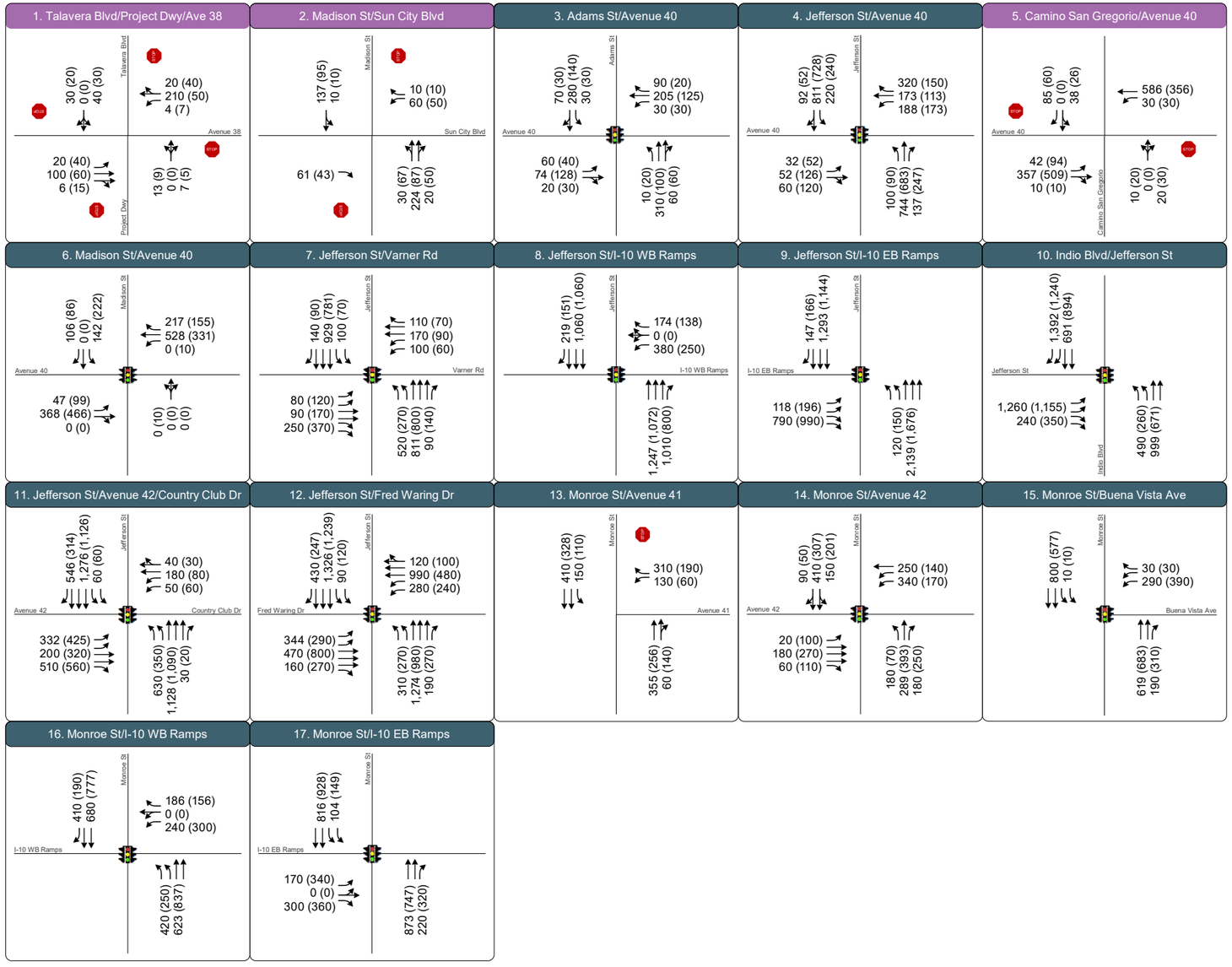


Figure 9

Near-Term (2030) with Project Intersection Turning Movement Volumes

Intersection Operations

Near-Term (2030) intersection operations were evaluated using the HCM methodology. Peak hour factors and heavy vehicle percentages were consistent with existing conditions. Traffic signal timings were left unchanged from existing conditions.

Intersection operations under Near-Term (2030) conditions, with and without the Project, are presented in **Table 9**. Under Near-Term (2030) without Project conditions, the following intersections would have deficient operations during at least one peak hour:

- Jefferson Street and Avenue 40 (Intersection 4) would operate at LOS F during the AM and PM peak hours
- Monroe Street and Avenue 41 (Intersection 13); the westbound left movement would operate at LOS E during the AM peak hour

Under Near-Term (2030) with Project conditions, the following intersections remain deficient during at least one peak hour:

- Jefferson Street and Avenue 40 (Intersection 4) would continue to operate at LOS F during the AM and PM peak hours
- Monroe Street and Avenue 41 (Intersection 13); the westbound left movement would degrade from LOS E to LOS F during the AM peak hour

All other study intersections operate at acceptable service levels. Intersection LOS calculation worksheets are provided in **Appendix B**.

Peak Hour Signal Warrant

Peak hour traffic signal warrants under Near-Term (2030) conditions, with and without the Project, were reviewed at the unsignalized study intersections in **Table 5**. Under Near-Term (2030) without Project conditions, the peak hour signal warrant is satisfied at:

- Monroe Street and Avenue 41 (Intersection 13)

Under Near-Term (2030) with Project conditions, the peak hour signal warrant is satisfied at:

- Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5)
- Monroe Street and Avenue 41 (Intersection 13)

Signal warrant worksheets are provided in **Appendix C**.

Table 9: Near-Term (2030) Intersection Levels of Service

	Intersection	Control[1]	Peak Hour	Near-Term without Project Conditions		Near-Term with Project Conditions	
				LOS[2]	Delay[2]	LOS[2]	Delay[2]
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	B A	11 8	B A	12 8
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	A (B) A (B)	2 (14) 2 (11)	A (C) BA(B)	4 (18) 4 (14)
3	Adams Street and Avenue 40	Signal	AM PM	A A	9 8	A A	9 8
4	Jefferson Street and Avenue 40	Signal	AM PM	**F** **F**	**151** **139**	**F** **F**	**185** **165**
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	A (A) A (A)	1 (5) 1 (5)	A (B) A (B)	3 (13) 2 (12)
6	Madison Street and Avenue 40	Signal	AM PM	A B	10 14	B B	11 14
7	Jefferson Street and Varner Road	Signal	AM PM	D D	45 35	D C	41 34
8	Jefferson Street and I-10 Westbound Ramps	Signal	AM PM	A A	7 4	A A	6 4
9	Jefferson Street and I-10 Eastbound Ramps	Signal	AM PM	D D	21 36	C D	21 35
10	Jefferson Street and Indio Boulevard	Signal	AM PM	D D	43 48	D D	46 51
11	Jefferson Street and Avenue 42/Country Club Drive	Signal	AM PM	D D	35 36	D D	35 36
12	Jefferson Street and Fred Waring Drive	Signal	AM PM	D D	43 36	D D	44 36
13	Monroe Street and Avenue 41	SSSC	AM PM	B **(F)** A (C)	11 **(67)** 4 (19)	B **(F)** A (C)	13 **(95)** 4 (23)
14	Monroe Street and Avenue 42	Signal	AM PM	C C	33 35	D D	37 41
15	Monroe Street and Buena Vista Avenue	Signal	AM PM	A A	9 9	A A	9 9
16	Monroe Street and I-10 Westbound Ramps	Signal	AM PM	A A	10 9	B A	11 9
17	Monroe Street and I-10 Eastbound Ramps	Signal	AM PM	B B	8 12	A B	8 12

Notes:

1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
3. Deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Table 10: Near-Term (2030) Peak Hour Signal Warrants

	Intersection	Control[1]	Peak Hour	Signal Warrant Met?	
				Near-Term without Project Conditions	Near-Term with Project Conditions
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	No No	No No
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	No No	No No
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	No No	**Yes** **Yes**
13	Monroe Street and Avenue 41	SSSC	AM PM	**Yes** No	**Yes** **Yes**

Note:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.

Source: Fehr & Peers, 2022.

Roadway Segment Operations

Roadway segment operations under Near-Term (2030) conditions, with and without the Project, were evaluated using the ADT based thresholds for Riverside County with results summarized in **Table 11.** Under Near-Term (2030) without Project conditions, the following roadway would have deficient operations:

- Jefferson Street from Avenue 39 to Avenue 40 (Roadway Segment 4)

Table 11: Near-Term (2030) Roadway Segments

	Roadway Segment	Roadway Classification	Near-Term without Project Conditions		Near-Term with Project Conditions	
			ADT	LOS	ADT	LOS
1	Avenue 38 From Jefferson Street to Madison Street	2-Lane Collector	2,360	A – C	2,520	A – C
2	Madison Street From Avenue 38 to Avenue 40	2-Lane Collector	3,470	A – C	5,040	A – C
3	Avenue 40 From Jefferson Street to Madison Street	2-Lane Collector	6,390	A – C	8,080	A – C
4	Jefferson Street From Avenue 39 to Avenue 40	2-Lane Collector	11,870	**E**	12,020	**E**

Note:
1. Deficient roadway segment operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Under Near-Term (2030) with Project conditions, the following roadway would remain deficient:

- Jefferson Street from Avenue 39 to Avenue 40 (Roadway Segment 4)

All other study roadway segments would operate at LOS C or better.

Improvements

The following improvements would improve operations to acceptable or better than No Project conditions at the deficient intersections, as shown in **Table 12**.

Table 12: Near-Term (2030) Conditions with Improvement Intersection Levels of Service

Intersection		Control[1]	Peak Hour	Near-Term without Project Conditions		Near-Term with Project Conditions		Near-Term with Project + Improvement Conditions		Percent Project Traffic[2]
				LOS	Delay	LOS	Delay	LOS	Delay	
4	Jefferson Street and Avenue 40	Signal	AM PM	**F** **F**	**151** **139**	**F** **F**	**185** **165**	22 23	C C	9%
13	Monroe Street and Avenue 41	SSSC/ Signal[3]	AM PM	B **(F)** A (C)	11 **(67)** 4 (19)	B **(F)** A (C)	13 **(95)** 4 (23)	A A	9 7	11%

Notes:

1. SSSC = side-street stop-controlled intersection. For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
2. Percent of Project traffic at the intersection is calculated using PM peak hour volumes.
3. Intersection signalized as improvement.
4. Potentially deficient intersection operations are noted in **bold text**

Source: Fehr & Peers, 2022.

Jefferson Avenue and Avenue 40 (Intersection 4) – Under Near-Term (2030) conditions, the addition of Project traffic would exacerbate LOS F operations during the AM and PM peak hours.

> ***Recommendation 1:*** *Widen/restripe Jefferson Street between Avenue 39 and Sun City Boulevard (Intersection 4/Roadway Segment 4) to accommodate one additional northbound through lane and one additional southbound through lane. This improvement would require additional one additional northbound through and one additional southbound through receiving lane, effectively widening Jefferson Street between Avenue 39 and Sun City Boulevard to four-lanes.*

The addition of a northbound and southbound through lane at the intersection of Jefferson Street and Avenue 40 (Intersection 4) would result in LOS C operations.

Monroe Street and Avenue 41 (Intersection 13) – Under Near-Term (2030) conditions, the addition of Project traffic would exacerbate side-street LOS F operations during the AM peak hour. This intersection meets the peak hour signal warrant under Existing conditions.

Recommendation 2: *Signalize the intersection of Monroe Street and Avenue 41 (Intersection 13).*

The signalization of the intersection of Monroe Street and Avenue 41 (Intersection 13) would result in LOS A operations.

Jefferson Avenue from Avenue 39 to Avenue 40 (Roadway Segment 4) – Under Near-Term (2030) conditions, the addition of Project traffic would exacerbate LOS E operations during the AM and PM peak hours.

Recommendation 3: *Implement Recommendation 1.*

The addition of a northbound and southbound through lane on Jefferson Street from Avenue 39 to Avenue 40 would result in LOS C or better operations.

Cumulative (2045) Conditions

This chapter presents intersection operations under Cumulative (2045) conditions without and with the Project. Cumulative conditions represent projected traffic volumes and future roadway improvements generally consistent with the City of Indio General Plan.

Roadway Network

Table 13 compares the future roadway improvements planned in the City of Indio General Plan and the project list in the *Connect SoCal 2020 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (Southern California Association of Governments (SCAG), 2020) plus *Amendment 1* (SCAG, 2021) to the Existing (2022) roadway geometry.

Table 13: Cumulative (2045) Year Roadway Assumptions

	Roadway Segment	Existing	General Plan	Connect SoCal 2020 RTP/SCS	Analysis Assumption
1	**Avenue 38** from Jefferson Street to Madison Street	Varies; 1-2 lanes in each direction	2-lanes	4-lanes	4-lanes
2	**Avenue 40** from Varner Road to Jefferson Street	2-lanes	4-lanes	4-lanes	4-lanes
3	**Avenue 40** from Jefferson Street to Madison Street	2-lanes	4-lanes	No Improvement	4-lanes
4	**Varner Road/Avenue 42** from Jefferson Street to Monroe Street	2-lanes	4-lanes	4-lanes	4-lanes
5	**Avenue 42** from Monroe Street to Jackson Street	Varies; 1-3 lanes in each direction	6-lanes	6-lanes	6-lanes
6	**Adams Street** from Avenue 38 to Avenue 40	Varies; 1-2 lanes in each direction	2-lanes	4-lanes	Retain Existing Geometry
7	**Jefferson Street** from Avenue 39 to Avenue 40	Varies; 1-2 lanes in each direction	2-lanes	4-lanes	4-lanes
8	**Jefferson Street** from Avenue 40 to Sun City Blvd	Varies; 1-2 lanes in each direction	6-lanes	6-lanes	6-lanes
9	**Jefferson Street** from I-10 to Indio Blvd	Varies; 2-3 lanes in each direction	6-lanes	6-lanes	6-lanes
10	**Madison Street** from Avenue 38 to Avenue 40	Varies; 1-2 lanes in each direction	2-lanes	4-lanes	4-lanes
11	**Monroe Street** from Avenue 41 to Avenue 42	Varies; 1-2 lanes in each direction	4-lanes	4-lanes	4-lanes
12	**Monroe Street** from I-10 to Avenue 42	Varies; 1-2 lanes in each direction	6-lanes	6-lanes	6-lanes
13	**Monroe Street** from I-10 to Avenue 44	Varies; 1-2 lanes in each direction	4-lanes	4-lanes	4-lanes

Source: *City of Indio General Plan*, 2019; *Connect SoCal 2020 RTP/SCS* plus *Amendment 1* (SCAG, 2020 and 2021). Fehr & Peers, 2022.

The Cumulative (2045) conditions analysis assumes:

- All planned roadway improvements that are consistent between the General Plan and the Connect SoCal 2020 RTP/SCS.
- For planned roadway improvements that are not consistent between the General Plan and the Connect SoCal 2020 RTP/SCS, analysis assumptions were verified with City of Indio staff.
- The completion of the I-10/Monroe Street interchange (also included in the Near-Term (2030) analysis)

Projected roadway network deficiencies under the aforementioned assumptions, with and without the Project, were identified with accompanying improvements.

Traffic Volume Development

The latest version of RIVCOM was used to develop traffic volume forecasts. Traffic volume forecasts were developed using the "difference methodology". The difference methodology uses the Base Year (2018) and Future Year (2045) model outputs to calculate the annual growth at study facilities. This projected annual growth was added to the Existing (2022) traffic counts to develop Cumulative (2045) without Project traffic forecasts.

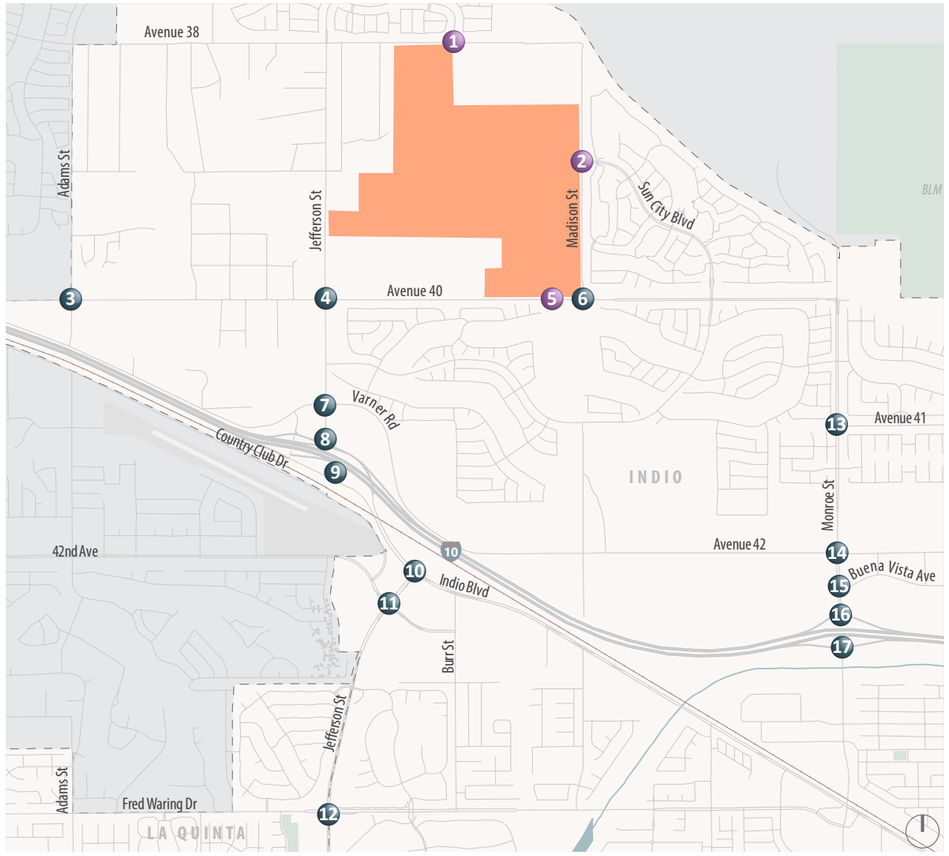
Cumulative (2045) without Project intersection turning movement forecasts are presented in **Figure 10.** Project trips from Figure 5 were then added to develop Cumulative (2045) with Project intersection turning movement forecasts, as presented in **Figure 11.**

Intersection Operations

Cumulative (2045) intersection operations were evaluated using the HCM methodology. Heavy vehicle percentages were consistent with existing conditions. Recognizing that ongoing and planned development in the vicinity of the Project site will likely necessitate traffic signal timing updates between the current year and 2045, traffic signal timings were optimized under the Cumulative conditions when necessary.

Per the Riverside County's T*ransportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled* (2020), the peak hour factor under Cumulative (2045) conditions was set to 1 for all of the study intersection analyzed in Synchro (Intersections 1-3, 7-17). Due to the proximity to nearby schools, the peak hour factor under Cumulative (2045) conditions were consistent with existing conditions for all of the study intersections analyzed in VISSIM (Intersections 4-6).

Intersection operations under Cumulative (2045) conditions, with and without the Project, are presented in **Table 14**.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Project Driveway Study Intersection

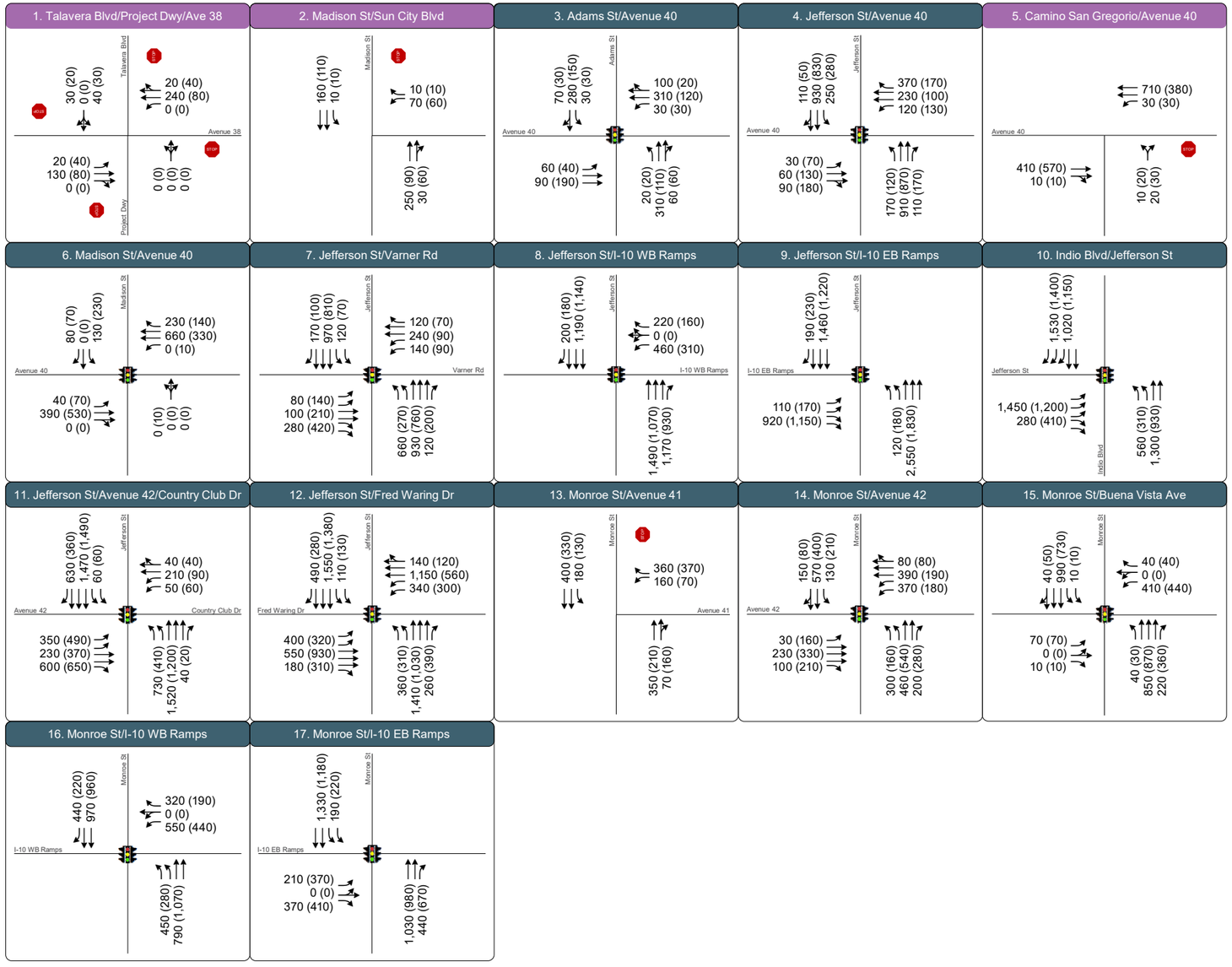
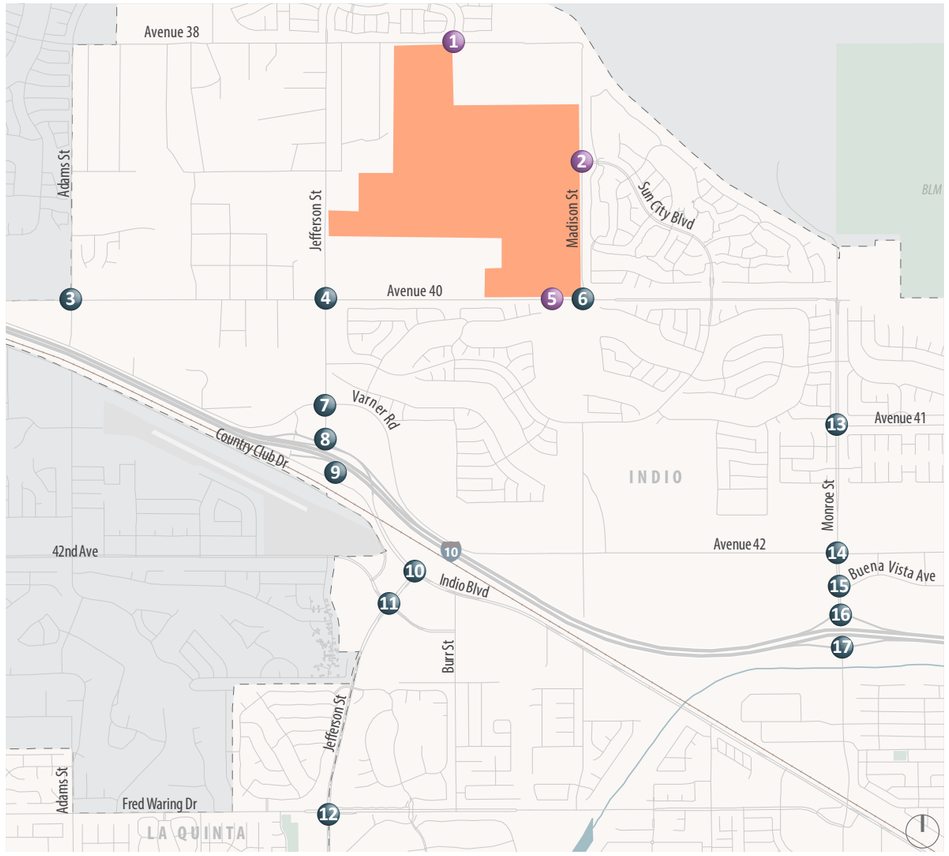


Figure 10

Cumulative (2045) without Project Intersection Turning Movement Volumes



XX (YY) AM (PM) Peak Hour Traffic Volumes Signalized Intersection Stop Sign

Project Site Study Intersection Project Driveway Study Intersection

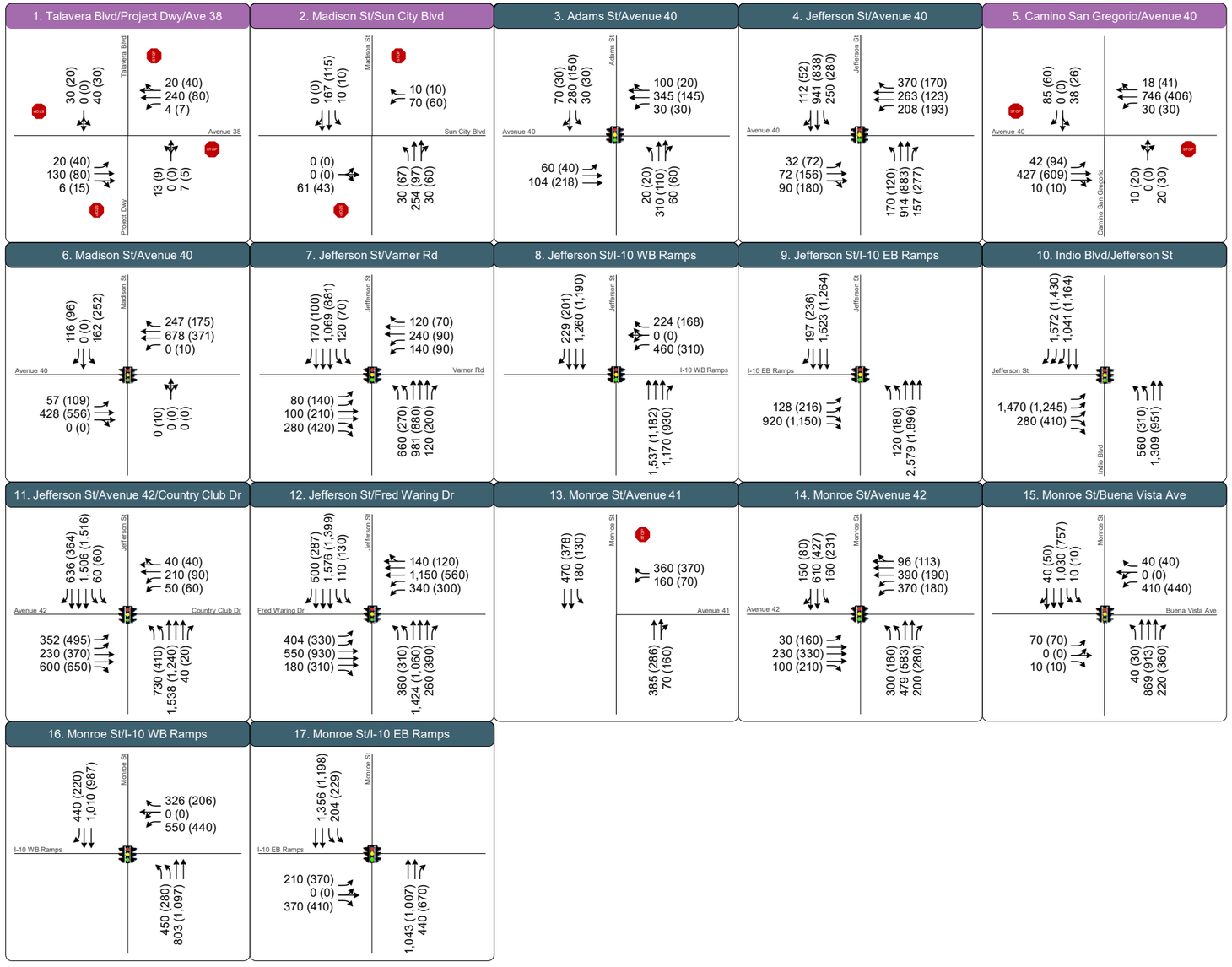


Figure 11

Cumulative (2045) with Project Intersection Turning Movement Volumes

Table 14: Cumulative (2045) Intersection Levels of Service

	Intersection	Control[1]	Peak Hour	Cumulative (2045) without Project Conditions		Cumulative (2045) with Project Conditions	
				LOS[2]	Delay[2]	LOS[2]	Delay[2]
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	A A	8 8	A A	9 8
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	A (B) A (B)	2 (12) 2 (10)	A (B) A (B)	3 (14) 4 (13)
3	Adams Street and Avenue 40	Signal	AM PM	A A	9 8	A A	9 8
4	Jefferson Street and Avenue 40	Signal	AM PM	D D	40 37	D D	49 50
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	A (B) A (A)	1 (11) 1 (10)	A (B) A (A)	2 (11) 2 (12)
6	Madison Street and Avenue 40	Signal	AM PM	A B	8 11	A B	9 11
7	Jefferson Street and Varner Road	Signal	AM PM	D C	43 34	D C	40 33
8	Jefferson Street and I-10 Westbound Ramps	Signal	AM PM	A A	6 4	A A	6 4
9	Jefferson Street and I-10 Eastbound Ramps	Signal	AM PM	C C	28 25	C C	28 25
10	Jefferson Street and Indio Boulevard	Signal	AM PM	D C	30 26	D C	30 26
11	Jefferson Street and Avenue 42/Country Club Drive	Signal	AM PM	C D	35 40	C D	35 40
12	Jefferson Street and Fred Waring Drive	Signal	AM PM	D D	41 37	D D	41 37
13	Monroe Street and Avenue 41	SSSC	AM PM	B **(F)** A (C)	10 **(58)** 6 (19)	B **(F)** A (C)	12 **(77)** 6 (22)
14	Monroe Street and Avenue 42	Signal	AM PM	C C	31 28	C C	32 29
15	Monroe Street and Buena Vista Avenue	Signal	AM PM	B B	15 15	B B	15 15
16	Monroe Street and I-10 Westbound Ramps	Signal	AM PM	B A	13 10	B A	13 10
17	Monroe Street and I-10 Eastbound Ramps	Signal	AM PM	B B	14 16	B B	14 16

Notes:

1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
3. Deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Under Cumulative (2045) without Project conditions, the following intersection would have deficient operations during at least one peak hour:

- Monroe Street and Avenue 41 (Intersection 13); the westbound left movement would operate at LOS F during the AM peak hour

Under Cumulative (2045) with Project conditions, the following intersection remain deficient during at least one peak hour:

- Monroe Street and Avenue 41 (Intersection 13); the westbound left movement would continue to operate at LOS F during the AM peak hour

All other study intersections operate at acceptable service levels. Intersection LOS calculation worksheets are provided in **Appendix B**.

Peak Hour Signal Warrant

Peak hour traffic signal warrants under Cumulative (2045) conditions, with and without the Project, were reviewed at the unsignalized study intersections in **Table 15**. Under Cumulative (2045) without Project conditions, the peak hour signal warrant is satisfied at:

- Monroe Street and Avenue 41 (Intersection 13)

Under Cumulative (2045) with Project conditions, the peak hour signal warrant is satisfied at:

- Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5)
- Monroe Street and Avenue 41 (Intersection 13)

Signal warrant worksheets are provided in **Appendix C**.

Roadway Segment Operations

Roadway segment operations under Cumulative (2045) conditions, with and without the Project, were evaluated using the ADT based thresholds for Riverside County with results summarized in **Table 16.** Under Cumulative (2045) conditions, with and without the Project, all study roadway segments would operate at LOS C or better.

Table 15: Cumulative (2045) Peak Hour Signal Warrants

	Intersection	Control[1]	Peak Hour	Signal Warrant Met?	
				Cumulative without Project Conditions	Cumulative with Project Conditions
1	Avenue 38 and Talavera Boulevard/Project Driveway	AWSC	AM PM	No No	No No
2	Madison Street and Sun City Boulevard/Project Driveway	SSSC	AM PM	No No	No No
5	Avenue 40 and Camino San Gregorio/Project Driveway	SSSC	AM PM	No No	**Yes** **Yes**
13	Monroe Street and Avenue 41	SSSC	AM PM	**Yes** **Yes**	**Yes** **Yes**

Note:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.

Source: Fehr & Peers, 2022.

Table 16: Cumulative (2045) Roadway Segments

	Roadway Segment	Roadway Classification	Cumulative without Project Conditions		Cumulative with Project Conditions	
			ADT	LOS	ADT	LOS
1	Avenue 38 From Jefferson Street to Madison Street	4-Lane Collector (Secondary)	3,020	A – C	3,170	A – C
2	Madison Street From Avenue 38 to Avenue 40	4-Lane Collector (Secondary)	4,110	A – C	5,680	A – C
3	Avenue 40 From Jefferson Street to Madison Street	4-Lane Boulevard (Major)	7,550	A – C	9,240	A – C
4	Jefferson Street From Avenue 39 to Avenue 40	4-Lane Collector (Secondary)	14,330	A – C	14,490	A – C

Note:
1. Deficient roadway segment operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Improvements

The following improvements would improve operations to acceptable or better than No Project conditions at the deficient intersections, as shown in **Table 17**.

Table 17: Cumulative (2045) Conditions with Improvement Intersection Levels of Service

Intersection		Control[1]	Peak Hour	Cumulative without Project Conditions		Cumulative with Project Conditions		Cumulative with Project + COA Conditions		Percent Project Traffic
				LOS	Delay	LOS	Delay	LOS	Delay	
13	Monroe Street and Avenue 41	SSSC/ Signal[5]	AM PM	B **(F)** A (C)	11 **(67)** 4 (19)	B **(F)** A (C)	13 **(95)** 4 (23)	A A	10 8	9%

Notes:

1. SSSC = side-street stop-controlled intersection; For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
2. Percent of Project traffic at the intersection is calculated using PM peak hour volumes.
3. Intersection signalized as condition of approval.
4. Potentially deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Monroe Street and Avenue 41 (Intersection 13) – Under Cumulative (2045) conditions, the addition of Project traffic would exacerbate side-street LOS F operations during the AM peak hour. This intersection meets the peak hour signal warrant under Existing conditions.

Recommendation 4: *Implement Recommendation 2.*

The signalization of the intersection of Monroe Street and Avenue 41 (Intersection 13) would result in LOS A operations.

Site Access Assessment

Project access driveway intersections were evaluated for vehicles, pedestrians, bicycles, and golf carts accessibility and safety. The Project proposes three driveways for residents - one primary entrance and two secondary entrances. Primary access to the site would be provided on Avenue 40 at Camino San Gregorio. The secondary entrances are located on Madison Street at Sun City Boulevard and on Avenue 38 at Talavera Boulevard.

Intersection Control Evaluation

The three residential driveways were evaluated to review appropriate traffic control options based on peak hour traffic volumes.

Avenue 38 and Talavera Boulevard/Project Driveway (Intersection 1) has one northbound shared left/through/right lane for vehicles exiting the site. To access the Project site, vehicles could use the existing shared eastbound through/right-turn lane, or the existing westbound left-turn pocket.

- The intersection is currently all-way stop-controlled.
- The intersection would not satisfy the peak hour signal warrant under Near-Term (2030) with Project conditions.

  Recommendation 5*: The intersection of Avenue 38 and Talavera Boulevard/Project Driveway should remain an all-way stop-controlled intersection.*

Madison Street and Sun City Boulevard/Project Driveway (Intersection 2) has one eastbound shared left/through/right lane for vehicles exiting the site. To access the Project site, vehicles could use the existing shared northbound through/left-turn lane, or the existing southbound shared left/through/right-turn lane.

- The intersection is currently side-street stop-controlled.
- The intersection satisfies an all-way-stop control warrant based on guidance from the California Manual on Uniform Traffic Control Devices (CA MUTCD) under Option D - The intersection would join two residential neighborhood collector streets of similar design and operating characteristics.
- The intersection would not satisfy the peak hour signal warrant under Near-Term (2030) with Project conditions.

  Recommendation 6*: The intersection of Madison Street and Sun City Boulevard/Project Driveway is recommended to be all-way stop-controlled intersection.*

Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) has one southbound shared left/through lane and one right turn lane for vehicles exiting the site. To access the Project site, vehicles could use the existing two-way-left-turn lane for vehicles traveling eastbound, or the existing westbound shared through/right-turn lane.

- The intersection is currently side-street stop-controlled.
- The intersection satisfies the peak hour signal warrant under Near-Term (2030) with Project conditions.
- The intersection only satisfies an all-way-stop control warrant as an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of a traffic signal. The intersection does not meet any of the other all-way stop control warrants criteria based on guidance from the California Manual on Uniform Traffic Control Devices (CA MUTCD) criteria or options, as discussed below.
    - Criteria B (5 or more reported collisions in a 12-month period) – Between 2015 and 2021 there were no reported collisions at this intersection.
    - Criteria C (minimum volume and delay thresholds) – The posted speed limit on is 50 miles per hour, so the minimum volume criteria requires an average of at least 210 vehicles per hour entering from the major street for eight hours of a day, and an average of 140 vehicles, pedestrians, and bicycles per hour entering from the minor street for the same eight hours of a day with a minimum average vehicular delay on the minor-street of at least 30 seconds. As shown on **Table 9** in the prior chapter, the minimum average vehicular delay on the minor-street does not exceed 30 seconds.
    - Criteria D (80 percent satisfaction of Criteria B and C) - Between 2015 and 2021 there were no reported collisions at this intersection.
    - Option A (left-turn conflicts) – Left-turns into and out of the minor street are able to utilize the two-way-left-turn lane, therefore there are no significant concerns related to left-turn conflict.
    - Option B (vehicle/pedestrian conflicts) – Based on existing multimodal traffic counts, there were less than five observed pedestrians during the peak hour, therefore there are no significant concerns vehicle/pedestrian conflict concerns near a location that generates high pedestrian volumes.
    - Option C (sight distance) – There are no sight distance obstructions and vehicles are not allowed to stop or park on Avenue 40 or Camino San Gregorio near the intersection.
    - Option D (intersection of two residential collectors) – Although the Project would construct a residential collector on the north leg, the south leg is a private local driveway that provides access to the golf club and indirect access to the adjacent neighborhood.

- The CA MUTCD does not include roundabout warrants, but roundabouts are considered appropriate in place of traffic signals when factors such as safety and life-cycle cost are taken into consideration.

Because all-way stop sign control of this intersection would only be appropriate at this intersection as an interim measure prior to the installation of a traffic signal, only the 1) side-street-stop, 2) traffic signal, and 3) roundabout alternatives for traffic control at this intersection were evaluated further.

Operations Analysis

Based on the results of the all-way stop and peak hour signal warrants, the intersection operations were evaluated under Near-Term (2030) with Project and Cumulative (2045) with Project conditions using the VISSIM 2022 microsimulation model. Intersection operations are presented in **Table 18**. The intersection of Avenue 40 and Camino San Gregorio/Project Driveway under Near-Term (2030) and Cumulative (2045) conditions would operate at LOS B or better for either of the three intersection control alternatives.

Table 18: Intersection Control Evaluation - Levels of Service

Intersection		Peak Hour	SSSC[1]		Signal		Roundabout	
			LOS	Delay	LOS	Delay	LOS	Delay
Near-Term (2030) with Project								
5	Avenue 40 and Camino San Gregorio/Project Driveway	AM PM	A (B) A (B)	3 (13) 2 (12)	B B	12 15	A A	9 6
Cumulative (2045) with Project								
5	Avenue 40 and Camino San Gregorio/Project Driveway	AM PM	A (B) A (B)	2 (11) 2 (12)	A B	8 12	B A	10 7

Notes:
1. SSSC = side-street stop-controlled intersection. For SSSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
2. Potentially deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2022.

Maximum vehicle queues for each of the three intersection control alternatives are presented in **Table 19**. Under Near-Term (2030) with Project conditions, maximum vehicle queues are exceeded for the following movements:

- Westbound left-turn at Jefferson Street and Avenue 40 (Intersection 4) – All Alternatives
- Westbound right-turn at Jefferson Street and Avenue 40 (Intersection 4) – All Alternatives (AM Only)
- Eastbound left-turn at Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) – Signal Alternative (PM Only)
- Westbound left-turn at Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) – Signal Alternative

Although the maximum vehicle queues are exceeded at some of the left-turn pockets, along Avenue 40 there is a two-way-left turn lane that provides adequate queue storage. Additionally, maximum vehicle queues at both right-turn and left-turn pockets would not spill into adjacent intersections and can be contained within the through movement storage.

Under Cumulative (2045) with Project conditions, it is assumed that Avenue 40 is widened from 2-lanes with a two-way-left-turn lane to 4-lanes with a two-way-left turn lane. Maximum vehicle queues are exceeded for the following movements:

- Westbound left-turn at Jefferson Street and Avenue 40 (Intersection 4) – All Alternatives
- Westbound right-turn at Jefferson Street and Avenue 40 (Intersection 4) – All Alternatives (AM Only)

Although the maximum vehicle queues are exceeded the westbound left-turn pocket at Intersection 4, along Avenue 40 there is a two-way-left turn lane that provides adequate queue storage. Additionally, maximum vehicle queues at both right-turn and left-turn pockets would not spill into adjacent intersections and can be contained within the through movement storage.

The main project driveway, the intersection of Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) and the intersection of Jefferson Street and Avenue 40 (Intersection 4) are roughly 4,500 feet apart. The the intersection of Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) and the intersection of Madison Street and Avenue 40 (Intersection 6) are roughly 500 feet apart. Vehicle queues from the intersection of Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5), under Near-Term (2030) and Cumulative (2045) conditions would not spill into either of the adjacent intersections for either of the three intersection control alternatives.

All of the intersection control alternatives are applicable based on the operations and queueing evaluations. Intersection control evaluation worksheets are provided in **Appendix E**.

Table 19: Intersection Control Evaluation - Vehicle Queues

Intersection		Movement[1]	Storage (feet)	Side-Street-Stop		Signal		Roundabout	
				AM	PM	AM	PM	AM	PM
Near-Term (2030) with Project									
4	Jefferson Street and Avenue 40	WB L	150[2]	**300**	**250**	**250**	**275**	**250**	**275**
		WB T	4,500	275	175	225	175	225	175
		WB R	175	**250**	175	**300**	150	**225**	125
5	Avenue 40 and Camino San Gregorio/Project Driveway	NB L/T/R	100	50	50	75	75	25	50
		SB L/T	100	50	50	100	75	75	50
		SB R	100	75	75	75	75	0	0
		EB L	100[2]	75	75	100	**450**	-	-
		EB T/R	4,500	-	-	250	450	-	-
		EB L/T/R	4,500	-	-	-	-	200	275
		WB L	100[2]	50	50	**125**	**125**	-	-
		WB T/R	500	-	-	475	300	-	-
		WB L/T	500	-	-	-	-	450	250
		WB R	500	-	-	-	-	0	0
6	Madison Street and Avenue 40	EB L	175[2]	50	100	50	75	100	125
		EB T	500	175	325	175	275	175	325
Cumulative (2045) with Project									
4	Jefferson Street and Avenue 40	WB L	150[2]	**675**	**600**	**725**	**700**	**625**	**600**
		WB T	4,500	200	125	225	125	200	125
		WB R	175	**400**	150	**400**	175	**400**	150
5	Avenue 40 and Camino San Gregorio/Project Driveway	NB L/T/R	100	75	75	75	75	50	50
		SB L/T	100	50	50	100	75	75	50
		SB R	100	75	75	75	50	0	0
		EB L	100[2]	50	50	100	150	-	-
		EB T/R	4,500	-	-	200	250	-	-
		EB L/T/R	4,500	-	-	-	-	400	450
		WB L	100[2]	50	50	75	75	-	-
		WB T/R	500	-	-	225	200	-	-
		WB L/T	500	-	-	-	-	325	100
		WB R	500	-	-	-	-	0	0
6	Madison Street and Avenue 40	EB L	175[2]	100	100	75	125	125	125
		EB T	500	150	175	150	175	100	150

Notes:

1. NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; L = Left-Turn; T = Through; R = Right-Turn.
2. There is a two-way-left turn lane that provides adequate queue storage at this location.
3. Movements that exceed the available queue storage are noted in **bold text**.

Source: Fehr & Peers, 2022.

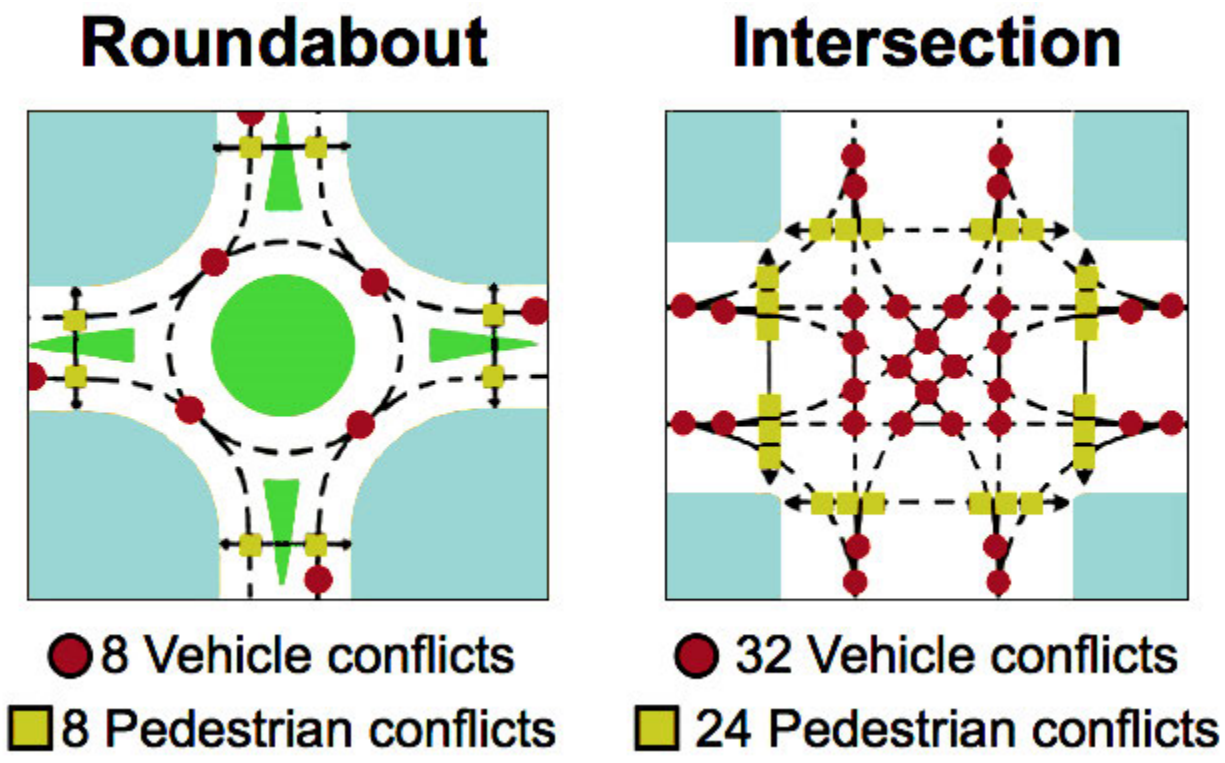
Safety Considerations

A major safety consideration at intersections is the number of conflict points - defined as locations at an intersection where vehicle, bicycle, golf cart, or pedestrian paths merge, diverge, or cross. Intersection configurations with fewer conflict points can reduce the potential for head-on, broadside, and vehicle/pedestrian collisions. Assuming that pedestrians may cross at either of the four legs of the intersection:

- The side-street-stop and traffic signal alternatives have 32 vehicle conflict points and 24 pedestrian conflict points as shown in Exhibit A below.
- The roundabout alternative has 8 vehicle/bicycle/golf cart conflict points and 8 pedestrian conflict points as shown in Exhibit A below.

The number of bicycles and golf carts conflict points could be similar to either the vehicle or pedestrian conflict points depending on the facility they choose to travel on. The roundabout interchange has the least number of conflicts points due to the removal of left turns.

Exhibit A: Intersection Control Evaluation – Conflict Points



Source: https://web.northeastern.edu/holland2017sustrans/?page_id=1266

In 2020, the California Department of Transportation (Caltrans) published the *Local Roadway Safety Manual* (LRSM) to provide for local agencies to evaluate safety countermeasures on local roadways.

- The installation of a traffic signal at a non-signalized intersection is estimated to provide an overall collision reduction factor of 30 percent.
- The installation of a roundabout at a non-signalized intersection is estimated to provide an overall collision reduction of 12 to 78 percent dependent on the annual daily traffic.

The *Highway Safety Manual, 1st Edition* (American Association of State Highway and Transportation Officials (AASHTO), 2010) reports that the installation of a roundabout in place of a two-way-stop controlled intersection is estimated to provide an overall collision reduction factor of 44 percent, which is greater than the 30 percent collision reduction factor for a traffic signal.

Life-Cycle Cost Assessment

Planning level cost estimates for construction and maintenance over the design life-span of each control strategy are presented below:

- The installation of a side-street-stop would cost approximately $5,000 with negligible maintenance costs
- The installation of a traffic signal would cost approximately $600,000. Reoccurring traffic signal maintenance costs on average approximately $5,000 per year.
- The installation of a roundabout would cost approximately $1,200,000. Maintenance costs for roundabouts are most dependent on landscaping costs which could average approximately $1,000 per year.

Conclusions

The intersection of Avenue 40 and Camino San Gregorio/Project Driveway (Intersection 5) was evaluated under three intersection control alternatives: 1) side-street stop, 2) traffic signal, or 3) roundabout. Each alternative was evaluated based on traffic operations, safety, and life-cycle cost considerations, as summarized in **Table 20**.

> ***Recommendation 7****: The intersection of Avenue 40 and Camino San Gregorio/Project Driveway is recommended to be a roundabout controlled intersection for the following reasons:*
>
> 1. *The level of service for a roundabout controlled intersection would be LOS A as opposed to LOS B for a traffic signal-controlled intersection at project buildout.*
>
> 2. *The installation of a roundabout in place of a two-way-stop controlled intersection is estimated to provide an overall collision reduction factor of 44 percent, which is greater than the 30 percent collision reduction for a traffic signal.*

3. *The annual maintenance cost for a roundabout is approximately $1,000 per year as compared to $5,000 per year for a traffic signal.*

Table 20: Intersection Control Evaluation

Intersection Control	Traffic Operations		Safety Considerations		Life-Cycle Costs	
	Rank	Discussion	Rank	Discussion	Rank	Discussion
Side-Street-Stop	**1**	All three alternatives would operate at acceptable levels of service. There are no vehicle queueing concerns related to the unsignalized intersection. There are no vehicle queuing concerns related to traffic signal alternatives. There are no vehicle queueing concerns related to the roundabout.	**3**	Traffic safety was evaluated relatively between the three alternatives. The side-street-stop and traffic signal alternatives would have the most conflict points. Installing a traffic signal to control the major street would improve overall safety relative to an unsignalized intersection. Installing a roundabout would significantly reduce the number of conflict points and provide the greatest improvement to overall safety relative to the other alternatives.	**1**	Construction costs would be the responsibility of the project applicant. Maintenance costs for the unsignalized intersection are negligible. Maintenance costs are highest for the traffic signal. Maintenance costs for the roundabout are dependent on landscaping and would be most likely less than the traffic signal.
Traffic Signal	**1**		**2**		**3**	
Roundabout	**1**		**1**		**2**	

Source: Fehr & Peers, 2022.

Multimodal Connectivity

This section evaluates the Project's internal and external connectivity to existing and proposed sidewalks and trails, bicycle facilities, golf cart facilities, and nearby transit. Recommendations to support the development of the final site plan are provided.

Transit Access

Transit in the study area is provided Sun Line Transit Agency (SLTA), which is the regional transit provider for Riverside County. Currently, Sun Line Transit operates a variety of bus routes in Indio. Routes 800, 801, 802, and 803 provide school shuttle service to Shadow Hills High School. Each bus operates once on weekday mornings before school starts and once on weekday evenings after school. Bus stops are located directly adjacent to the Project site on the corner of Avenue 38 and Talavera Boulevard, and Avenue 40

and Madison Street. Access to the Project site is very limited via transit during any other time of day, with the closest transit stop is a bus stop located near the Walmart Supercenter on the corner of Showcase Parkway and Monroe Street, approximately 2.6 miles away.

> ***Recommendation 8****: To anticipate the expansion of future bus service into the area identify locations on Avenue 38, Madison Street, and/or Avenue 40 that could be readily converted to a bus stop.*

Bicycle Access

Adjacent to the Project site, there is an existing Class I bicycle path on Jefferson Street between Avenue 38 and Avenue 39, Class II bicycle lanes on Avenue 38 between Dune Palms Road and Madison Street, and Class II bicycle lanes on Avenue 40 between Jefferson Street and Monroe Street.

There are Class I bicycle paths proposed on Jefferson Street between Avenue 39 and Varner Road and Class II bicycle lanes planned on Madison Street between Avenue 38 and Avenue 40.

> ***Recommendation 9****: When the roadway frontage along Madison Street is improved as the Project is constructed, work with the City to restripe Madison Street to provide Class II bicycle lanes between Avenue 38 and Avenue 40. Consider installing buffered bicycle lanes considering the posted speed limit of 45 miles per hour.*

> ***Recommendation 10****: Provide Class II lanes along all internal collector streets on the final site plan.*

Golf Cart Access

Given the Project's proximity to the Shadow Hills Golf Club, many of the adjacent bicycle facilities and pedestrian sidewalks are shared with golf carts.

> ***Recommendation 11****: Ensure that the bicycle lanes constructed within and around the Project are wide enough to accommodate golf carts.*

Pedestrian Access

Pedestrian facilities are provided along most roadways in Indio where land uses have been developed adjacent to the roadway. The Project will construct sidewalks on all existing streets adjacent to the Project site including Avenue 38, Madison Street, and Avenue 40.

> ***Recommendation 12****: Provide pedestrian facilities along all internal collector streets on the final site plan. Marked crosswalks should be provided at all major intersections along the collector streets.*

Appendix A: Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Talavera
EAST & WEST: Ave 38

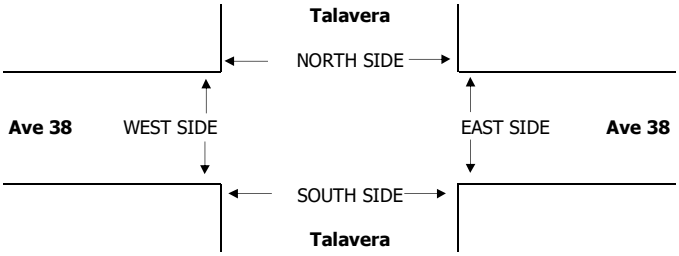
PROJECT #: SC3235
LOCATION #: 1
CONTROL: STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Talavera - Burr			SOUTHBOUND Talavera - Burr			EASTBOUND Ave 38			WESTBOUND Ave 38				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 1	ET 2	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	5	0	7	0	8	0	0	4	4	28	0	0	0	0	0
	7:15 AM	0	0	0	9	0	7	1	7	0	0	9	2	35	0	0	0	0	0
	7:30 AM	0	0	0	8	0	12	0	10	0	0	9	1	40	0	0	0	0	0
	7:45 AM	0	0	0	11	0	6	1	10	0	0	23	1	52	0	0	0	0	0
	8:00 AM	0	0	0	7	0	4	2	10	0	0	64	2	89	0	0	0	0	0
	8:15 AM	0	0	0	6	0	9	4	31	0	0	73	8	131	0	1	0	0	1
	8:30 AM	0	0	0	8	0	3	2	25	0	0	22	2	62	0	0	0	0	0
	8:45 AM	0	0	0	3	0	4	3	6	0	0	13	1	30	0	0	1	0	1
	VOLUMES	0	0	0	57	0	52	13	107	0	0	217	21	469	0	1	1	0	2
	APPROACH %	0%	0%	0%	52%	0%	47%	11%	88%	0%	0%	91%	9%						
	APP/DEPART	0	/	35	110	/	0	121	/	164	238	/	270	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	32	0	22	9	76	0	0	182	13	335					
	APPROACH %	0%	0%	0%	58%	0%	40%	11%	89%	0%	0%	93%	7%						
	PEAK HR FACTOR		0.000			0.809			0.607			0.602		0.634					
	APP/DEPART	0	/	23	55	/	0	85	/	108	195	/	204	0					
PM	4:00 PM	0	0	0	4	0	0	7	13	0	0	8	6	38	0	0	0	0	0
	4:15 PM	0	0	0	10	0	5	9	12	0	0	6	6	48	0	0	0	0	0
	4:30 PM	0	0	0	6	0	2	7	10	0	0	7	8	40	0	0	0	0	0
	4:45 PM	0	0	0	4	0	3	8	7	0	0	6	9	37	0	0	0	0	0
	5:00 PM	0	0	0	2	0	0	2	8	0	0	4	10	26	0	0	0	1	1
	5:15 PM	0	0	0	7	0	2	11	5	0	0	6	7	38	0	0	0	0	0
	5:30 PM	0	0	0	4	0	2	5	7	0	0	6	5	29	0	0	0	0	0
	5:45 PM	0	0	0	3	0	4	4	2	0	0	6	10	29	0	0	0	0	0
	VOLUMES	0	0	0	40	0	18	53	64	0	0	49	61	286	0	0	0	1	1
	APPROACH %	0%	0%	0%	69%	0%	31%	45%	55%	0%	0%	44%	55%						
	APP/DEPART	0	/	114	58	/	0	117	/	105	111	/	67	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	24	0	10	31	42	0	0	27	29	163					
	APPROACH %	0%	0%	0%	71%	0%	29%	42%	58%	0%	0%	48%	52%						
	PEAK HR FACTOR		0.000			0.567			0.869			0.933		0.849					
	APP/DEPART	0	/	60	34	/	0	73	/	66	56	/	37	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	7:45 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	2	1	0	1	4	1	0	0	0	1	1	1	0	1	3
	8:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	TOTAL	6	4	0	1	11	3	1	0	0	4	3	3	0	1	7
	AM BEGIN PEAK HR			7:45 AM			3	0	0	0	3					
PM	4:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
	4:45 PM	0	6	0	0	6	0	4	0	0	4	0	2	0	0	2
	5:00 PM	0	19	0	0	19	0	19	0	0	19	0	0	0	0	0
	5:15 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	27	1	0	31	0	25	1	0	26	3	2	0	0	5
	PM BEGIN PEAK HR			4:00 PM			0	4	1	0	5					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: Sun City

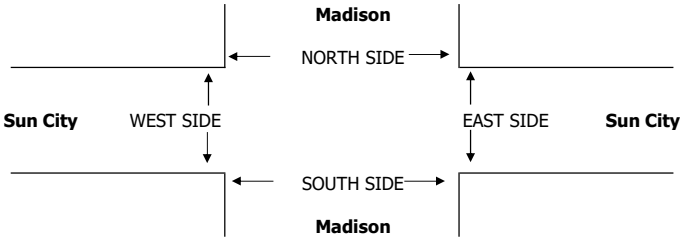
PROJECT #: SC3235
LOCATION #: 2
CONTROL: STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND Sun City			WESTBOUND Sun City				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	9	2	0	15	0	0	0	0	9	0	2	37	0	0	0	0	0
	7:15 AM	0	10	3	0	8	0	0	0	0	14	0	0	35	0	0	0	1	1
	7:30 AM	0	9	2	3	13	0	0	0	0	8	0	0	35	0	0	0	0	0
	7:45 AM	0	31	2	0	20	0	0	0	0	10	0	1	64	0	0	0	0	0
	8:00 AM	0	63	3	0	23	0	0	0	0	12	0	0	101	0	0	0	0	0
	8:15 AM	0	69	8	1	33	0	0	0	0	8	0	0	119	1	0	0	0	1
	8:30 AM	0	27	1	0	37	0	0	0	0	18	0	0	83	0	0	0	0	0
	8:45 AM	0	14	3	0	15	0	0	0	0	16	0	0	48	0	0	0	0	0
	VOLUMES	0	232	24	4	164	0	0	0	0	95	0	3	524	1	0	0	1	2
	APPROACH %	0%	90%	9%	2%	98%	0%	0%	0%	0%	96%	0%	3%						
	APP/DEPART	257	/	235	168	/	260	0	/	29	99	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	190	14	1	113	0	0	0	0	48	0	1	368					
	APPROACH %	0%	93%	7%	1%	99%	0%	0%	0%	0%	98%	0%	2%						
	PEAK HR FACTOR		0.657			0.770			0.000			0.681		0.767					
	APP/DEPART	205	/	191	114	/	162	0	/	15	49	/	0	0					
PM	4:00 PM	0	26	4	1	22	0	0	0	0	10	0	1	64	0	0	0	0	0
	4:15 PM	0	12	8	0	20	0	0	0	0	8	0	0	48	0	0	0	0	0
	4:30 PM	0	14	15	1	18	0	0	0	0	7	0	0	55	0	0	0	0	0
	4:45 PM	0	17	8	1	13	0	0	0	0	8	0	0	47	0	0	0	0	0
	5:00 PM	0	15	11	0	9	0	0	0	0	5	0	0	40	0	0	0	0	0
	5:15 PM	0	12	7	2	9	0	0	0	0	3	0	0	33	0	0	0	0	0
	5:30 PM	0	12	4	0	16	0	0	0	0	2	0	0	34	0	0	0	0	0
	5:45 PM	0	16	11	0	6	0	0	0	0	2	0	0	35	0	0	0	0	0
	VOLUMES	0	124	68	5	113	0	0	0	0	45	0	1	356	0	0	0	0	0
	APPROACH %	0%	65%	35%	4%	96%	0%	0%	0%	0%	98%	0%	2%						
	APP/DEPART	192	/	125	118	/	158	0	/	73	46	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	69	35	3	73	0	0	0	0	33	0	1	214					
	APPROACH %	0%	66%	34%	4%	96%	0%	0%	0%	0%	97%	0%	3%						
	PEAK HR FACTOR		0.867			0.826			0.000			0.773		0.836					
	APP/DEPART	104	/	70	76	/	106	0	/	38	34	/	0	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	5	0	5	0	0	3	0	3	0	0	2	0	2
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:45 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:45 AM	0	0	1	2	3	0	0	0	1	1	0	0	1	1	2
	TOTAL	0	0	7	7	14	0	0	3	1	4	0	0	4	6	10
	AM BEGIN PEAK HR			7:45 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
	4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	4:45 PM	0	0	0	25	25	0	0	0	23	23	0	0	0	2	2
	5:00 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	2	28	31	1	0	0	25	26	0	0	2	3	5
	PM BEGIN PEAK HR			4:00 PM			0	0	0	23	23					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Adams
EAST & WEST: Ave 40

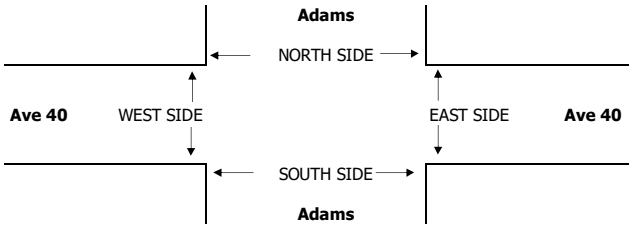
PROJECT #: SC3235
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Adams			SOUTHBOUND Adams			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	24	11	10	57	9	3	6	4	11	20	6	164	0	0	0	0	0
	7:15 AM	3	32	7	7	56	18	11	6	0	13	22	3	178	1	0	0	0	1
	7:30 AM	2	33	9	2	117	15	4	7	3	18	25	6	241	0	0	0	0	0
	7:45 AM	2	51	10	4	59	12	10	4	2	12	26	5	197	0	0	0	0	0
	8:00 AM	0	94	15	3	50	13	15	7	4	7	18	21	247	0	0	0	0	0
	8:15 AM	0	125	14	8	75	19	13	10	3	7	17	34	325	0	0	0	0	0
	8:30 AM	1	42	12	10	85	19	12	10	3	10	33	20	257	0	0	0	0	0
	8:45 AM	2	42	10	3	64	18	11	14	2	6	21	5	198	0	0	0	0	0
	9:00 AM	3	22	5	3	28	6	4	12	1	4	18	6	112	0	0	0	0	0
	9:15 AM	1	22	11	2	30	7	7	9	3	5	18	7	122	0	0	0	0	0
	9:30 AM	4	21	14	3	38	9	5	11	4	7	17	5	138	0	0	0	0	0
	9:45 AM	1	24	8	6	44	14	2	10	4	10	18	5	146	0	0	0	0	0
	VOLUMES	22	532	126	61	703	159	97	106	33	110	253	123	2,325	1	0	0	0	1
	APPROACH %	3%	78%	19%	7%	76%	17%	41%	45%	14%	23%	52%	25%						
	APP/DEPART	680	/	752	923	/	847	236	/	293	486	/	433	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	3	303	51	24	274	69	51	41	12	30	89	80	1,027					
	APPROACH %	1%	85%	14%	7%	75%	19%	49%	39%	12%	15%	45%	40%						
	PEAK HR FACTOR		0.642			0.805			0.963			0.790		0.790					
	APP/DEPART	357	/	434	367	/	316	104	/	116	199	/	161	0					
MD	10:00 AM	1	23	14	7	25	6	6	10	1	4	18	7	122	0	0	0	0	0
	10:15 AM	1	23	14	2	31	9	6	12	2	1	18	5	124	0	0	0	0	0
	10:30 AM	2	19	7	4	31	5	3	12	2	7	22	6	120	0	0	0	0	0
	10:45 AM	1	29	8	7	24	13	7	17	4	6	24	3	143	0	0	0	0	0
	11:00 AM	0	17	11	6	35	5	7	13	2	5	30	4	135	0	0	0	0	0
	11:15 AM	6	21	13	6	28	8	8	13	4	5	15	2	129	0	0	0	0	0
	11:30 AM	0	28	18	3	42	6	9	8	6	7	21	4	152	0	0	0	0	0
	11:45 AM	5	23	11	9	24	10	8	11	4	6	17	5	133	0	0	0	0	0
	12:00 PM	1	21	12	6	25	16	6	10	3	8	22	2	132	0	0	0	0	0
	12:15 PM	2	30	11	8	30	8	3	20	3	8	23	2	148	0	0	0	0	0
	12:30 PM	2	29	11	8	35	8	5	13	0	2	18	0	131	0	0	0	0	0
	12:45 PM	3	27	11	6	43	7	8	11	4	15	18	3	156	0	0	0	0	0
	VOLUMES	24	290	141	72	373	101	76	150	35	74	246	43	1,625	0	0	0	0	0
	APPROACH %	5%	64%	31%	13%	68%	18%	29%	57%	13%	20%	68%	12%						
	APP/DEPART	455	/	409	546	/	482	261	/	363	363	/	371	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	8	107	45	28	133	39	22	54	10	33	81	7	567					
	APPROACH %	5%	67%	28%	14%	67%	20%	26%	63%	12%	27%	67%	6%						
	PEAK HR FACTOR		0.930			0.893			0.827			0.840		0.909					
	APP/DEPART	160	/	136	200	/	176	86	/	127	121	/	128	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	1	2	0	0	3	1	2	0	0	3	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	8:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:00 AM	0	2	1	0	3	0	2	1	0	3	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	8	2	0	12	2	7	1	0	10	0	1	1	0	2
	AM BEGIN PEAK HR			8:00 AM			0	2	0	0	2					
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	10:30 AM	1	0	2	0	3	0	0	2	0	2	1	0	0	0	1
	10:45 AM	1	0	2	0	3	0	0	2	0	2	1	0	0	0	1
	11:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:30 AM	1	3	2	0	6	0	1	1	0	2	1	2	1	0	4
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	1	1	1	0	3	0	1	1	0	2	1	0	0	0	1
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	6	6	7	0	19	0	4	6	0	10	6	2	1	0	9
	MD BEGIN PEAK HR			12:00 PM			0	2	1	0	3					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Adams
EAST & WEST: Ave 40

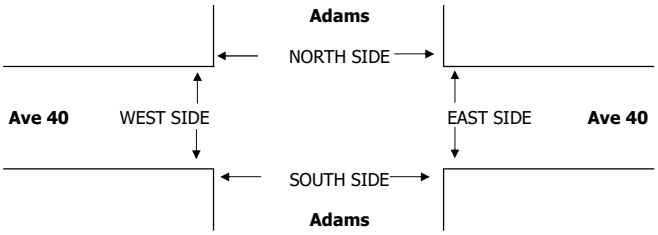
PROJECT #: SC3235
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Adams			SOUTHBOUND Adams			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	1	35	12	10	35	7	4	15	7	6	21	5	158	0	0	0	0	0
	1:15 PM	1	21	10	3	25	16	6	16	3	7	18	5	131	0	0	0	0	0
	1:30 PM	1	48	16	7	36	5	12	10	8	3	15	5	166	0	0	0	0	0
	1:45 PM	4	33	9	4	28	5	11	9	4	7	19	4	137	0	0	0	0	0
	2:00 PM	3	39	10	7	29	8	6	20	2	6	16	7	153	1	0	0	0	1
	2:15 PM	0	35	13	1	50	19	10	11	5	4	23	1	172	0	0	0	0	0
	2:30 PM	3	37	16	2	32	12	9	17	7	6	21	3	165	0	1	0	0	1
	2:45 PM	2	47	12	5	47	11	12	25	2	7	23	3	196	0	0	0	0	0
	3:00 PM	2	61	18	4	37	6	15	14	6	8	23	5	199	1	0	0	0	1
	3:15 PM	1	64	11	3	50	9	14	16	3	6	20	13	210	0	0	0	0	0
	3:30 PM	1	59	20	8	106	15	18	18	5	7	22	17	296	0	0	0	0	0
	3:45 PM	5	60	16	16	109	23	13	10	5	13	38	8	316	0	0	0	0	0
	VOLUMES	24	539	163	70	584	136	130	181	57	80	259	76	2,299	2	1	0	0	3
	APPROACH %	3%	74%	22%	9%	74%	17%	35%	49%	15%	19%	62%	18%						
	APP/DEPART	726	/	746	790	/	723	368	/	413	415	/	417	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	9	244	65	31	302	53	60	58	19	34	103	43	1,021					
	APPROACH %	3%	77%	20%	8%	78%	14%	44%	42%	14%	19%	57%	24%						
	PEAK HR FACTOR		0.981			0.652			0.835			0.763		0.808					
	APP/DEPART	318	/	347	386	/	356	137	/	154	180	/	164	0					
PM	4:00 PM	2	62	22	6	43	13	13	15	6	9	27	4	222	0	0	0	0	0
	4:15 PM	0	53	14	3	41	4	16	20	6	3	21	5	186	0	0	0	0	0
	4:30 PM	0	44	11	5	44	9	8	16	4	7	21	3	172	0	0	0	0	0
	4:45 PM	3	39	14	4	20	11	8	17	4	6	15	2	143	2	0	0	0	2
	5:00 PM	2	52	10	3	38	7	5	17	1	10	23	2	170	0	0	0	0	0
	5:15 PM	0	55	15	4	33	8	10	12	2	7	8	1	155	0	0	0	0	0
	5:30 PM	1	44	18	6	24	6	4	12	0	4	11	6	136	0	0	0	0	0
	5:45 PM	2	42	15	2	22	6	2	15	2	3	10	1	122	0	0	0	0	0
	6:00 PM	0	36	14	0	20	7	10	13	5	1	16	3	125	0	0	0	0	0
	6:15 PM	0	36	10	3	19	4	5	10	1	1	13	3	105	0	0	0	0	0
	6:30 PM	1	39	9	1	23	1	11	5	2	3	7	1	103	0	0	0	0	0
	6:45 PM	0	21	5	2	16	2	4	5	0	2	5	2	64	0	0	0	0	0
	VOLUMES	11	523	157	39	343	78	96	157	33	56	177	33	1,703	2	0	0	0	2
	APPROACH %	2%	76%	23%	8%	75%	17%	34%	55%	12%	21%	67%	12%						
	APP/DEPART	691	/	652	460	/	434	286	/	353	266	/	264	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	5	198	61	18	148	37	45	68	20	25	84	14	723					
	APPROACH %	2%	75%	23%	9%	73%	18%	34%	51%	15%	20%	68%	11%						
	PEAK HR FACTOR		0.767			0.819			0.792			0.769		0.814					
	APP/DEPART	264	/	257	203	/	195	133	/	147	123	/	124	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	1:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	1	3	1	1	6	1	3	1	1	6	0	0	0	0	0
	3:00 PM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	8	1	1	13	2	6	1	1	10	1	2	0	0	3
	MD BEGIN PEAK HR	3:00 PM					1	2	0	0	3					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					1	0	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Feb 11, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

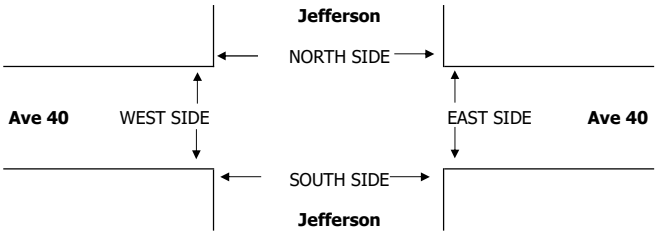
NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	19	32	12	2	58	10	1	7	19	9	15	5	189	0	0	0	0	0
	7:15 AM	13	50	8	6	96	3	2	13	16	11	21	16	255	0	0	0	0	0
	7:30 AM	9	92	12	10	138	5	3	7	13	33	23	21	366	0	0	0	0	0
	7:45 AM	13	139	20	15	136	8	3	7	18	18	24	37	438	0	0	0	0	0
	8:00 AM	14	177	17	42	169	11	7	7	10	22	14	82	572	0	0	0	0	0
	8:15 AM	11	170	43	49	174	29	4	11	12	18	17	101	639	0	0	0	0	0
	8:30 AM	14	145	38	74	197	22	9	10	9	30	16	43	607	0	0	0	0	0
	8:45 AM	11	99	18	41	141	10	3	8	19	31	18	26	425	0	0	0	0	0
	9:00 AM	6	66	25	16	70	7	6	7	12	23	9	11	258	0	1	0	0	1
	9:15 AM	10	52	12	8	76	17	7	5	9	38	11	9	254	0	0	0	0	0
	9:30 AM	6	42	20	3	59	1	4	12	14	26	22	8	217	0	0	0	0	0
	9:45 AM	7	49	21	5	52	6	5	12	15	39	21	6	238	0	0	0	0	0
	VOLUMES	133	1,113	246	271	1,366	129	54	106	166	298	211	365	4,458	0	1	0	0	1
	APPROACH %	9%	75%	16%	15%	77%	7%	17%	33%	51%	34%	24%	42%						
	APP/DEPART	1,492	/	1,533	1,766	/	1,830	326	/	622	874	/	473	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	52	631	118	180	676	70	23	35	49	88	71	263	2,256					
	APPROACH %	6%	79%	15%	19%	73%	8%	21%	33%	46%	21%	17%	62%						
	PEAK HR FACTOR		0.894			0.790			0.955			0.776		0.883					
	APP/DEPART	801	/	917	926	/	813	107	/	333	422	/	193	0					
MD	10:00 AM	6	68	23	5	71	5	8	14	17	32	11	8	268	0	0	0	0	0
	10:15 AM	7	57	28	6	42	4	3	11	10	38	12	6	224	0	0	0	0	0
	10:30 AM	9	50	20	5	45	4	5	15	15	32	16	11	227	0	0	0	0	0
	10:45 AM	7	57	33	2	41	3	5	16	11	29	19	10	233	0	0	0	0	0
	11:00 AM	16	60	25	1	31	4	4	11	13	30	15	5	215	0	0	0	0	0
	11:15 AM	7	56	38	5	48	4	7	14	13	27	24	11	254	0	0	0	0	0
	11:30 AM	13	64	32	4	48	5	3	17	25	35	13	5	264	0	0	0	0	0
	11:45 AM	18	57	46	8	33	4	1	9	16	18	15	7	232	0	1	0	0	1
	12:00 PM	11	50	18	8	48	3	4	9	9	22	25	8	215	0	0	0	0	0
	12:15 PM	10	51	26	6	46	1	5	15	11	31	18	2	222	0	0	0	0	0
	12:30 PM	12	64	29	8	50	3	4	16	19	35	21	6	267	0	0	0	0	0
	12:45 PM	17	44	29	7	65	3	2	12	10	23	13	4	229	0	0	0	0	0
	VOLUMES	133	678	347	65	568	43	51	159	169	352	202	83	2,850	0	1	0	0	1
	APPROACH %	11%	59%	30%	10%	84%	6%	13%	42%	45%	55%	32%	13%						
	APP/DEPART	1,158	/	813	676	/	1,089	379	/	570	637	/	378	0					
	BEGIN PEAK HR		10:45 AM																
	VOLUMES	43	237	128	12	168	16	19	58	62	121	71	31	966					
	APPROACH %	11%	58%	31%	6%	86%	8%	14%	42%	45%	54%	32%	14%						
	PEAK HR FACTOR		0.936			0.860			0.772			0.899		0.915					
	APP/DEPART	408	/	287	196	/	351	139	/	198	223	/	130	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:15 AM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	4	1	0	1	6	0	0	0	0	0	4	1	0	1	6
	8:15 AM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	8:30 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	8:45 AM	1	0	0	2	3	0	0	0	0	0	1	0	0	2	3
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	9:30 AM	0	1	2	1	4	0	0	0	0	0	0	1	2	1	4
	9:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	7	7	3	7	24	0	2	0	2	4	7	5	3	5	20
	AM BEGIN PEAK HR			7:45 AM			0	1	0	1	2					
MD	10:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	10:15 AM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	10:30 AM	2	0	0	2	4	0	0	0	0	0	2	0	0	2	4
	10:45 AM	1	1	4	0	6	0	0	4	0	4	1	1	0	0	2
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	4	4	2	17	0	0	4	0	4	7	4	0	2	13
	MD BEGIN PEAK HR			10:45 AM			0	0	4	0	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Feb 11, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

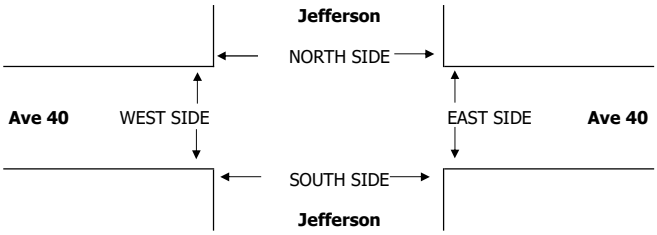
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	12	47	36	3	75	1	1	14	13	27	17	3	249	0	0	0	0	0
	1:15 PM	10	33	25	5	58	2	4	13	19	24	18	13	224	0	0	0	0	0
	1:30 PM	15	62	30	8	64	1	1	23	12	18	17	5	256	0	0	0	0	0
	1:45 PM	11	54	30	14	67	8	2	29	19	27	18	8	287	0	0	0	0	0
	2:00 PM	9	56	37	3	74	2	3	13	9	30	15	10	261	0	0	0	0	0
	2:15 PM	21	67	23	8	56	5	4	16	16	19	12	4	251	0	0	0	0	0
	2:30 PM	28	73	22	6	63	5	1	21	25	29	13	9	295	0	0	0	0	0
	2:45 PM	16	108	32	13	76	3	4	18	21	20	18	19	348	0	0	0	0	0
	3:00 PM	18	123	28	8	91	8	8	17	28	33	17	41	420	0	0	0	0	0
	3:15 PM	29	163	34	9	72	7	8	20	18	17	17	53	447	0	0	0	0	0
	3:30 PM	18	132	32	80	185	11	18	16	25	26	9	41	593	0	0	0	0	0
	3:45 PM	26	127	33	80	199	17	10	18	27	30	22	34	623	0	0	0	0	0
	VOLUMES	213	1,045	362	237	1,080	70	64	218	232	300	193	240	4,254	0	0	0	0	0
	APPROACH %	13%	65%	22%	17%	78%	5%	12%	42%	45%	41%	26%	33%						
	APP/DEPART	1,620	/	1,349	1,387	/	1,612	514	/	817	733	/	476	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	91	545	127	177	547	43	44	71	98	106	65	169	2,083					
	APPROACH %	12%	71%	17%	23%	71%	6%	21%	33%	46%	31%	19%	50%						
	PEAK HR FACTOR		0.844			0.648			0.903			0.934		0.836					
	APP/DEPART	763	/	758	767	/	751	213	/	375	340	/	199	0					
PM	4:00 PM	14	119	32	21	166	9	6	19	18	16	22	13	455	0	0	0	0	0
	4:15 PM	22	83	48	19	109	2	4	19	20	15	19	5	365	0	0	0	0	0
	4:30 PM	8	87	31	7	88	5	1	17	14	20	16	5	299	0	0	0	0	0
	4:45 PM	12	67	24	6	62	3	2	16	14	16	13	3	238	0	0	0	0	0
	5:00 PM	13	76	25	8	71	5	2	21	25	14	13	9	282	0	0	0	0	0
	5:15 PM	11	81	27	10	84	6	2	16	19	12	14	13	295	0	0	1	0	1
	5:30 PM	7	88	14	17	108	1	4	15	6	19	17	15	311	0	0	0	0	0
	5:45 PM	12	75	18	22	101	3	5	26	17	7	10	15	311	0	0	0	0	0
	6:00 PM	5	68	20	26	99	4	5	8	12	11	6	6	270	0	0	0	0	0
	6:15 PM	10	60	23	13	72	4	3	15	12	7	4	9	232	0	0	0	0	0
	6:30 PM	9	51	15	12	79	6	1	8	8	3	10	5	207	0	0	0	0	0
	6:45 PM	12	50	12	10	101	6	4	9	8	14	6	2	234	0	0	0	0	0
	VOLUMES	135	905	289	171	1,140	54	39	189	173	154	150	100	3,499	0	0	1	0	1
	APPROACH %	10%	68%	22%	13%	84%	4%	10%	47%	43%	38%	37%	25%						
	APP/DEPART	1,329	/	1,043	1,365	/	1,467	401	/	649	404	/	340	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	56	356	135	53	425	19	13	71	66	67	70	26	1,357					
	APPROACH %	10%	65%	25%	11%	86%	4%	9%	47%	44%	41%	43%	16%						
	PEAK HR FACTOR		0.829			0.634			0.872			0.799		0.746					
	APP/DEPART	547	/	395	497	/	558	150	/	259	163	/	145	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	2	0	0	2	4	0	0	0	0	0	2	0	0	2	4
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	1	3	0	4	0	0	0	0	0	0	1	3	0	4
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	2	1	0	1	4	2	1	0	1	4	0	0	0	0	0
	TOTAL	4	2	3	3	12	2	1	0	1	4	2	1	3	2	8
	MD BEGIN PEAK HR	3:00 PM					2	1	0	1	4					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	0	0	1	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Feb 7, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

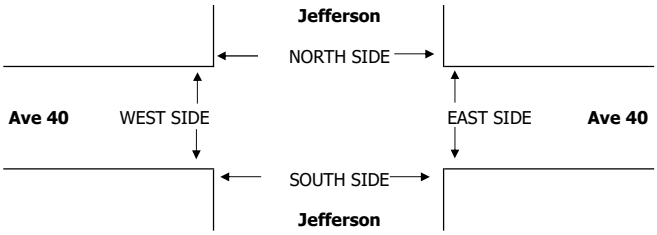
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	21	37	9	1	67	3	2	4	20	13	10	4	191	0	0	0	0	0
	7:15 AM	15	33	17	4	77	2	4	5	14	16	11	8	206	0	0	0	0	0
	7:30 AM	8	75	13	9	119	5	2	7	25	28	21	15	327	0	0	0	0	0
	7:45 AM	19	109	5	15	135	2	1	13	6	20	15	31	371	0	0	0	0	0
	8:00 AM	9	172	15	36	166	16	2	10	8	25	19	98	576	0	0	0	0	0
	8:15 AM	14	190	24	67	192	34	5	4	12	18	14	104	678	0	0	0	0	0
	8:30 AM	14	110	23	71	195	22	7	9	8	21	12	28	520	0	0	0	0	0
	8:45 AM	9	82	20	28	113	10	2	11	11	21	14	29	350	0	0	0	0	0
	9:00 AM	2	58	19	17	57	5	1	8	9	27	9	17	229	0	0	0	0	0
	9:15 AM	5	39	18	5	61	3	4	12	7	26	15	3	198	0	0	0	0	0
	9:30 AM	13	29	18	1	42	1	2	9	7	31	13	3	169	0	0	0	0	0
	9:45 AM	10	34	22	4	36	0	4	12	9	37	7	5	180	0	0	0	0	0
	VOLUMES	139	968	203	258	1,260	103	36	104	136	283	160	345	3,995	0	0	0	0	0
	APPROACH %	11%	74%	15%	16%	78%	6%	13%	38%	49%	36%	20%	44%						
	APP/DEPART	1,310	/	1,349	1,621	/	1,679	276	/	565	788	/	402	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	56	581	67	189	688	74	15	36	34	84	60	261	2,145					
	APPROACH %	8%	83%	10%	20%	72%	8%	18%	42%	40%	21%	15%	64%						
	PEAK HR FACTOR		0.772			0.811			0.885			0.713		0.791					
	APP/DEPART	704	/	857	951	/	806	85	/	292	405	/	190	0					
MD	10:00 AM	6	40	27	12	39	3	3	12	7	32	16	5	202	0	0	0	0	0
	10:15 AM	7	31	24	1	43	3	1	15	8	37	17	3	190	0	0	0	0	0
	10:30 AM	6	38	23	2	44	3	0	14	15	30	20	6	201	0	0	0	0	0
	10:45 AM	3	25	28	5	45	2	3	17	9	31	27	9	204	0	0	0	0	0
	11:00 AM	7	32	27	7	28	0	2	19	8	31	14	2	177	0	0	0	0	0
	11:15 AM	6	36	28	7	33	0	0	16	13	27	16	6	188	0	0	0	0	0
	11:30 AM	9	25	34	3	34	1	2	11	14	35	15	5	188	0	0	0	0	0
	11:45 AM	9	40	28	3	30	2	0	9	10	28	18	9	186	0	0	0	0	0
	12:00 PM	22	34	40	4	37	0	0	12	14	24	11	4	202	0	0	0	0	0
	12:15 PM	21	34	30	5	41	1	3	17	13	26	19	5	215	0	0	0	0	0
	12:30 PM	8	46	33	2	30	2	3	28	13	26	20	6	217	0	0	0	0	0
	12:45 PM	11	42	27	5	44	1	0	17	11	22	22	6	208	0	0	0	0	0
	VOLUMES	115	423	349	56	448	18	17	187	135	349	215	66	2,378	0	0	0	0	0
	APPROACH %	13%	48%	39%	11%	86%	3%	5%	55%	40%	55%	34%	10%						
	APP/DEPART	887	/	506	522	/	932	339	/	592	630	/	348	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	62	156	130	16	152	4	6	74	51	98	72	21	842					
	APPROACH %	18%	45%	37%	9%	88%	2%	5%	56%	39%	51%	38%	11%						
	PEAK HR FACTOR		0.906			0.860			0.744			0.918		0.970					
	APP/DEPART	348	/	183	172	/	301	131	/	220	191	/	138	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	1	1	3	0	1	0	1	2	0	0	1	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	9:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	1	1	2	1	5	0	1	0	1	2	1	0	2	0	3
	AM BEGIN PEAK HR			7:45 AM			0	0	0	0	0					
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	3	2	1	6	0	3	0	1	4	0	0	2	0	2
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	11:15 AM	5	0	0	1	6	0	0	0	0	0	5	0	0	1	6
	11:30 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	11:45 AM	1	1	1	0	3	1	0	1	0	2	0	1	0	0	1
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	1	4	3	1	9	0	0	0	0	0	1	4	3	1	9
	12:30 PM	1	0	4	0	5	0	0	0	0	0	1	0	4	0	5
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	10	10	10	4	34	1	5	1	1	8	9	5	9	3	26
	MD BEGIN PEAK HR			12:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Feb 7, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

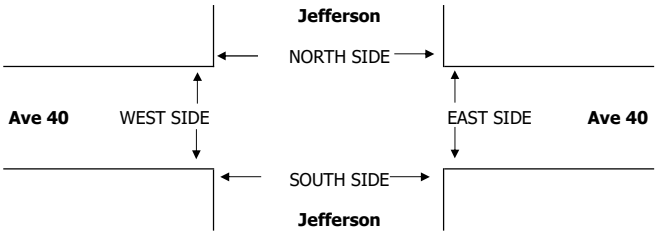
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	18	34	36	0	46	2	0	13	15	21	12	5	202	0	0	0	0	0
	1:15 PM	6	37	35	3	42	1	4	8	7	25	15	4	187	0	0	0	0	0
	1:30 PM	9	30	35	2	41	4	1	16	8	26	14	3	189	0	0	0	0	0
	1:45 PM	16	43	28	9	44	6	3	15	12	31	16	5	228	0	0	0	0	0
	2:00 PM	7	34	27	8	53	3	3	14	29	18	15	7	218	0	0	0	0	0
	2:15 PM	18	43	32	4	45	1	2	20	13	19	17	5	219	0	0	0	0	0
	2:30 PM	13	59	28	8	53	4	2	21	15	29	14	5	251	0	0	0	0	0
	2:45 PM	34	90	36	6	71	1	5	16	10	32	11	10	322	0	0	0	0	0
	3:00 PM	19	93	29	3	60	4	4	15	37	22	13	29	328	0	0	0	0	0
	3:15 PM	23	153	36	8	63	7	5	15	20	28	16	51	425	0	0	0	0	0
	3:30 PM	15	141	33	74	190	16	9	14	26	23	21	25	587	0	0	0	0	0
	3:45 PM	23	126	34	70	205	13	14	27	23	31	20	23	609	0	0	0	0	0
	VOLUMES	201	883	389	195	913	62	52	194	215	305	184	172	3,765	0	0	0	0	0
	APPROACH %	14%	60%	26%	17%	78%	5%	11%	42%	47%	46%	28%	26%						
	APP/DEPART	1,473	/	1,107	1,170	/	1,433	461	/	778	661	/	447	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	80	513	132	155	518	40	32	71	106	104	70	128	1,949					
	APPROACH %	11%	71%	18%	22%	73%	6%	15%	34%	51%	34%	23%	42%						
	PEAK HR FACTOR		0.855			0.619			0.816			0.795		0.800					
	APP/DEPART	725	/	673	713	/	728	209	/	358	302	/	190	0					
PM	4:00 PM	24	84	26	34	157	9	5	16	20	21	20	10	426	0	0	0	0	0
	4:15 PM	14	85	31	12	84	4	3	19	21	19	14	5	311	0	0	0	0	0
	4:30 PM	17	78	25	8	58	4	5	16	6	20	13	3	253	0	0	0	0	0
	4:45 PM	16	72	18	7	63	5	3	25	19	15	9	10	262	0	0	0	0	0
	5:00 PM	21	78	26	11	60	3	6	21	15	13	9	11	274	0	0	0	0	0
	5:15 PM	10	98	21	15	86	2	5	23	13	8	11	13	305	0	0	0	0	0
	5:30 PM	14	93	22	25	72	3	1	16	12	18	7	24	307	0	0	0	0	0
	5:45 PM	6	60	27	19	87	1	5	15	14	3	12	20	269	0	0	0	0	0
	6:00 PM	14	82	23	20	62	7	6	7	5	6	7	16	255	0	0	0	0	0
	6:15 PM	13	69	19	21	58	2	2	12	9	6	5	6	222	0	0	0	0	0
	6:30 PM	13	74	16	4	28	2	3	7	12	6	8	2	175	0	0	0	0	0
	6:45 PM	7	68	16	8	35	1	3	6	7	7	3	5	166	0	0	0	0	0
	VOLUMES	169	941	270	184	850	43	47	183	153	142	118	125	3,225	0	0	0	0	0
	APPROACH %	12%	68%	20%	17%	79%	4%	12%	48%	40%	37%	31%	32%						
	APP/DEPART	1,380	/	1,113	1,077	/	1,145	383	/	637	385	/	330	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	71	319	100	61	362	22	16	76	66	75	56	28	1,252					
	APPROACH %	14%	65%	20%	14%	81%	5%	10%	48%	42%	47%	35%	18%						
	PEAK HR FACTOR		0.914			0.556			0.840			0.779		0.735					
	APP/DEPART	490	/	363	445	/	503	158	/	237	159	/	149	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	2	0	1	1	4	0	0	0	0	0	2	0	1	1	4
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	2	2	0	2	6	2	1	0	1	4	0	1	0	1	2
	TOTAL	5	2	1	4	12	2	1	0	1	4	3	1	1	3	8
	MD BEGIN PEAK HR	3:00 PM					2	1	0	1	4					
PM	4:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	0	1	0	6	1	0	0	0	1	4	0	1	0	5
	PM BEGIN PEAK HR	4:00 PM					1	0	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Feb 12, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

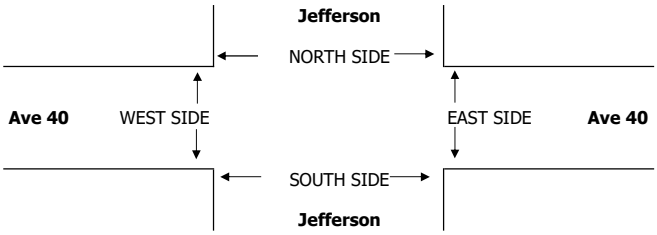
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	11	47	4	3	35	2	0	6	0	9	5	2	124	0	0	0	0	0
	7:15 AM	2	67	8	5	29	1	0	8	10	12	10	7	159	0	0	0	0	0
	7:30 AM	7	40	6	0	43	3	2	11	5	12	10	9	148	0	0	0	0	0
	7:45 AM	8	54	13	14	42	4	4	3	11	12	9	18	192	0	0	0	0	0
	8:00 AM	7	34	11	8	74	7	5	4	10	16	9	2	187	0	0	0	0	0
	8:15 AM	3	33	20	3	60	4	5	5	8	17	11	4	173	0	0	0	0	0
	8:30 AM	10	32	6	2	56	4	3	8	5	15	13	3	157	0	0	0	0	0
	8:45 AM	5	47	10	9	76	0	4	6	5	20	12	9	203	0	0	0	0	0
	9:00 AM	8	30	14	8	51	5	4	6	14	24	10	8	182	0	0	0	0	0
	9:15 AM	9	55	19	3	36	3	2	2	3	16	19	3	170	0	0	0	0	0
	9:30 AM	8	55	18	2	48	4	3	15	10	23	11	6	203	0	0	0	0	0
	9:45 AM	5	52	12	6	47	0	4	10	10	23	19	6	194	0	0	0	0	0
	VOLUMES	83	546	141	63	597	37	36	84	91	199	138	77	2,092	0	0	0	0	0
	APPROACH %	11%	71%	18%	9%	86%	5%	17%	40%	43%	48%	33%	19%						
	APP/DEPART	770	/	659	697	/	887	211	/	288	414	/	258	0					
	BEGIN PEAK HR		8:45 AM																
	VOLUMES	30	187	61	22	211	12	13	29	32	83	52	26	758					
	APPROACH %	11%	67%	22%	9%	86%	5%	18%	39%	43%	52%	32%	16%						
	PEAK HR FACTOR		0.837			0.721			0.661			0.958		0.933					
	APP/DEPART	278	/	226	245	/	326	74	/	112	161	/	94	0					
MD	10:00 AM	10	46	33	3	44	0	1	10	2	13	15	7	184	0	0	0	0	0
	10:15 AM	11	53	11	4	48	3	1	13	11	28	16	11	210	0	0	0	0	0
	10:30 AM	8	66	23	4	65	1	1	14	13	28	16	3	242	0	0	1	0	1
	10:45 AM	7	46	20	3	53	1	2	17	14	32	20	6	221	0	0	0	0	0
	11:00 AM	5	43	19	3	47	3	2	9	8	26	19	9	193	0	0	0	0	0
	11:15 AM	8	51	22	8	61	4	3	16	16	23	14	4	230	0	0	0	0	0
	11:30 AM	4	48	32	6	52	5	0	11	13	19	11	8	209	0	0	0	0	0
	11:45 AM	11	41	31	12	59	3	0	9	8	19	23	14	230	0	0	0	0	0
	12:00 PM	13	52	22	8	57	2	0	17	6	25	13	10	225	0	0	0	0	0
	12:15 PM	17	43	24	13	63	2	5	19	12	26	20	5	249	0	0	0	0	0
	12:30 PM	8	41	38	7	50	0	0	15	10	26	14	6	215	0	0	0	0	0
	12:45 PM	12	48	24	4	48	3	2	12	10	20	13	3	199	0	0	0	0	0
	VOLUMES	114	578	299	75	647	27	17	162	123	285	194	86	2,607	0	0	1	0	1
	APPROACH %	12%	58%	30%	10%	86%	4%	6%	54%	41%	50%	34%	15%						
	APP/DEPART	991	/	680	749	/	1,055	302	/	536	565	/	336	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	49	177	115	40	229	7	5	60	36	96	70	35	919					
	APPROACH %	14%	52%	34%	14%	83%	3%	5%	59%	36%	48%	35%	17%						
	PEAK HR FACTOR		0.980			0.885			0.701			0.897		0.923					
	APP/DEPART	341	/	217	276	/	361	101	/	215	201	/	126	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	2	0	2	4	0	1	0	1	2	0	1	0	1	2
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	TOTAL	1	4	0	3	8	0	3	0	1	4	1	1	0	2	4
	AM BEGIN PEAK HR	8:45 AM					0	0	0	0	0					
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	11:00 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	1	1	0	1	3	0	1	0	1	2	1	0	0	0	1
	11:45 AM	0	2	0	1	3	0	0	0	0	0	0	2	0	1	3
	12:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	12:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	5	1	4	17	0	1	0	1	2	7	4	1	3	15
	MD BEGIN PEAK HR	11:45 AM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Feb 12, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

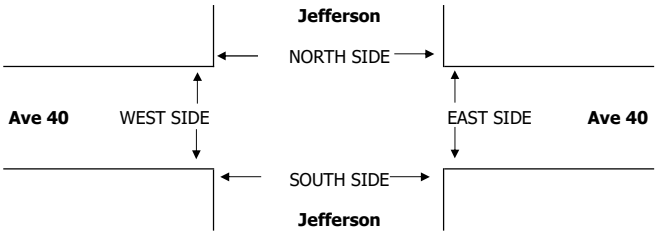
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	5	45	25	6	55	2	1	10	10	15	9	5	188	0	0	0	0	0
	1:15 PM	10	49	25	8	56	5	3	14	11	24	8	9	222	0	0	0	0	0
	1:30 PM	3	36	23	0	39	1	2	15	8	11	12	2	152	0	0	0	0	0
	1:45 PM	10	43	27	1	30	2	1	13	12	13	20	4	176	0	0	0	0	0
	2:00 PM	10	45	30	3	57	0	3	23	10	20	19	3	223	0	0	0	0	0
	2:15 PM	12	39	20	0	41	1	0	11	10	13	14	3	164	0	0	0	0	0
	2:30 PM	3	34	25	5	44	3	4	13	4	16	11	3	165	0	0	0	0	0
	2:45 PM	10	37	21	3	46	1	1	21	6	9	21	5	181	1	0	0	0	1
	3:00 PM	9	36	18	1	46	1	1	15	6	17	11	3	164	0	0	0	0	0
	3:15 PM	12	46	32	4	69	6	3	12	11	15	16	2	228	0	0	0	0	0
	3:30 PM	18	63	23	8	126	6	5	12	8	15	18	8	310	0	0	0	0	0
	3:45 PM	16	48	28	6	132	9	1	13	16	18	16	7	310	0	0	0	0	0
	VOLUMES	118	521	297	45	741	37	25	172	112	186	175	54	2,483	1	0	0	0	1
	APPROACH %	13%	56%	32%	5%	90%	4%	8%	56%	36%	45%	42%	13%						
	APP/DEPART	936	/	600	823	/	1,040	309	/	514	415	/	329	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	55	193	101	19	373	22	10	52	41	65	61	20	1,012					
	APPROACH %	16%	55%	29%	5%	90%	5%	10%	50%	40%	45%	42%	14%						
	PEAK HR FACTOR		0.839			0.704			0.858			0.890		0.816					
	APP/DEPART	349	/	223	414	/	479	103	/	172	146	/	138	0					
PM	4:00 PM	7	44	19	0	47	2	3	18	6	26	15	5	192	0	0	0	0	0
	4:15 PM	7	47	21	1	36	2	2	10	7	19	9	3	164	0	0	0	0	0
	4:30 PM	8	36	18	3	45	2	0	15	11	21	15	2	176	0	0	0	0	0
	4:45 PM	13	48	14	6	34	4	1	12	11	16	15	5	179	0	0	0	0	0
	5:00 PM	9	50	25	4	40	3	0	15	10	22	10	9	197	0	0	0	0	0
	5:15 PM	4	57	27	10	46	2	1	15	5	23	13	8	211	0	0	0	0	0
	5:30 PM	11	61	16	9	38	4	4	9	9	9	14	13	197	0	0	0	0	0
	5:45 PM	8	57	14	10	50	3	0	5	9	18	10	8	192	0	0	0	0	0
	6:00 PM	5	41	22	3	49	1	2	10	4	23	11	5	176	0	0	0	0	0
	6:15 PM	6	44	19	3	37	1	1	7	10	9	8	5	150	0	0	0	0	0
	6:30 PM	6	38	7	2	30	1	1	9	4	7	7	5	117	0	0	0	0	0
	6:45 PM	4	43	19	3	36	0	1	6	8	7	2	6	135	0	0	0	0	0
	VOLUMES	88	566	221	54	488	25	16	131	94	200	129	74	2,086	0	0	0	0	0
	APPROACH %	10%	65%	25%	10%	86%	4%	7%	54%	39%	50%	32%	18%						
	APP/DEPART	875	/	656	567	/	782	241	/	406	403	/	242	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	32	225	82	33	174	12	5	44	33	72	47	38	797					
	APPROACH %	9%	66%	24%	15%	79%	5%	6%	54%	40%	46%	30%	24%						
	PEAK HR FACTOR		0.963			0.869			0.820			0.892		0.944					
	APP/DEPART	339	/	268	219	/	279	82	/	159	157	/	91	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	1:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	2:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	2:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	1	2	1	10	1	0	1	0	2	5	1	1	1	8
	MD BEGIN PEAK HR			3:00 PM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	2	0	2	4	0	2	0	2	4	0	0	0	0	0
	PM BEGIN PEAK HR			5:00 PM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Feb 13, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

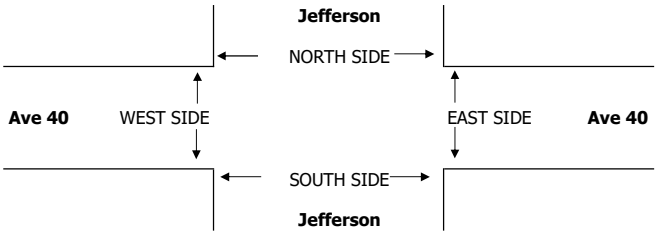
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	7	5	0	11	0	0	3	1	3	6	1	38	0	0	0	0	0
	7:15 AM	2	9	4	0	13	1	1	1	1	5	4	6	47	0	0	0	0	0
	7:30 AM	2	27	1	1	30	1	2	5	4	8	2	9	92	0	0	0	0	0
	7:45 AM	2	74	12	2	20	2	2	5	3	4	6	8	140	0	0	0	0	0
	8:00 AM	0	22	6	1	18	3	1	4	6	9	3	3	76	0	0	0	0	0
	8:15 AM	3	15	8	0	12	0	1	4	4	4	7	5	63	0	0	0	0	0
	8:30 AM	2	23	8	2	36	0	1	4	8	17	14	0	115	0	0	0	0	0
	8:45 AM	5	13	10	1	30	2	0	5	4	13	12	1	96	0	0	0	0	0
	9:00 AM	9	27	9	2	39	0	1	6	4	17	11	2	127	0	0	0	0	0
	9:15 AM	3	82	7	6	100	9	2	6	5	21	12	7	260	0	0	0	0	0
	9:30 AM	2	125	7	3	53	1	7	7	7	24	14	7	257	0	0	0	0	0
	9:45 AM	5	64	13	3	42	3	1	11	4	20	18	7	191	0	0	0	0	0
	VOLUMES	36	488	90	21	404	22	19	61	51	145	109	56	1,502	0	0	0	0	0
	APPROACH %	6%	79%	15%	5%	90%	5%	15%	47%	39%	47%	35%	18%						
	APP/DEPART	614	/	563	447	/	600	131	/	172	310	/	167	0					
	BEGIN PEAK HR		9:00 AM																
	VOLUMES	19	298	36	14	234	13	11	30	20	82	55	23	835					
	APPROACH %	5%	84%	10%	5%	90%	5%	18%	49%	33%	51%	34%	14%						
	PEAK HR FACTOR		0.659			0.567			0.726			0.889		0.803					
	APP/DEPART	353	/	332	261	/	336	61	/	80	160	/	87	0					
MD	10:00 AM	6	26	16	1	34	3	1	9	3	22	11	2	134	0	0	0	0	0
	10:15 AM	11	30	14	0	23	1	2	7	9	18	16	3	134	0	0	0	0	0
	10:30 AM	8	26	26	2	31	1	1	16	10	22	11	1	155	0	0	0	0	0
	10:45 AM	5	22	18	0	48	4	1	10	8	24	14	0	154	0	0	0	1	1
	11:00 AM	9	48	13	6	98	4	1	10	8	16	20	3	236	1	0	0	0	1
	11:15 AM	9	70	21	19	148	5	2	12	2	23	10	8	329	0	0	0	0	0
	11:30 AM	6	52	22	4	72	3	1	21	9	22	16	3	231	0	0	0	0	0
	11:45 AM	10	35	28	2	48	1	2	11	11	11	11	1	171	0	0	0	0	0
	12:00 PM	14	27	27	2	36	3	1	14	9	11	17	4	165	0	0	0	0	0
	12:15 PM	7	35	22	2	39	2	1	18	10	21	8	2	167	0	0	0	0	0
	12:30 PM	4	27	29	0	33	1	3	13	7	16	8	1	142	0	0	0	0	0
	12:45 PM	2	26	28	6	73	3	1	5	6	13	12	0	175	0	0	0	0	0
	VOLUMES	91	424	264	44	683	31	17	146	92	219	154	28	2,193	1	0	0	1	2
	APPROACH %	12%	54%	34%	6%	90%	4%	7%	57%	36%	55%	38%	7%						
	APP/DEPART	779	/	469	758	/	994	255	/	455	401	/	275	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	34	205	84	31	366	13	6	54	30	72	57	15	967					
	APPROACH %	11%	63%	26%	8%	89%	3%	7%	60%	33%	50%	40%	10%						
	PEAK HR FACTOR		0.808			0.596			0.726			0.878		0.735					
	APP/DEPART	323	/	226	410	/	469	90	/	169	144	/	103	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	2	0	2
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	1	5	1	7	14	1	2	1	2	6	0	3	0	5	8
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	1	1	1	3	0	1	0	1	2	0	0	1	0	1
	9:15 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	TOTAL	4	7	5	8	24	2	3	1	3	9	2	4	4	5	15
	AM BEGIN PEAK HR			9:00 AM			0	1	0	1	2					
MD	10:00 AM	2	0	0	2	4	0	0	0	0	0	2	0	0	2	4
	10:15 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	10:30 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	10:45 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	11:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	11:15 AM	2	0	1	1	4	0	0	0	0	0	2	0	1	1	4
	11:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:45 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	TOTAL	8	7	1	8	24	1	0	0	1	2	7	7	1	7	22
	MD BEGIN PEAK HR			11:00 AM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Feb 13, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

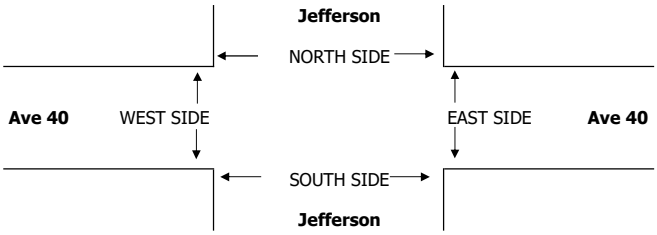
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	6	33	20	3	85	4	2	11	3	15	13	1	196	0	0	0	0	0
	1:15 PM	8	35	13	5	57	3	1	12	4	15	11	2	166	0	0	0	0	0
	1:30 PM	11	33	10	4	38	2	3	18	8	17	13	5	162	0	0	0	0	0
	1:45 PM	11	44	22	2	38	2	3	6	7	16	11	2	164	0	0	0	0	0
	2:00 PM	2	46	15	7	32	2	2	11	11	22	9	4	163	0	0	0	0	0
	2:15 PM	11	46	20	3	32	2	3	12	4	11	8	4	156	0	0	1	0	1
	2:30 PM	12	57	25	4	29	2	4	8	10	18	13	1	183	0	0	0	0	0
	2:45 PM	7	54	23	2	44	4	0	9	12	13	12	8	188	0	0	0	0	0
	3:00 PM	9	46	24	3	35	0	0	8	9	12	9	0	155	0	0	0	0	0
	3:15 PM	16	54	17	3	31	0	0	8	12	12	12	2	167	0	0	0	0	0
	3:30 PM	12	45	9	2	29	1	0	9	6	13	8	2	136	0	0	0	0	0
	3:45 PM	10	43	15	0	27	1	5	7	17	6	9	1	141	0	0	0	0	0
	VOLUMES	115	536	213	38	477	23	23	119	103	170	128	32	1,977	0	0	1	0	1
	APPROACH %	13%	62%	25%	7%	89%	4%	9%	49%	42%	52%	39%	10%						
	APP/DEPART	864	/	590	538	/	750	245	/	370	330	/	267	0					
	BEGIN PEAK HR		2:30 PM																
	VOLUMES	44	211	89	12	139	6	4	33	43	55	46	11	693					
	APPROACH %	13%	61%	26%	8%	89%	4%	5%	41%	54%	49%	41%	10%						
	PEAK HR FACTOR		0.915			0.785			0.909			0.848		0.922					
	APP/DEPART	344	/	226	157	/	237	80	/	134	112	/	96	0					
PM	4:00 PM	9	32	15	2	26	1	0	11	6	15	6	2	125	0	0	0	0	0
	4:15 PM	4	30	11	1	22	3	1	7	4	8	9	1	101	0	0	0	0	0
	4:30 PM	11	28	9	2	15	0	0	10	6	6	6	0	93	0	0	0	0	0
	4:45 PM	4	31	10	0	23	0	1	3	8	7	7	0	94	0	0	0	0	0
	5:00 PM	7	31	15	2	18	0	0	4	3	10	6	0	96	0	0	0	0	0
	5:15 PM	5	26	11	0	19	0	1	6	7	1	4	1	81	0	0	0	0	0
	5:30 PM	6	15	12	1	23	0	0	2	5	7	7	0	78	0	0	0	0	0
	5:45 PM	11	29	15	1	16	0	0	6	4	6	4	2	94	1	1	0	0	2
	6:00 PM	5	24	7	0	28	1	1	5	7	4	8	2	92	0	0	0	0	0
	6:15 PM	4	20	5	4	26	0	0	3	3	3	4	3	75	0	0	0	0	0
	6:30 PM	5	20	10	2	16	1	1	5	3	5	7	3	78	0	0	0	0	0
	6:45 PM	4	15	2	0	11	1	0	2	5	0	0	0	40	0	0	0	0	0
	VOLUMES	75	301	122	15	243	7	5	64	61	72	68	14	1,047	1	1	0	0	2
	APPROACH %	15%	60%	24%	6%	92%	3%	4%	49%	47%	47%	44%	9%						
	APP/DEPART	498	/	321	265	/	377	130	/	200	154	/	149	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	28	121	45	5	86	4	2	31	24	36	28	3	413					
	APPROACH %	14%	62%	23%	5%	91%	4%	4%	54%	42%	54%	42%	4%						
	PEAK HR FACTOR		0.866			0.819			0.838			0.728		0.826					
	APP/DEPART	194	/	126	95	/	146	57	/	81	67	/	60	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:30 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	4	0	2	0	6	0	0	0	0	0	4	0	2	0	6
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	TOTAL	6	3	2	2	13	0	0	0	0	0	6	3	2	2	13
	MD BEGIN PEAK HR	2:30 PM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	6:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	2	3	2	0	7	0	2	0	0	2	2	1	2	0	5
	PM BEGIN PEAK HR	4:00 PM					0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 10, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

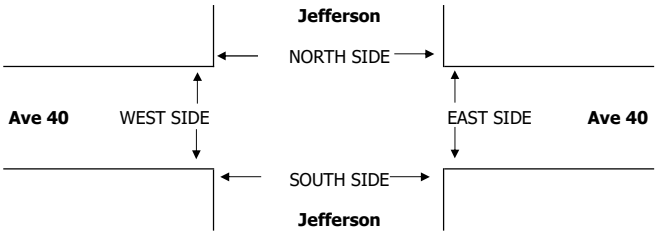
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	24	39	6	5	74	6	1	10	11	10	12	2	200	0	0	0	0	0
	7:15 AM	16	31	13	3	84	9	2	9	23	21	17	4	232	0	0	0	0	0
	7:30 AM	9	40	21	1	133	9	0	7	12	26	23	8	289	0	0	0	0	0
	7:45 AM	14	54	11	1	93	3	3	9	18	21	16	4	247	0	0	0	0	0
	8:00 AM	16	67	15	3	69	1	3	9	15	22	18	12	250	0	0	0	0	0
	8:15 AM	8	60	17	10	72	2	2	9	16	23	15	18	252	0	0	0	0	0
	8:30 AM	10	96	14	12	96	5	5	9	4	26	26	19	322	0	0	0	0	0
	8:45 AM	14	110	18	23	108	9	2	3	8	28	21	42	386	0	0	0	0	0
	9:00 AM	11	198	16	44	155	16	5	3	14	28	26	89	605	0	0	0	0	0
	9:15 AM	9	191	18	67	204	21	8	14	12	27	8	100	679	0	0	0	0	0
	9:30 AM	12	115	15	82	204	27	8	13	11	34	19	36	576	0	0	0	0	0
	9:45 AM	7	63	21	16	82	10	6	11	12	35	14	18	295	0	0	0	0	0
	VOLUMES	150	1,064	185	267	1,374	118	45	106	156	301	215	352	4,333	0	0	0	0	0
	APPROACH %	11%	76%	13%	15%	78%	7%	15%	35%	51%	35%	25%	41%						
	APP/DEPART	1,399	/	1,461	1,759	/	1,831	307	/	558	868	/	483	0					
	BEGIN PEAK HR		8:45 AM																
	VOLUMES	46	614	67	216	671	73	23	33	45	117	74	267	2,246					
	APPROACH %	6%	84%	9%	23%	70%	8%	23%	33%	45%	26%	16%	58%						
	PEAK HR FACTOR		0.808			0.767			0.743			0.801		0.827					
	APP/DEPART	727	/	904	960	/	833	101	/	316	458	/	193	0					
MD	10:00 AM	11	41	25	6	70	5	2	13	10	27	20	6	236	0	0	0	0	0
	10:15 AM	8	42	23	9	55	2	4	10	5	27	19	6	210	0	1	0	0	1
	10:30 AM	12	35	29	2	50	1	3	18	11	29	14	4	208	0	0	0	0	0
	10:45 AM	14	39	24	7	54	2	4	16	7	28	20	2	217	0	0	1	0	1
	11:00 AM	5	38	35	5	43	3	1	22	10	36	20	2	220	0	0	0	0	0
	11:15 AM	11	35	31	6	49	3	4	10	8	21	22	5	205	0	0	0	0	0
	11:30 AM	10	34	31	2	34	3	2	20	9	23	16	6	190	0	0	0	0	0
	11:45 AM	13	50	43	4	58	3	1	22	11	27	18	5	255	0	0	0	0	0
	12:00 PM	15	45	34	5	41	2	1	19	11	28	9	2	212	0	0	0	0	0
	12:15 PM	10	36	33	2	28	5	2	14	7	24	19	3	183	0	0	0	0	0
	12:30 PM	6	39	42	6	48	3	1	23	14	25	16	4	227	0	0	0	0	0
	12:45 PM	15	51	21	6	44	5	2	26	13	25	16	2	226	0	0	0	0	0
	VOLUMES	130	485	371	60	574	37	27	213	116	320	209	47	2,589	0	1	1	0	2
	APPROACH %	13%	49%	38%	9%	86%	6%	8%	60%	33%	56%	36%	8%						
	APP/DEPART	986	/	559	671	/	1,010	356	/	643	576	/	377	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	44	170	152	17	175	13	5	78	43	104	62	14	877					
	APPROACH %	12%	46%	42%	8%	85%	6%	4%	62%	34%	58%	34%	8%						
	PEAK HR FACTOR		0.863			0.788			0.829			0.900		0.860					
	APP/DEPART	366	/	189	205	/	322	126	/	247	180	/	119	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	9:15 AM	1	0	1	2	4	0	0	0	1	1	1	0	1	1	3
	9:30 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	0	2	2	7	0	0	0	1	1	3	0	2	1	6
	AM BEGIN PEAK HR	8:45 AM					0	0	0	1	1					
MD	10:00 AM	2	1	0	0	3	0	1	0	0	1	2	0	0	0	2
	10:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	10:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	10:45 AM	1	1	1	0	3	0	0	0	0	0	1	1	1	0	3
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	3	2	0	10	0	1	0	0	1	5	2	2	0	9
	MD BEGIN PEAK HR	11:45 AM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 10, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

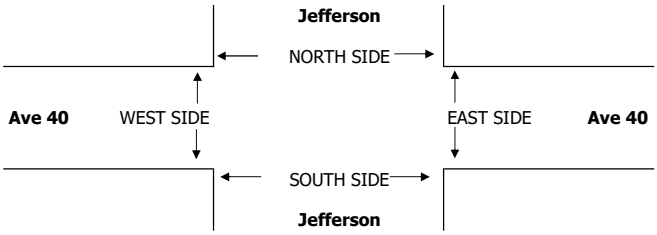
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	15	38	23	2	46	1	3	17	15	21	22	3	206	0	0	0	0	0
	1:15 PM	15	45	23	2	35	2	3	15	4	29	17	9	199	0	0	0	0	0
	1:30 PM	9	44	27	7	38	3	1	20	16	29	22	6	222	0	0	0	0	0
	1:45 PM	15	46	32	3	55	2	1	13	15	25	17	4	228	0	0	0	0	0
	2:00 PM	8	47	28	3	61	3	1	18	6	22	9	5	211	0	0	0	0	0
	2:15 PM	13	52	30	10	56	3	1	15	17	16	11	7	231	0	0	0	0	0
	2:30 PM	14	71	37	5	59	5	4	16	21	26	17	12	287	0	0	0	0	0
	2:45 PM	22	92	37	7	63	2	5	21	24	24	12	21	330	0	0	0	0	0
	3:00 PM	19	121	33	10	81	7	9	14	34	18	14	30	390	0	0	0	0	0
	3:15 PM	18	137	33	40	114	3	9	17	15	4	14	29	433	0	0	0	0	0
	3:30 PM	14	134	36	10	103	5	11	19	28	25	25	36	446	0	0	0	0	0
	3:45 PM	12	119	25	108	221	16	12	15	28	26	8	35	625	0	0	0	0	0
	VOLUMES	174	946	364	207	932	52	60	200	223	265	188	197	3,808	0	0	0	0	0
	APPROACH %	12%	64%	25%	17%	78%	4%	12%	41%	46%	41%	29%	30%						
	APP/DEPART	1,484	/	1,203	1,191	/	1,420	483	/	771	650	/	414	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	63	511	127	168	519	31	41	65	105	73	61	130	1,894					
	APPROACH %	9%	73%	18%	23%	72%	4%	19%	31%	50%	28%	23%	49%						
	PEAK HR FACTOR		0.932			0.520			0.909			0.767		0.758					
	APP/DEPART	701	/	682	718	/	697	211	/	360	264	/	155	0					
PM	4:00 PM	19	97	26	70	131	21	3	10	20	22	20	16	455	0	0	0	0	0
	4:15 PM	16	89	30	28	105	12	3	12	15	17	15	11	353	0	0	0	0	0
	4:30 PM	15	72	24	6	84	4	4	15	12	20	9	5	270	0	0	0	0	0
	4:45 PM	17	82	28	13	57	5	6	16	10	20	9	11	274	0	0	0	0	0
	5:00 PM	11	97	32	16	73	6	7	12	18	17	13	15	317	0	0	0	0	0
	5:15 PM	14	89	22	10	57	4	4	17	14	19	15	13	278	0	0	0	0	0
	5:30 PM	7	98	28	13	78	6	3	15	16	10	13	16	303	0	0	0	0	0
	5:45 PM	8	108	15	20	96	6	10	18	9	2	6	16	314	0	0	0	0	0
	6:00 PM	11	86	15	24	95	7	9	15	14	12	13	16	317	0	0	0	0	0
	6:15 PM	8	79	18	15	85	6	5	8	9	5	9	9	256	0	0	0	0	0
	6:30 PM	6	54	18	8	55	4	5	10	10	5	8	8	191	0	0	0	0	0
	6:45 PM	8	73	16	6	73	4	0	11	7	5	4	13	220	0	0	0	0	0
	VOLUMES	140	1,024	272	229	989	85	59	159	154	154	134	149	3,548	0	0	0	0	0
	APPROACH %	10%	71%	19%	18%	76%	7%	16%	43%	41%	35%	31%	34%						
	APP/DEPART	1,436	/	1,232	1,303	/	1,297	372	/	660	437	/	359	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	67	340	108	117	377	42	16	53	57	79	53	43	1,352					
	APPROACH %	13%	66%	21%	22%	70%	8%	13%	42%	45%	45%	30%	25%						
	PEAK HR FACTOR		0.907			0.604			0.955			0.754		0.743					
	APP/DEPART	515	/	399	536	/	513	126	/	278	175	/	162	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	TOTAL	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	MD BEGIN PEAK HR	3:00 PM					1	0	1	0	2					
PM	4:00 PM	1	1	0	1	3	0	0	0	0	0	1	1	0	1	3
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	20	1	24	0	45	20	0	24	0	44	0	1	0	0	1
	5:15 PM	2	1	2	1	6	2	1	2	1	6	0	0	0	0	0
	5:30 PM	7	5	8	3	23	7	3	8	3	21	0	2	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	31	8	34	5	78	29	4	34	4	71	2	4	0	1	7
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

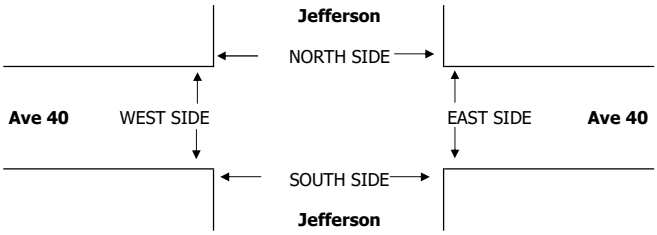
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	20	26	11	2	56	6	1	6	21	19	9	2	179	0	0	0	0	0
	7:15 AM	16	33	11	5	87	4	0	5	19	16	17	12	225	0	0	0	0	0
	7:30 AM	11	73	9	6	123	10	1	5	16	17	18	19	308	0	0	0	0	0
	7:45 AM	13	138	9	15	154	8	2	5	9	25	10	36	424	0	0	0	0	0
	8:00 AM	11	187	22	33	177	17	1	4	12	24	15	78	581	0	0	0	0	0
	8:15 AM	12	200	33	66	202	27	9	5	16	23	16	116	725	0	0	0	0	0
	8:30 AM	13	101	18	67	186	33	6	10	15	34	19	36	538	0	0	0	0	0
	8:45 AM	7	85	20	34	119	9	5	8	8	38	13	35	381	0	0	0	0	0
	9:00 AM	10	46	20	12	58	5	4	4	16	27	9	6	217	0	0	0	0	0
	9:15 AM	7	60	26	3	48	5	5	6	8	32	6	7	213	0	0	0	0	0
	9:30 AM	12	43	13	6	48	6	2	11	16	40	14	7	218	0	0	0	0	0
	9:45 AM	7	64	36	7	44	6	1	10	13	28	11	16	243	0	0	0	0	0
	VOLUMES	139	1,056	228	256	1,302	136	37	79	169	323	157	370	4,252	0	0	0	0	0
	APPROACH %	10%	74%	16%	15%	77%	8%	13%	28%	59%	38%	18%	44%						
	APP/DEPART	1,423	/	1,463	1,694	/	1,794	285	/	563	850	/	432	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	49	626	82	181	719	85	18	24	52	106	60	266	2,268					
	APPROACH %	6%	83%	11%	18%	73%	9%	19%	26%	55%	25%	14%	62%						
	PEAK HR FACTOR		0.772			0.835			0.758			0.697		0.782					
	APP/DEPART	757	/	910	985	/	877	94	/	287	432	/	194	0					
MD	10:00 AM	14	63	36	5	42	4	3	8	8	28	15	4	230	0	0	0	0	0
	10:15 AM	7	38	24	4	44	3	4	10	8	30	18	6	196	0	0	0	0	0
	10:30 AM	12	33	22	6	45	7	3	11	5	35	9	4	192	0	0	0	0	0
	10:45 AM	9	39	21	2	42	4	3	19	18	28	16	5	206	0	0	0	0	0
	11:00 AM	11	37	27	6	42	1	1	14	17	25	17	5	203	0	0	0	0	0
	11:15 AM	6	40	35	3	25	3	3	14	10	32	13	2	186	0	0	0	0	0
	11:30 AM	9	31	27	2	49	4	4	15	10	24	13	10	198	0	0	0	0	0
	11:45 AM	11	38	37	4	39	4	3	13	12	26	12	1	200	0	0	0	0	0
	12:00 PM	8	32	37	3	56	4	2	12	10	26	16	6	212	0	0	0	0	0
	12:15 PM	13	35	38	8	86	4	2	22	12	31	14	4	269	0	0	0	0	0
	12:30 PM	3	43	37	3	60	3	0	21	17	26	15	8	236	0	0	0	0	0
	12:45 PM	10	48	30	7	49	2	2	14	12	33	19	4	230	0	0	0	0	0
	VOLUMES	113	477	371	53	579	43	30	173	139	344	177	59	2,558	0	0	0	0	0
	APPROACH %	12%	50%	39%	8%	86%	6%	9%	51%	41%	59%	31%	10%						
	APP/DEPART	961	/	566	675	/	1,062	342	/	597	580	/	333	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	34	158	142	21	251	13	6	69	51	116	64	22	947					
	APPROACH %	10%	47%	43%	7%	88%	5%	5%	55%	40%	57%	32%	11%						
	PEAK HR FACTOR		0.949			0.727			0.829			0.902		0.880					
	APP/DEPART	334	/	186	285	/	418	126	/	232	202	/	111	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	1	0	0	1	2	0	0	0	1	1	1	0	0	0	1
	9:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	3	0	1	6	0	2	0	1	3	2	1	0	0	3
	AM BEGIN PEAK HR			7:45 AM			0	1	0	0	1					
MD	10:00 AM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	10:15 AM	2	0	1	1	4	0	0	0	0	0	2	0	1	1	4
	10:30 AM	1	1	2	0	4	1	1	1	0	3	0	0	1	0	1
	10:45 AM	0	2	0	2	4	0	1	0	1	2	0	1	0	1	2
	11:00 AM	1	2	0	2	5	0	0	0	0	0	1	2	0	2	5
	11:15 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	11:30 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	6	5	6	24	2	2	3	1	8	5	4	2	5	16
	MD BEGIN PEAK HR			12:00 PM			0	0	1	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

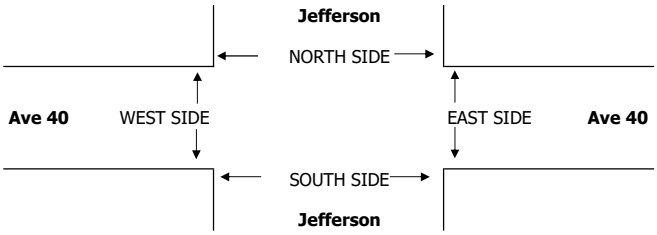
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	9	45	43	4	46	1	1	19	12	37	20	5	242	0	0	0	0	0
	1:15 PM	12	45	26	8	46	3	2	13	7	34	15	5	216	0	0	0	0	0
	1:30 PM	14	51	27	5	52	2	2	9	13	33	13	10	231	0	0	0	0	0
	1:45 PM	7	51	36	0	51	2	2	18	17	33	16	4	237	0	0	0	0	0
	2:00 PM	14	42	37	5	50	1	2	22	16	22	18	5	234	1	0	0	0	1
	2:15 PM	14	53	26	1	40	0	2	15	13	21	14	11	210	0	0	0	0	0
	2:30 PM	18	54	29	14	66	5	3	15	18	32	18	10	282	0	0	0	0	0
	2:45 PM	21	73	32	7	73	4	4	16	23	31	14	23	321	0	0	0	0	0
	3:00 PM	20	118	46	3	58	8	5	24	37	17	19	30	385	0	0	0	0	0
	3:15 PM	18	136	36	8	58	6	7	13	18	22	18	47	387	0	0	0	0	0
	3:30 PM	15	138	30	71	192	13	5	20	20	21	20	37	582	0	0	0	0	0
	3:45 PM	16	125	30	97	229	19	4	15	26	16	21	23	621	0	0	0	0	0
	VOLUMES	178	931	398	223	961	64	39	199	220	319	206	210	3,948	1	0	0	0	1
	APPROACH %	12%	62%	26%	18%	77%	5%	9%	43%	48%	43%	28%	29%						
	APP/DEPART	1,507	/	1,180	1,248	/	1,501	458	/	820	735	/	447	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	69	517	142	179	537	46	21	72	101	76	78	137	1,975					
	APPROACH %	9%	71%	20%	23%	70%	6%	11%	37%	52%	26%	27%	47%						
	PEAK HR FACTOR		0.958			0.552			0.735			0.836		0.795					
	APP/DEPART	728	/	675	762	/	714	194	/	393	291	/	193	0					
PM	4:00 PM	20	101	31	26	129	8	6	16	26	36	22	17	438	0	0	0	0	0
	4:15 PM	18	79	27	16	110	4	9	17	24	16	16	11	347	0	0	0	0	0
	4:30 PM	14	72	34	10	77	4	3	18	19	17	15	5	288	0	0	0	0	0
	4:45 PM	12	84	29	7	63	1	1	19	13	14	9	9	261	0	0	0	0	0
	5:00 PM	14	81	31	7	63	1	2	19	15	14	25	11	283	0	0	0	0	0
	5:15 PM	7	127	20	8	63	2	4	19	14	13	14	9	300	0	0	0	0	0
	5:30 PM	7	119	21	14	82	6	3	16	16	14	8	13	319	0	0	0	0	0
	5:45 PM	4	117	22	20	83	5	5	18	6	16	4	17	317	0	0	0	0	0
	6:00 PM	11	113	22	30	82	8	5	10	10	14	9	15	329	0	0	0	0	0
	6:15 PM	7	122	13	17	63	8	4	13	12	5	6	14	284	0	0	0	0	0
	6:30 PM	11	83	16	12	62	2	2	6	7	2	5	10	218	0	0	0	0	0
	6:45 PM	10	63	15	14	44	3	2	7	10	4	4	10	186	0	0	0	0	0
	VOLUMES	135	1,161	281	181	921	52	46	178	172	165	137	141	3,570	0	0	0	0	0
	APPROACH %	9%	74%	18%	16%	80%	5%	12%	45%	43%	37%	31%	32%						
	APP/DEPART	1,577	/	1,348	1,154	/	1,258	396	/	640	443	/	324	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	64	336	121	59	379	17	19	70	82	83	62	42	1,334					
	APPROACH %	12%	64%	23%	13%	83%	4%	11%	41%	48%	44%	33%	22%						
	PEAK HR FACTOR		0.857			0.698			0.855			0.623		0.761					
	APP/DEPART	521	/	397	455	/	544	171	/	250	187	/	143	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	3:00 PM	2	2	1	1	6	2	2	1	1	6	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	4	4	0	0	0	1	1	0	0	0	3	3
	TOTAL	3	4	2	7	16	2	2	1	2	7	1	2	1	5	9
	MD BEGIN PEAK HR			3:00 PM			2	2	1	2	7					
PM	4:00 PM	0	4	0	1	5	0	1	0	1	2	0	3	0	0	3
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	28	0	0	0	28	26	0	0	0	26	2	0	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	30	4	1	1	36	26	1	1	1	29	4	3	0	0	7
	PM BEGIN PEAK HR			4:00 PM			26	1	0	1	28					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Feb 9, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

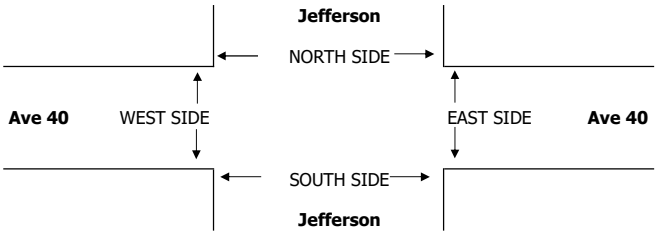
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	19	35	9	7	69	6	1	6	19	14	8	4	197	1	0	0	0	1
	7:15 AM	9	32	7	2	93	7	0	9	13	15	23	11	221	0	0	0	0	0
	7:30 AM	13	56	12	14	134	5	1	8	18	21	18	19	319	0	0	0	0	0
	7:45 AM	20	143	12	13	155	5	1	10	5	16	14	38	432	0	0	0	0	0
	8:00 AM	11	174	13	43	159	11	7	7	10	26	22	101	584	0	0	0	0	0
	8:15 AM	8	174	43	76	208	30	6	5	17	22	27	108	724	0	0	0	0	0
	8:30 AM	13	144	9	57	200	22	5	11	9	24	21	41	556	0	0	0	0	0
	8:45 AM	15	78	23	41	119	11	4	10	20	31	21	18	391	0	0	0	0	0
	9:00 AM	9	36	24	13	58	4	7	5	15	19	14	10	214	0	0	0	0	0
	9:15 AM	8	28	15	10	42	4	2	2	10	32	20	8	181	0	0	0	0	0
	9:30 AM	13	31	16	9	41	3	2	11	15	32	25	2	200	0	0	0	0	0
	9:45 AM	12	33	25	7	51	3	1	12	7	33	21	6	211	0	0	0	0	0
	VOLUMES	150	964	208	292	1,329	111	37	96	158	285	234	366	4,230	1	0	0	0	1
	APPROACH %	11%	73%	16%	17%	77%	6%	13%	33%	54%	32%	26%	41%						
	APP/DEPART	1,322	/	1,367	1,732	/	1,773	291	/	596	885	/	494	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	52	635	77	189	722	68	19	33	41	88	84	288	2,296					
	APPROACH %	7%	83%	10%	19%	74%	7%	20%	35%	44%	19%	18%	63%						
	PEAK HR FACTOR		0.849			0.779			0.830			0.732		0.793					
	APP/DEPART	764	/	942	979	/	851	93	/	299	460	/	204	0					
MD	10:00 AM	12	46	24	10	43	3	1	13	6	31	13	9	211	0	0	0	0	0
	10:15 AM	8	40	21	6	56	1	2	9	15	28	13	2	201	0	0	0	0	0
	10:30 AM	7	26	20	4	38	2	1	9	5	36	28	0	176	0	0	0	0	0
	10:45 AM	8	28	20	9	46	4	0	19	6	46	13	2	201	0	0	0	0	0
	11:00 AM	8	30	25	6	40	1	0	13	15	36	18	3	195	0	0	0	0	0
	11:15 AM	8	37	27	3	19	3	0	18	12	23	21	9	180	0	0	0	0	0
	11:30 AM	8	29	31	2	42	0	2	11	9	26	15	8	183	0	0	0	0	0
	11:45 AM	7	35	38	3	27	0	2	13	12	24	12	7	180	0	0	0	0	0
	12:00 PM	9	43	28	13	44	1	1	13	11	35	15	7	220	0	0	0	0	0
	12:15 PM	16	37	38	7	32	1	2	22	11	26	20	3	215	0	0	0	0	0
	12:30 PM	11	39	33	7	33	3	1	18	7	32	23	3	210	0	0	0	0	0
	12:45 PM	8	29	36	5	33	3	1	18	10	36	26	2	207	0	0	0	0	0
	VOLUMES	110	419	341	75	453	22	13	176	119	379	217	55	2,379	0	0	0	0	0
	APPROACH %	13%	48%	39%	14%	82%	4%	4%	57%	39%	58%	33%	8%						
	APP/DEPART	870	/	487	550	/	951	308	/	592	651	/	349	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	44	148	135	32	142	8	5	71	39	129	84	15	852					
	APPROACH %	13%	45%	41%	18%	78%	4%	4%	62%	34%	57%	37%	7%						
	PEAK HR FACTOR		0.898			0.784			0.821			0.891		0.968					
	APP/DEPART	327	/	168	182	/	310	115	/	238	228	/	136	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	8:15 AM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	9:00 AM	10	0	10	0	20	0	0	0	0	0	10	0	10	0	20
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	4	0	0	0	4	0	0	0	0	0	4	0	0	0	4
	9:45 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	TOTAL	17	2	13	1	33	0	1	0	0	1	17	1	13	1	32
	AM BEGIN PEAK HR			7:45 AM			0	1	0	0	1					
MD	10:00 AM	0	0	3	0	3	0	0	0	0	0	0	0	3	0	3
	10:15 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	10:30 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	10:45 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	11:00 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	11:45 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	12:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	9	3	2	19	0	0	0	0	0	5	9	3	2	19
	MD BEGIN PEAK HR			12:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Feb 9, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 40

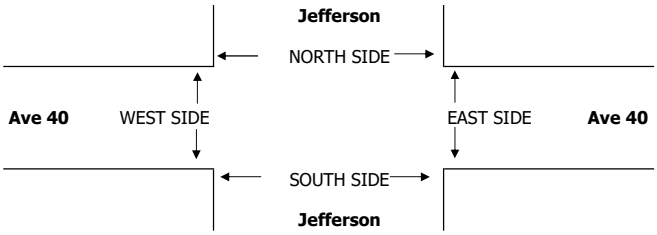
PROJECT #: SC3235
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	11	38	28	3	58	2	4	14	20	21	21	4	224	0	0	0	0	0
	1:15 PM	14	52	27	4	39	0	1	14	10	24	22	9	216	0	0	0	0	0
	1:30 PM	14	46	35	5	47	3	0	18	10	35	12	6	231	0	0	0	0	0
	1:45 PM	9	36	34	3	48	6	1	16	12	20	15	5	205	0	0	0	0	0
	2:00 PM	10	41	28	3	30	0	3	13	13	19	20	3	183	0	0	0	0	0
	2:15 PM	11	44	27	4	36	1	0	18	17	21	21	7	207	0	0	0	0	0
	2:30 PM	23	64	30	9	68	5	1	16	16	23	24	10	289	0	0	0	0	0
	2:45 PM	20	71	31	8	58	4	4	29	21	20	15	9	290	0	0	0	0	0
	3:00 PM	17	114	38	3	54	1	5	11	32	15	9	27	326	0	0	0	0	0
	3:15 PM	24	152	29	9	75	3	7	12	12	21	19	47	410	0	0	0	0	0
	3:30 PM	14	138	33	77	213	17	7	21	25	30	19	36	630	0	0	0	0	0
	3:45 PM	19	164	31	84	224	17	9	21	28	19	16	29	661	0	0	0	0	0
	VOLUMES	186	960	371	212	950	59	42	203	216	268	213	192	3,872	0	0	0	0	0
	APPROACH %	12%	63%	24%	17%	78%	5%	9%	44%	47%	40%	32%	29%						
	APP/DEPART	1,517	/	1,194	1,221	/	1,434	461	/	786	673	/	458	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	74	568	131	173	566	38	28	65	97	85	63	139	2,027					
	APPROACH %	10%	73%	17%	22%	73%	5%	15%	34%	51%	30%	22%	48%						
	PEAK HR FACTOR		0.903			0.598			0.819			0.825		0.767					
	APP/DEPART	773	/	735	777	/	748	190	/	369	287	/	175	0					
PM	4:00 PM	15	107	28	41	135	4	4	20	17	26	16	17	430	0	0	0	0	0
	4:15 PM	18	77	26	17	88	3	4	19	19	16	16	12	315	0	0	0	0	0
	4:30 PM	13	88	26	6	69	1	5	16	15	19	18	5	281	0	0	0	0	0
	4:45 PM	10	70	26	9	67	2	5	20	8	18	13	5	253	0	0	0	0	0
	5:00 PM	12	93	27	4	70	1	1	16	14	9	12	10	269	0	0	0	0	0
	5:15 PM	9	108	17	19	76	2	3	18	8	9	19	18	306	0	0	0	0	0
	5:30 PM	9	88	20	20	97	4	2	13	16	17	14	21	321	0	0	0	0	0
	5:45 PM	13	99	23	18	99	4	8	18	13	10	7	26	338	0	0	0	0	0
	6:00 PM	10	97	19	29	94	3	7	3	11	12	6	22	313	0	0	0	0	0
	6:15 PM	7	136	19	13	57	5	5	7	7	9	6	13	284	0	0	0	0	0
	6:30 PM	9	80	19	11	49	0	0	3	5	8	5	13	202	0	0	0	0	0
	6:45 PM	2	50	11	16	34	2	3	5	9	7	5	6	150	0	0	0	0	0
	VOLUMES	127	1,093	261	203	935	31	47	158	142	160	137	168	3,462	0	0	0	0	0
	APPROACH %	9%	74%	18%	17%	80%	3%	14%	46%	41%	34%	29%	36%						
	APP/DEPART	1,481	/	1,308	1,169	/	1,237	347	/	622	465	/	295	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	56	342	106	73	359	10	18	75	59	79	63	39	1,279					
	APPROACH %	11%	68%	21%	17%	81%	2%	12%	49%	39%	44%	35%	22%						
	PEAK HR FACTOR		0.840			0.614			0.905			0.767		0.744					
	APP/DEPART	504	/	399	442	/	497	152	/	254	181	/	129	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	5	0	0	0	5	0	0	0	0	0	5	0	0	0	5
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	1	1	1	0	3	0	0	0	0	0	1	1	1	0	3
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	5	1	0	2	8	3	1	0	2	6	2	0	0	0	2
	TOTAL	11	2	1	2	16	3	1	0	2	6	8	1	1	0	10
	MD BEGIN PEAK HR			3:00 PM			3	1	0	2	6					
PM	4:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:15 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	0	0	2	5	0	0	0	1	1	3	0	0	1	4
	PM BEGIN PEAK HR			4:00 PM			0	0	0	1	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Feb 11, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

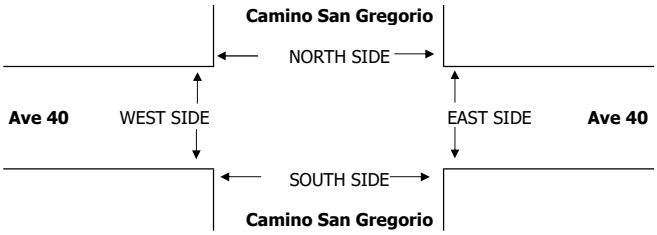
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	0	4	0	0	0	0	25	1	4	28	0	63	0	0	0	0	0
	7:15 AM	1	0	5	0	0	0	0	19	2	2	43	0	72	0	0	0	0	0
	7:30 AM	2	0	1	0	0	0	0	31	3	3	72	0	112	0	0	0	0	0
	7:45 AM	0	0	1	0	0	0	0	40	2	5	83	0	131	0	0	0	0	0
	8:00 AM	2	0	8	0	0	0	0	56	0	3	117	0	186	0	0	0	0	0
	8:15 AM	0	0	3	0	0	0	0	69	2	2	127	0	203	0	0	0	0	0
	8:30 AM	2	0	6	0	0	0	0	119	4	6	74	0	211	0	0	0	1	1
	8:45 AM	2	0	2	0	0	0	0	67	3	6	71	0	151	0	0	0	0	0
	9:00 AM	1	0	3	0	0	0	0	40	3	10	42	0	99	0	0	0	0	0
	9:15 AM	5	0	4	0	0	0	0	24	2	7	46	0	88	0	0	0	0	0
	9:30 AM	1	0	7	0	0	0	0	33	2	5	58	0	106	0	0	0	0	0
	9:45 AM	2	0	3	0	0	0	0	36	0	8	59	0	108	0	0	0	0	0
	VOLUMES	19	0	47	0	0	0	0	559	24	61	820	0	1,530	0	0	0	1	1
	APPROACH %	29%	0%	71%	0%	0%	0%	0%	96%	4%	7%	93%	0%						
	APP/DEPART	66	/	0	0	/	84	583	/	607	881	/	839	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	6	0	19	0	0	0	0	311	9	17	389	0	751					
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	97%	3%	4%	96%	0%						
	PEAK HR FACTOR		0.625			0.000			0.650			0.787		0.890					
	APP/DEPART	25	/	0	0	/	25	320	/	331	406	/	395	0					
MD	10:00 AM	2	0	1	0	0	0	0	40	3	12	46	0	104	0	0	0	0	0
	10:15 AM	1	0	7	0	0	0	0	36	4	1	49	0	98	0	0	0	0	0
	10:30 AM	1	0	8	0	0	0	0	37	1	13	57	0	117	0	0	0	0	0
	10:45 AM	2	0	3	0	0	0	0	50	3	7	51	0	116	0	0	0	0	0
	11:00 AM	3	0	6	0	0	0	0	36	1	10	52	0	108	0	0	0	0	0
	11:15 AM	3	0	4	0	0	0	0	53	4	6	53	0	123	0	0	0	0	0
	11:30 AM	1	0	9	0	0	0	0	48	3	5	47	0	113	0	0	0	0	0
	11:45 AM	1	0	6	0	0	0	0	57	5	13	42	0	124	0	0	0	0	0
	12:00 PM	2	0	8	0	0	0	0	35	0	8	53	0	106	0	0	0	0	0
	12:15 PM	2	0	7	0	0	0	0	46	2	9	44	0	110	0	0	0	0	0
	12:30 PM	6	0	9	0	0	0	0	48	3	8	53	0	127	0	0	0	0	0
	12:45 PM	1	0	7	0	0	0	0	45	4	8	41	0	106	0	0	0	0	0
	VOLUMES	25	0	75	0	0	0	0	531	33	100	588	0	1,352	0	0	0	0	0
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	94%	6%	15%	85%	0%						
	APP/DEPART	100	/	0	0	/	133	564	/	606	688	/	613	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	8	0	25	0	0	0	0	194	13	34	194	0	468					
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	94%	6%	15%	85%	0%						
	PEAK HR FACTOR		0.825			0.000			0.835			0.919		0.944					
	APP/DEPART	33	/	0	0	/	47	207	/	219	228	/	202	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	4	0	0	4	0	2	0	0	2	0	2	0	0	2
	7:15 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	4	1	0	0	5	0	1	0	0	1	4	0	0	0	4
	8:15 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	8:30 AM	1	6	0	0	7	0	5	0	0	5	1	1	0	0	2
	8:45 AM	3	3	0	0	6	0	2	0	0	2	3	1	0	0	4
	9:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:15 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	9:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	9:45 AM	2	3	0	0	5	0	1	0	0	1	2	2	0	0	4
	TOTAL	11	27	0	0	38	0	14	0	0	14	11	13	0	0	24
	AM BEGIN PEAK HR			8:00 AM			0	9	0	0	9					
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	3	3	0	0	6	0	2	0	0	2	3	1	0	0	4
	10:30 AM	1	5	0	0	6	0	2	0	0	2	1	3	0	0	4
	10:45 AM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	11:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:15 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	12:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	12:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	17	0	0	24	0	5	0	0	5	7	12	0	0	19
	MD BEGIN PEAK HR			11:00 AM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Feb 11, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

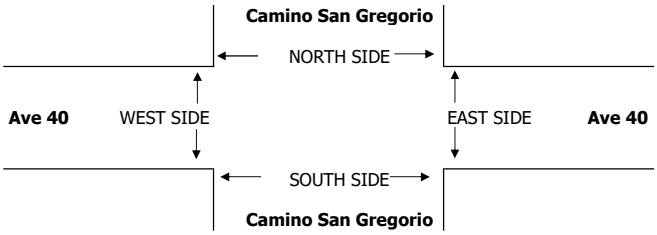
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	4	0	4	0	0	0	0	48	1	6	45	0	108	0	0	0	0	0
	1:15 PM	4	0	6	0	0	0	0	37	3	7	45	0	102	0	0	0	0	0
	1:30 PM	2	0	13	0	0	0	0	60	0	9	40	0	124	0	0	0	0	0
	1:45 PM	0	0	10	0	0	0	0	66	2	3	49	0	130	0	0	0	0	0
	2:00 PM	5	0	6	0	0	0	0	54	1	8	48	0	122	0	0	0	0	0
	2:15 PM	4	0	7	0	0	0	0	39	4	8	30	0	92	0	0	0	0	0
	2:30 PM	2	0	3	0	0	0	0	50	0	4	46	0	105	0	0	0	0	0
	2:45 PM	3	0	14	0	0	0	0	57	5	10	51	0	140	0	0	0	0	0
	3:00 PM	2	0	6	0	0	0	0	53	0	1	85	0	147	0	0	0	0	0
	3:15 PM	5	0	9	0	0	0	0	52	3	4	78	0	151	0	0	0	0	0
	3:30 PM	5	0	10	0	0	0	0	129	0	11	71	0	226	0	0	0	0	0
	3:45 PM	2	0	13	0	0	0	0	130	2	14	70	0	231	0	0	0	0	0
	VOLUMES	38	0	101	0	0	0	0	775	21	85	658	0	1,678	0	0	0	0	0
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	97%	3%	11%	89%	0%						
	APP/DEPART	139	/	0	0	/	106	796	/	876	743	/	696	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	14	0	38	0	0	0	0	364	5	30	304	0	755					
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	99%	1%	9%	91%	0%						
	PEAK HR FACTOR		0.867			0.000			0.699			0.971		0.817					
	APP/DEPART	52	/	0	0	/	35	369	/	402	334	/	318	0					
PM	4:00 PM	3	0	5	0	0	0	0	67	1	5	48	0	129	0	0	0	0	0
	4:15 PM	1	0	4	0	0	0	0	80	1	5	39	0	130	0	0	0	0	0
	4:30 PM	1	0	11	0	0	0	0	58	2	9	35	0	116	0	0	0	0	0
	4:45 PM	0	0	4	0	0	0	0	43	1	8	31	0	87	0	0	0	0	0
	5:00 PM	2	0	7	0	0	0	0	50	2	9	35	0	105	0	0	0	0	0
	5:15 PM	1	0	2	0	0	0	0	45	1	3	34	0	86	0	0	0	0	0
	5:30 PM	4	0	7	0	0	0	0	44	2	6	44	0	107	0	0	0	1	1
	5:45 PM	3	0	5	0	0	0	0	65	0	5	33	0	111	0	0	0	0	0
	6:00 PM	0	0	5	0	0	0	0	55	1	3	18	0	82	0	0	0	0	0
	6:15 PM	2	0	2	0	0	0	0	50	2	4	22	0	82	0	0	0	0	0
	6:30 PM	1	0	2	0	0	0	0	32	1	6	16	0	58	0	0	0	0	0
	6:45 PM	3	0	8	0	0	0	0	30	0	2	15	0	58	0	0	0	0	0
	VOLUMES	21	0	62	0	0	0	0	619	14	65	370	0	1,151	0	0	0	1	1
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	98%	2%	15%	85%	0%						
	APP/DEPART	83	/	0	0	/	78	633	/	682	435	/	391	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	5	0	24	0	0	0	0	248	5	27	153	0	462					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	98%	2%	15%	85%	0%						
	PEAK HR FACTOR		0.604			0.000			0.781			0.849		0.888					
	APP/DEPART	29	/	0	0	/	32	253	/	272	180	/	158	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	2	2	0	0	4	0	1	0	0	1	2	1	0	0	3
	1:15 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	3	0	0	7	0	1	0	0	1	4	2	0	0	6
	MD BEGIN PEAK HR			3:00 PM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	4	0	0	5	0	3	0	0	3	1	1	0	0	2
	PM BEGIN PEAK HR			4:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Feb 7, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

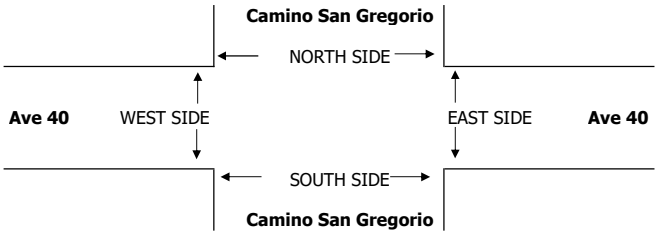
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	2	0	0	0	0	12	2	2	26	0	44	0	0	0	0	0
	7:15 AM	1	0	4	0	0	0	0	27	0	2	42	0	76	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	22	2	0	58	0	85	0	0	0	0	0
	7:45 AM	0	0	3	0	0	0	0	34	1	2	57	0	97	0	0	0	0	0
	8:00 AM	1	0	2	0	0	0	0	54	3	4	149	0	213	0	0	0	0	0
	8:15 AM	0	0	6	0	0	0	0	75	1	7	113	0	202	0	0	0	0	0
	8:30 AM	2	0	5	0	0	0	0	100	8	3	52	0	170	0	0	0	0	0
	8:45 AM	0	0	3	0	0	0	0	55	1	5	59	0	123	0	0	0	0	0
	9:00 AM	1	0	5	0	0	0	0	41	4	3	46	0	100	0	0	0	0	0
	9:15 AM	0	0	6	0	0	0	0	30	2	5	46	0	89	0	0	0	0	0
	9:30 AM	0	0	2	0	0	0	0	28	1	6	41	0	78	0	0	0	0	0
	9:45 AM	0	0	3	0	0	0	0	33	3	6	53	0	98	0	0	0	0	0
	VOLUMES	6	0	43	0	0	0	0	511	28	45	742	0	1,375	0	0	0	0	0
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	95%	5%	6%	94%	0%						
	APP/DEPART	49	/	0	0	/	73	539	/	554	787	/	748	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	3	0	16	0	0	0	0	284	13	19	373	0	708					
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	96%	4%	5%	95%	0%						
	PEAK HR FACTOR		0.679			0.000			0.688			0.641		0.831					
	APP/DEPART	19	/	0	0	/	32	297	/	300	392	/	376	0					
MD	10:00 AM	2	0	4	0	0	0	0	46	3	9	48	0	112	0	0	0	0	0
	10:15 AM	2	0	3	0	0	0	0	43	3	7	56	0	114	0	0	0	0	0
	10:30 AM	3	0	4	0	0	0	0	34	2	6	50	0	99	0	0	0	0	0
	10:45 AM	5	0	1	0	0	0	0	47	2	9	57	0	121	0	0	0	1	1
	11:00 AM	2	0	5	0	0	0	0	50	0	3	45	0	105	0	0	0	0	0
	11:15 AM	1	0	2	0	0	0	0	52	2	12	50	0	119	0	0	0	0	0
	11:30 AM	3	0	9	0	0	0	0	46	3	6	48	0	115	0	0	0	0	0
	11:45 AM	2	0	7	0	0	0	0	28	4	6	46	0	93	0	0	0	0	0
	12:00 PM	3	0	7	0	0	0	0	52	4	9	37	0	112	0	0	0	0	0
	12:15 PM	0	0	13	0	0	0	0	50	3	7	49	0	122	0	0	0	0	0
	12:30 PM	2	0	7	0	0	0	0	54	6	5	45	0	119	0	0	0	0	0
	12:45 PM	3	0	8	0	0	0	0	46	3	8	47	0	115	0	0	0	0	0
	VOLUMES	28	0	70	0	0	0	0	548	35	87	578	0	1,346	0	0	0	1	1
	APPROACH %	29%	0%	71%	0%	0%	0%	0%	94%	6%	13%	87%	0%						
	APP/DEPART	98	/	0	0	/	121	583	/	619	665	/	606	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	8	0	35	0	0	0	0	202	16	29	178	0	468					
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	93%	7%	14%	86%	0%						
	PEAK HR FACTOR		0.827			0.000			0.908			0.924		0.959					
	APP/DEPART	43	/	0	0	/	45	218	/	237	207	/	186	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:00 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	12	0	0	12	0	3	0	0	3	0	9	0	0	9
	9:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	9:30 AM	1	2	0	0	3	0	2	0	0	2	1	0	0	0	1
	9:45 AM	2	5	0	0	7	0	4	0	0	4	2	1	0	0	3
	TOTAL	3	27	0	0	30	0	15	0	0	15	3	12	0	0	15
	AM BEGIN PEAK HR			8:00 AM			0	3	0	0	3					
MD	10:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	10:15 AM	1	3	0	0	4	0	3	0	0	3	1	0	0	0	1
	10:30 AM	1	4	0	0	5	0	3	0	0	3	1	1	0	0	2
	10:45 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	5	0	0	0	5	0	0	0	0	0	5	0	0	0	5
	11:30 AM	2	3	0	0	5	0	2	0	0	2	2	1	0	0	3
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	12:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	11	16	0	0	27	0	9	0	0	9	11	7	0	0	18
	MD BEGIN PEAK HR			12:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Feb 7, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

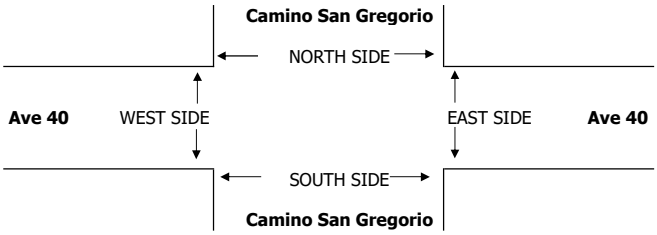
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	0	X	0	X	X	X	X	1	0	0	1	X		0	0	0	0	
MD	1:00 PM	4	0	11	0	0	0	0	46	4	14	31	0	110	0	0	0	0	0
	1:15 PM	1	0	6	0	0	0	0	44	0	3	43	0	97	0	0	0	0	0
	1:30 PM	2	0	10	0	0	0	0	50	3	5	41	0	111	0	0	0	0	0
	1:45 PM	0	0	2	0	0	0	0	50	2	4	45	0	103	0	0	0	0	0
	2:00 PM	4	0	3	0	0	0	0	42	1	1	38	0	89	0	0	0	0	0
	2:15 PM	4	0	9	0	0	0	0	58	3	3	39	0	116	0	0	0	0	0
	2:30 PM	1	0	15	0	0	0	0	49	0	4	41	0	110	0	0	0	0	0
	2:45 PM	3	0	5	0	0	0	0	59	3	2	47	0	119	0	0	0	0	0
	3:00 PM	2	0	6	0	0	0	0	45	1	0	66	0	120	0	0	0	0	0
	3:15 PM	5	0	8	0	0	0	0	55	4	3	87	0	162	0	0	0	0	0
	3:30 PM	5	0	6	0	0	0	0	116	2	3	65	0	197	0	0	0	0	0
	3:45 PM	3	0	8	0	0	0	0	120	2	3	61	0	197	0	0	0	0	0
	VOLUMES	34	0	89	0	0	0	0	734	25	45	604	0	1,531	0	0	0	0	0
	APPROACH %	28%	0%	72%	0%	0%	0%	0%	97%	3%	7%	93%	0%						
	APP/DEPART	123	/	0	0	/	70	759	/	823	649	/	638	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	15	0	28	0	0	0	0	336	9	9	279	0	676					
	APPROACH %	35%	0%	65%	0%	0%	0%	0%	97%	3%	3%	97%	0%						
	PEAK HR FACTOR		0.827			0.000			0.707			0.800		0.858					
	APP/DEPART	43	/	0	0	/	18	345	/	364	288	/	294	0					
PM	4:00 PM	3	0	11	0	0	0	0	74	1	4	42	0	135	0	0	0	0	0
	4:15 PM	1	0	9	0	0	0	0	59	1	5	32	0	107	0	0	0	0	0
	4:30 PM	0	0	4	0	0	0	0	46	3	5	37	0	95	0	0	0	0	0
	4:45 PM	3	0	8	0	0	0	0	51	0	6	31	0	99	0	0	0	0	0
	5:00 PM	1	0	6	0	0	0	0	53	1	2	29	0	92	0	0	0	0	0
	5:15 PM	1	0	1	0	0	0	0	58	0	2	33	0	95	0	0	0	0	0
	5:30 PM	2	0	6	0	0	0	0	61	1	3	43	0	116	0	0	0	0	0
	5:45 PM	0	0	5	0	0	0	0	56	0	2	32	0	95	0	0	0	0	0
	6:00 PM	0	0	1	0	0	0	0	52	0	0	26	0	79	0	0	0	0	0
	6:15 PM	1	0	0	0	0	0	0	48	0	1	17	0	67	0	0	0	0	0
	6:30 PM	0	0	2	0	0	0	0	27	1	1	14	0	45	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	29	0	0	14	0	43	0	0	0	0	0
	VOLUMES	12	0	53	0	0	0	0	614	8	31	350	0	1,068	0	0	0	0	0
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	99%	1%	8%	92%	0%						
	APP/DEPART	65	/	0	0	/	39	622	/	667	381	/	362	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	7	0	32	0	0	0	0	230	5	20	142	0	436					
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	98%	2%	12%	88%	0%						
	PEAK HR FACTOR		0.696			0.000			0.783			0.880		0.807					
	APP/DEPART	39	/	0	0	/	25	235	/	262	162	/	149	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	9	0	0	9	0	0	0	0	0	0	9	0	0	9
	1:15 PM	2	0	0	1	3	0	0	0	0	0	2	0	0	1	3
	1:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	2	0	0	1	3	0	0	0	0	0	2	0	0	1	3
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	2:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	TOTAL	7	12	0	3	22	0	0	0	0	0	7	12	0	3	22
	MD BEGIN PEAK HR			3:00 PM			0	0	0	0	0					
PM	4:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:15 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	4:30 PM	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	4	0	0	10	0	2	0	0	2	6	2	0	0	8
	PM BEGIN PEAK HR			4:00 PM			0	2	0	0	2					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Feb 12, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

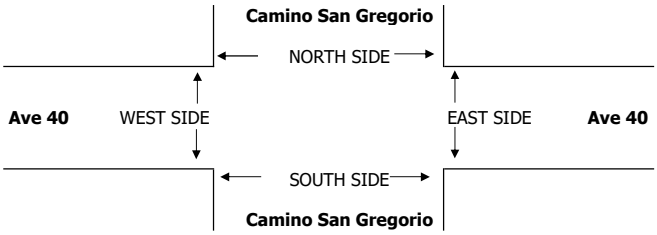
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	3	0	0	0	0	17	0	7	18	0	45	0	0	0	0	0
	7:15 AM	0	0	3	0	0	0	0	15	1	1	27	0	47	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	18	2	5	30	0	58	0	0	0	0	0
	7:45 AM	3	0	3	0	0	0	0	20	3	3	36	0	68	0	0	0	0	0
	8:00 AM	0	0	3	0	0	0	0	20	2	1	21	0	47	0	0	0	0	0
	8:15 AM	0	0	1	0	0	0	0	27	2	0	31	0	61	0	0	0	0	0
	8:30 AM	0	0	5	0	0	0	0	15	1	6	34	0	61	0	0	0	0	0
	8:45 AM	1	0	3	0	0	0	0	23	0	4	35	0	66	0	0	0	0	0
	9:00 AM	1	0	4	0	0	0	0	24	1	4	43	0	77	0	0	0	0	0
	9:15 AM	0	0	4	0	0	0	0	28	1	7	39	0	79	0	0	0	0	0
	9:30 AM	0	0	4	0	0	0	0	30	1	6	40	0	81	0	0	0	0	0
	9:45 AM	3	0	6	0	0	0	0	28	1	10	45	0	93	0	0	0	0	0
	VOLUMES	9	0	41	0	0	0	0	265	15	54	399	0	783	0	0	0	0	0
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	95%	5%	12%	88%	0%						
	APP/DEPART	50	/	0	0	/	69	280	/	306	453	/	408	0					
	BEGIN PEAK HR		9:00 AM																
	VOLUMES	4	0	18	0	0	0	0	110	4	27	167	0	330					
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	96%	4%	14%	86%	0%						
	PEAK HR FACTOR		0.611			0.000			0.919			0.882		0.887					
	APP/DEPART	22	/	0	0	/	31	114	/	128	194	/	171	0					
MD	10:00 AM	2	0	2	0	0	0	0	33	2	4	38	0	81	0	0	0	0	0
	10:15 AM	2	0	6	0	0	0	0	35	2	8	48	0	101	0	0	0	0	0
	10:30 AM	1	0	6	0	0	0	0	35	3	7	51	0	103	0	0	0	0	0
	10:45 AM	2	0	6	0	0	0	0	40	2	14	51	0	115	0	0	0	0	0
	11:00 AM	3	0	6	0	0	0	0	27	2	8	49	0	95	0	0	0	0	0
	11:15 AM	1	0	3	0	0	0	0	43	2	5	43	0	97	0	0	0	0	0
	11:30 AM	2	0	4	0	0	0	0	49	2	3	32	0	92	0	0	0	0	0
	11:45 AM	3	0	13	0	0	0	0	41	4	7	54	0	122	0	0	0	0	0
	12:00 PM	2	0	7	0	0	0	0	46	2	7	45	0	109	0	0	0	0	0
	12:15 PM	1	0	9	0	0	0	0	56	1	11	52	0	130	0	0	0	0	0
	12:30 PM	1	0	12	0	0	0	0	63	0	9	42	0	127	0	0	0	0	0
	12:45 PM	2	0	8	0	0	0	0	40	2	11	32	0	95	0	0	0	0	0
	VOLUMES	22	0	82	0	0	0	0	508	24	94	537	0	1,267	0	0	0	0	0
	APPROACH %	21%	0%	79%	0%	0%	0%	0%	95%	5%	15%	85%	0%						
	APP/DEPART	104	/	0	0	/	118	532	/	590	631	/	559	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	7	0	41	0	0	0	0	206	7	34	193	0	488					
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	97%	3%	15%	85%	0%						
	PEAK HR FACTOR		0.750			0.000			0.845			0.901		0.938					
	APP/DEPART	48	/	0	0	/	41	213	/	247	227	/	200	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	22	0	0	22	0	0	0	0	0	0	22	0	0	22
	8:15 AM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	8:30 AM	2	2	0	0	4	0	2	0	0	2	2	0	0	0	2
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	6	0	0	6	0	3	0	0	3	0	3	0	0	3
	9:15 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	9:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	9:45 AM	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2
	TOTAL	2	41	0	0	43	0	10	0	0	10	2	31	0	0	33
	AM BEGIN PEAK HR			9:00 AM			0	7	0	0	7					
MD	10:00 AM	1	3	0	1	5	0	1	0	0	1	1	2	0	1	4
	10:15 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	10:30 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0
	10:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	11:00 AM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	11:15 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2
	12:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	12:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	7	22	0	1	30	0	7	0	0	7	7	15	0	1	23
	MD BEGIN PEAK HR			11:45 AM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Feb 12, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

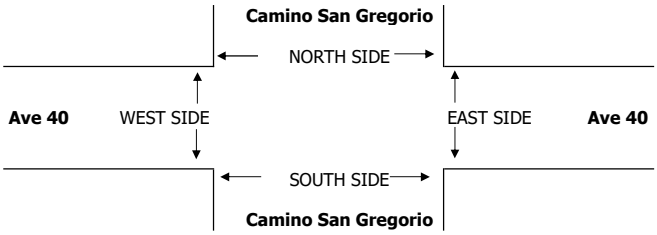
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	1	0	7	0	0	0	0	40	0	8	27	0	83	0	0	0	0	0
	1:15 PM	1	0	11	0	0	0	0	42	0	4	35	0	93	0	0	0	0	0
	1:30 PM	0	0	8	0	0	0	0	35	5	4	23	0	75	0	0	0	0	0
	1:45 PM	2	0	8	0	0	0	0	35	2	2	34	0	83	0	0	0	0	0
	2:00 PM	4	0	14	0	0	0	0	56	3	2	37	0	116	0	0	0	0	0
	2:15 PM	2	0	2	0	0	0	0	22	3	0	29	0	58	0	0	0	0	0
	2:30 PM	5	0	1	0	0	0	0	44	1	8	26	0	85	0	0	0	0	0
	2:45 PM	1	0	2	0	0	0	0	41	0	4	32	0	80	0	0	0	0	0
	3:00 PM	5	0	7	0	0	0	0	41	1	3	27	0	84	0	0	0	0	0
	3:15 PM	2	0	10	0	0	0	0	42	0	2	29	0	85	0	0	0	0	0
	3:30 PM	5	0	2	0	0	0	0	40	1	1	34	0	83	0	0	0	0	0
	3:45 PM	5	0	5	0	0	0	0	49	0	2	32	0	93	0	0	0	0	0
	VOLUMES	33	0	77	0	0	0	0	487	16	40	365	0	1,018	0	0	0	0	0
	APPROACH %	30%	0%	70%	0%	0%	0%	0%	97%	3%	10%	90%	0%						
	APP/DEPART	110	/	0	0	/	56	503	/	564	405	/	398	0					
	BEGIN PEAK HR		1:15 PM																
	VOLUMES	7	0	41	0	0	0	0	168	10	12	129	0	367					
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	94%	6%	9%	91%	0%						
	PEAK HR FACTOR		0.667			0.000			0.754			0.904		0.791					
	APP/DEPART	48	/	0	0	/	22	178	/	209	141	/	136	0					
PM	4:00 PM	4	0	3	0	0	0	0	35	1	0	40	0	83	0	0	0	0	0
	4:15 PM	4	0	8	0	0	0	0	33	0	6	28	0	79	0	0	0	0	0
	4:30 PM	2	0	7	0	0	0	0	36	1	3	38	0	87	0	0	0	0	0
	4:45 PM	1	0	9	0	0	0	0	27	1	5	34	0	77	0	0	0	0	0
	5:00 PM	5	0	6	0	0	0	0	46	0	4	33	0	94	0	0	0	0	0
	5:15 PM	4	0	4	0	0	0	0	48	1	3	39	0	99	0	0	0	1	1
	5:30 PM	4	0	5	0	0	0	0	31	1	3	34	0	78	0	0	0	0	0
	5:45 PM	3	0	6	0	0	0	0	32	2	3	27	0	73	0	0	0	0	0
	6:00 PM	5	0	2	0	0	0	0	31	2	2	31	0	73	0	0	0	0	0
	6:15 PM	1	0	0	0	0	0	0	30	0	1	21	0	53	0	0	0	0	0
	6:30 PM	1	0	1	0	0	0	0	17	0	2	17	0	38	0	0	0	0	0
	6:45 PM	2	0	0	0	0	0	0	23	1	2	12	0	40	0	0	0	0	0
	VOLUMES	36	0	51	0	0	0	0	389	10	34	354	0	874	0	0	0	1	1
	APPROACH %	41%	0%	59%	0%	0%	0%	0%	97%	3%	9%	91%	0%						
	APP/DEPART	87	/	0	0	/	43	399	/	441	388	/	390	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	12	0	26	0	0	0	0	157	3	15	144	0	357					
	APPROACH %	32%	0%	68%	0%	0%	0%	0%	98%	2%	9%	91%	0%						
	PEAK HR FACTOR		0.864			0.000			0.816			0.946		0.902					
	APP/DEPART	38	/	0	0	/	17	160	/	184	159	/	156	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	2:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	TOTAL	5	3	0	0	8	0	0	0	0	0	5	3	0	0	8
	MD BEGIN PEAK HR	1:15 PM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:30 PM	0	4	0	0	4	0	3	0	0	3	0	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	9	0	0	10	0	7	0	0	7	1	2	0	0	3
	PM BEGIN PEAK HR	4:30 PM					0	4	0	0	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Feb 13, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

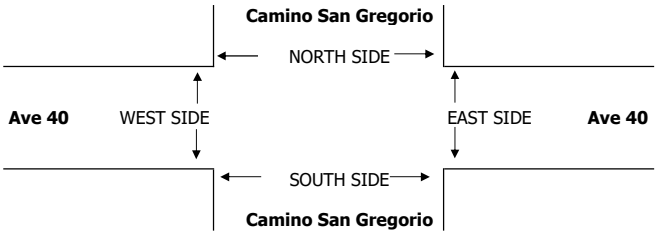
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	0	1	0	0	0	0	8	0	1	8	0	19	0	0	0	0	0
	7:15 AM	1	0	1	0	0	0	0	6	0	1	15	0	24	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	7	0	1	18	0	29	0	0	0	0	0
	7:45 AM	0	0	2	0	0	0	0	13	5	4	19	0	43	0	0	0	0	0
	8:00 AM	0	0	2	0	0	0	0	9	2	10	14	0	37	0	0	0	0	0
	8:15 AM	1	0	0	0	0	0	0	10	2	7	16	0	36	0	0	0	0	0
	8:30 AM	0	0	5	0	0	0	0	11	2	1	31	0	50	0	0	0	0	0
	8:45 AM	2	0	3	0	0	0	0	13	3	8	23	0	52	0	0	0	0	0
	9:00 AM	3	0	9	0	0	0	0	9	4	7	27	0	59	0	0	0	0	0
	9:15 AM	0	0	3	0	0	0	0	21	2	5	39	0	70	0	0	0	0	0
	9:30 AM	0	0	6	0	0	0	0	17	0	7	49	0	79	0	0	0	0	0
	9:45 AM	4	0	3	0	0	0	0	18	1	13	35	0	74	0	0	0	0	0
	VOLUMES	13	0	37	0	0	0	0	142	21	65	294	0	572	0	0	0	0	0
	APPROACH %	26%	0%	74%	0%	0%	0%	0%	87%	13%	18%	82%	0%						
	APP/DEPART	50	/	0	0	/	86	163	/	179	359	/	307	0					
	BEGIN PEAK HR		9:00 AM																
	VOLUMES	7	0	21	0	0	0	0	65	7	32	150	0	282					
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	90%	10%	18%	82%	0%						
	PEAK HR FACTOR		0.583			0.000			0.783			0.813		0.892					
	APP/DEPART	28	/	0	0	/	39	72	/	86	182	/	157	0					
MD	10:00 AM	0	0	6	0	0	0	0	30	4	9	37	0	86	0	0	0	0	0
	10:15 AM	4	0	5	0	0	0	0	15	1	7	31	0	63	0	0	0	0	0
	10:30 AM	2	0	5	0	0	0	0	42	4	5	34	0	92	0	0	0	0	0
	10:45 AM	3	0	6	0	0	0	0	26	4	8	30	0	77	0	0	0	0	0
	11:00 AM	6	0	6	0	0	0	0	25	1	8	37	0	83	0	0	0	0	0
	11:15 AM	3	0	9	0	0	0	0	50	1	7	35	0	105	0	0	0	0	0
	11:30 AM	2	0	4	0	0	0	0	45	5	4	35	0	95	0	0	0	0	0
	11:45 AM	0	0	6	0	0	0	0	35	2	8	22	0	73	0	0	0	0	0
	12:00 PM	3	0	9	0	0	0	0	43	1	7	30	0	93	0	0	0	0	0
	12:15 PM	3	0	3	0	0	0	0	43	2	6	27	0	84	0	0	0	0	0
	12:30 PM	2	0	9	0	0	0	0	36	2	2	22	0	73	0	0	0	0	0
	12:45 PM	1	0	4	0	0	0	0	41	1	7	26	0	80	0	0	0	0	0
	VOLUMES	29	0	72	0	0	0	0	431	28	78	366	0	1,004	0	0	0	0	0
	APPROACH %	29%	0%	71%	0%	0%	0%	0%	94%	6%	18%	82%	0%						
	APP/DEPART	101	/	0	0	/	106	459	/	503	444	/	395	0					
	BEGIN PEAK HR		11:15 AM																
	VOLUMES	8	0	28	0	0	0	0	173	9	26	122	0	366					
	APPROACH %	22%	0%	78%	0%	0%	0%	0%	95%	5%	18%	82%	0%						
	PEAK HR FACTOR		0.750			0.000			0.892			0.881		0.871					
	APP/DEPART	36	/	0	0	/	35	182	/	201	148	/	130	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	8:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	9:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	9:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	9:45 AM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	TOTAL	2	11	0	0	13	0	4	0	0	4	2	7	0	0	9
	AM BEGIN PEAK HR			9:00 AM			0	1	0	0	1					
MD	10:00 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	10:15 AM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	8	0	0	8	0	1	0	0	1	0	7	0	0	7
	11:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:15 AM	1	2	0	1	4	0	0	0	0	0	1	2	0	1	4
	11:30 AM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	11:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	12:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	12:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	8	16	0	1	25	0	2	0	0	2	8	14	0	1	23
	MD BEGIN PEAK HR			11:15 AM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Feb 13, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

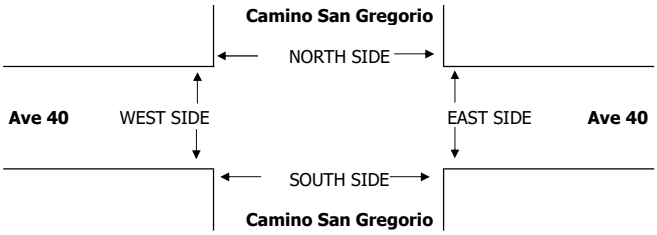
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	0	X	0	X	X	X	X	1	0	0	1	X		0	0	0	0	
MD	1:00 PM	4	0	5	0	0	0	0	35	0	2	28	0	74	0	0	0	0	0
	1:15 PM	0	0	2	0	0	0	0	26	1	1	28	0	58	0	0	0	0	0
	1:30 PM	4	0	3	0	0	0	0	34	0	4	27	0	72	0	0	0	0	0
	1:45 PM	1	0	9	0	0	0	0	27	1	3	26	0	67	0	0	0	0	0
	2:00 PM	4	0	10	0	0	0	0	31	0	1	33	0	79	0	0	0	0	0
	2:15 PM	0	0	5	0	0	0	0	33	1	4	28	0	71	0	0	0	0	0
	2:30 PM	1	0	2	0	0	0	0	38	1	5	28	0	75	0	0	0	0	0
	2:45 PM	0	0	8	0	0	0	0	28	1	4	31	0	72	0	0	0	0	0
	3:00 PM	0	0	6	0	0	0	0	38	2	9	21	0	76	0	0	0	1	1
	3:15 PM	4	0	8	0	0	0	0	25	0	4	18	0	59	0	0	0	0	0
	3:30 PM	3	0	5	0	0	0	0	20	1	1	19	0	49	0	0	0	0	0
	3:45 PM	1	0	4	0	0	0	0	22	1	4	15	0	47	0	0	0	0	0
	VOLUMES	22	0	67	0	0	0	0	357	9	42	302	0	799	0	0	0	1	1
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	98%	2%	12%	88%	0%						
	APP/DEPART	89	/	0	0	/	50	366	/	425	344	/	324	0					
	BEGIN PEAK HR		2:00 PM																
	VOLUMES	5	0	25	0	0	0	0	130	3	14	120	0	297					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	98%	2%	10%	90%	0%						
	PEAK HR FACTOR		0.536			0.000			0.853			0.957		0.940					
	APP/DEPART	30	/	0	0	/	17	133	/	155	134	/	125	0					
PM	4:00 PM	0	0	4	0	0	0	0	23	0	1	21	0	49	0	0	0	0	0
	4:15 PM	1	0	3	0	0	0	0	19	0	0	21	0	44	0	0	0	0	0
	4:30 PM	2	0	2	0	0	0	0	24	0	3	11	0	42	0	0	0	0	0
	4:45 PM	1	0	2	0	0	0	0	13	0	1	10	0	27	0	0	0	0	0
	5:00 PM	0	0	2	0	0	0	0	18	0	0	15	0	35	0	0	0	0	0
	5:15 PM	1	0	7	0	0	0	0	16	0	1	6	0	31	0	0	0	0	0
	5:30 PM	2	0	2	0	0	0	0	16	0	1	13	0	34	0	0	0	0	0
	5:45 PM	1	0	2	0	0	0	0	22	1	1	9	0	36	0	0	0	0	0
	6:00 PM	1	0	0	0	0	0	0	10	0	0	14	0	25	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	13	0	3	10	0	26	0	0	0	1	1
	6:30 PM	2	0	1	0	0	0	0	20	0	2	11	0	36	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
	VOLUMES	11	0	25	0	0	0	0	197	1	13	141	0	388	0	0	0	1	1
	APPROACH %	31%	0%	69%	0%	0%	0%	0%	99%	1%	8%	92%	0%						
	APP/DEPART	36	/	0	0	/	13	198	/	223	154	/	152	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	4	0	11	0	0	0	0	79	0	5	63	0	162					
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	100%	0%	7%	93%	0%						
	PEAK HR FACTOR		0.938			0.000			0.823			0.773		0.827					
	APP/DEPART	15	/	0	0	/	5	79	/	90	68	/	67	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	2:45 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	1	5	0	1	7	0	0	0	0	0	1	5	0	1	7
	MD BEGIN PEAK HR			2:00 PM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	PM BEGIN PEAK HR			4:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 10, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

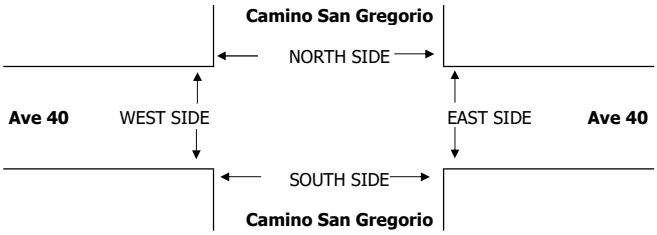
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	1	0	0	0	0	19	0	7	22	0	49	0	0	0	0	0
	7:15 AM	0	0	2	0	0	0	0	24	1	7	45	0	79	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	27	2	3	51	0	86	0	0	0	0	0
	7:45 AM	0	0	6	0	0	0	0	23	0	5	41	0	75	0	0	0	0	0
	8:00 AM	1	0	2	0	0	0	0	23	0	10	56	0	92	0	0	0	0	0
	8:15 AM	0	0	8	0	0	0	0	32	4	10	50	0	104	0	0	0	1	1
	8:30 AM	2	0	3	0	0	0	0	27	1	5	66	0	104	0	0	0	0	0
	8:45 AM	2	0	2	0	0	0	0	40	3	14	89	0	150	0	0	0	0	0
	9:00 AM	0	0	3	0	0	0	0	54	0	5	138	0	200	0	0	0	0	0
	9:15 AM	1	0	5	0	0	0	0	93	0	11	111	0	221	0	0	0	0	0
	9:30 AM	0	0	1	0	0	0	0	105	0	5	86	0	197	0	0	0	0	0
	9:45 AM	2	0	5	0	0	0	0	55	1	7	67	0	137	0	0	0	0	0
	VOLUMES	9	0	40	0	0	0	0	522	12	89	822	0	1,494	0	0	0	1	1
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	98%	2%	10%	90%	0%						
	APP/DEPART	49	/	0	0	/	100	534	/	563	911	/	831	0					
	BEGIN PEAK HR		8:45 AM																
	VOLUMES	3	0	11	0	0	0	0	292	3	35	424	0	768					
	APPROACH %	21%	0%	79%	0%	0%	0%	0%	99%	1%	8%	92%	0%						
	PEAK HR FACTOR		0.583			0.000			0.702			0.802		0.869					
	APP/DEPART	14	/	0	0	/	38	295	/	303	459	/	427	0					
MD	10:00 AM	2	0	3	0	0	0	0	41	1	4	49	0	100	0	0	0	0	0
	10:15 AM	0	0	3	0	0	0	0	40	2	7	50	0	102	0	0	0	0	0
	10:30 AM	2	0	6	0	0	0	0	45	0	4	47	0	104	0	0	0	0	0
	10:45 AM	2	0	9	0	0	0	0	47	0	9	47	0	114	0	0	0	0	0
	11:00 AM	2	0	8	0	0	0	0	54	4	5	56	0	129	0	0	0	0	0
	11:15 AM	1	0	4	0	0	0	0	52	4	4	41	0	106	0	0	0	0	0
	11:30 AM	0	0	4	0	0	0	0	44	2	7	45	0	102	0	0	0	0	0
	11:45 AM	1	0	5	0	0	0	0	58	6	10	51	0	131	0	0	0	0	0
	12:00 PM	1	0	6	0	0	0	0	54	5	11	32	0	109	0	0	0	0	0
	12:15 PM	3	0	11	0	0	0	0	49	3	15	44	0	125	0	0	0	0	0
	12:30 PM	1	0	9	0	0	0	0	59	4	7	46	0	126	0	0	0	0	0
	12:45 PM	2	0	7	0	0	0	0	55	3	6	38	0	111	0	0	0	0	0
	VOLUMES	17	0	75	0	0	0	0	598	34	89	546	0	1,359	0	0	0	0	0
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	95%	5%	14%	86%	0%						
	APP/DEPART	92	/	0	0	/	123	632	/	673	635	/	563	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	6	0	31	0	0	0	0	220	18	43	173	0	491					
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	92%	8%	20%	80%	0%						
	PEAK HR FACTOR		0.661			0.000			0.930			0.885		0.937					
	APP/DEPART	37	/	0	0	/	61	238	/	251	216	/	179	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	8:45 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1
	9:00 AM	2	1	1	1	5	0	1	0	0	1	2	0	1	1	4
	9:15 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1
	9:30 AM	3	0	1	0	4	0	0	0	0	0	3	0	1	0	4
	9:45 AM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	TOTAL	6	16	2	1	25	0	13	0	0	13	6	3	2	1	12
	AM BEGIN PEAK HR			8:45 AM			0	5	0	0	5					
MD	10:00 AM	1	2	0	0	3	0	2	0	0	2	1	0	0	0	1
	10:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	10:30 AM	2	2	0	0	4	0	0	0	0	0	2	2	0	0	4
	10:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	8	0	0	11	0	2	0	0	2	3	6	0	0	9
	MD BEGIN PEAK HR			11:45 AM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 10, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

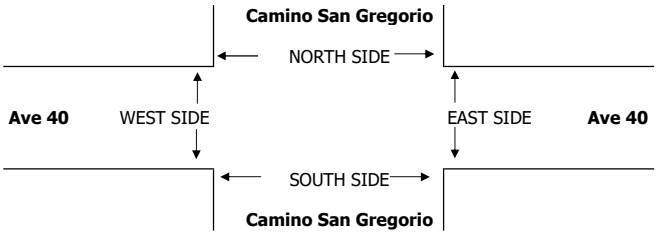
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 1	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	3	0	10	0	0	0	0	41	3	8	43	0	108	0	0	0	0	0
	1:15 PM	5	0	18	0	0	0	0	36	1	5	46	0	111	0	0	0	0	0
	1:30 PM	2	0	7	0	0	0	0	44	2	5	59	0	119	0	0	0	0	0
	1:45 PM	2	0	19	0	0	0	0	45	3	3	37	0	109	0	0	1	0	1
	2:00 PM	3	0	16	0	0	0	0	50	2	7	31	0	109	0	0	0	0	0
	2:15 PM	3	0	11	0	0	0	0	45	2	5	29	0	95	0	0	0	0	0
	2:30 PM	3	0	15	0	0	0	0	49	1	7	49	0	124	0	0	0	0	0
	2:45 PM	2	0	4	0	0	0	0	59	2	6	49	0	122	0	0	0	0	0
	3:00 PM	0	0	7	0	0	0	0	57	3	6	61	0	134	0	0	0	0	0
	3:15 PM	0	0	7	0	0	0	0	87	1	1	46	0	142	0	0	0	0	0
	3:30 PM	4	0	6	0	0	0	0	61	2	5	81	0	159	0	0	0	0	0
	3:45 PM	2	0	9	0	0	0	0	145	1	10	63	0	230	0	0	0	0	0
	VOLUMES	29	0	129	0	0	0	0	719	23	68	594	0	1,563	0	0	1	0	1
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	97%	3%	10%	90%	0%						
	APP/DEPART	158	/	0	0	/	91	743	/	848	662	/	624	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	6	0	29	0	0	0	0	350	7	22	251	0	665					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	98%	2%	8%	92%	0%						
	PEAK HR FACTOR		0.795			0.000			0.611			0.794		0.723					
	APP/DEPART	35	/	0	0	/	29	357	/	379	273	/	257	0					
PM	4:00 PM	0	0	3	0	0	0	0	101	0	6	51	0	161	0	0	0	0	0
	4:15 PM	2	0	9	0	0	0	0	73	1	7	41	0	133	0	0	0	0	0
	4:30 PM	1	0	3	0	0	0	0	44	2	3	29	0	82	0	0	0	0	0
	4:45 PM	2	0	2	0	0	0	0	49	0	8	38	0	99	0	0	0	0	0
	5:00 PM	4	0	13	0	0	0	0	54	6	6	39	0	122	0	0	0	0	0
	5:15 PM	8	0	6	0	0	0	0	52	2	6	36	0	110	0	0	0	0	0
	5:30 PM	1	0	7	0	0	0	0	58	0	4	39	0	109	0	0	0	0	0
	5:45 PM	1	0	4	0	0	0	0	52	1	6	25	0	89	0	0	0	0	0
	6:00 PM	3	0	1	0	0	0	0	51	0	2	35	0	92	0	0	1	0	1
	6:15 PM	2	0	3	0	0	0	0	45	1	3	19	0	73	0	0	0	0	0
	6:30 PM	1	0	2	0	0	0	0	31	0	2	16	0	52	0	0	0	0	0
	6:45 PM	0	0	5	0	0	0	0	35	0	2	23	0	65	0	0	0	0	0
	VOLUMES	25	0	58	0	0	0	0	645	13	55	391	0	1,188	0	0	1	0	1
	APPROACH %	30%	0%	70%	0%	0%	0%	0%	98%	2%	12%	88%	0%						
	APP/DEPART	83	/	0	0	/	68	659	/	703	446	/	417	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	5	0	17	0	0	0	0	267	3	24	159	0	475					
	APPROACH %	23%	0%	77%	0%	0%	0%	0%	99%	1%	13%	87%	0%						
	PEAK HR FACTOR		0.500			0.000			0.668			0.803		0.738					
	APP/DEPART	22	/	0	0	/	27	270	/	284	183	/	164	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0
	MD BEGIN PEAK HR			3:00 PM			0	1	0	0	1					
PM	4:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	4:15 PM	2	1	0	0	3	0	1	0	0	1	2	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	22	0	0	22	0	22	0	0	22	0	0	0	0	0
	5:15 PM	0	20	0	0	20	0	20	0	0	20	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	6:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	48	0	0	50	0	45	0	0	45	2	3	0	0	5
	PM BEGIN PEAK HR			4:00 PM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

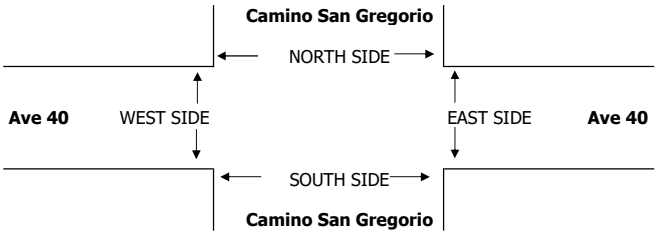
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	0	1	0	0	0	0	17	2	7	24	0	53	0	0	0	0	0
	7:15 AM	1	0	1	0	0	0	0	19	0	4	48	0	73	0	0	0	0	0
	7:30 AM	0	0	6	0	0	0	0	19	1	6	56	0	88	0	0	0	0	0
	7:45 AM	0	0	5	0	0	0	0	29	2	7	68	0	111	0	0	0	0	0
	8:00 AM	2	0	2	0	0	0	0	58	0	5	134	0	201	0	0	0	0	0
	8:15 AM	0	0	9	0	0	0	0	88	2	10	122	0	231	0	0	0	0	0
	8:30 AM	1	0	1	0	0	0	0	89	2	2	88	0	183	0	0	0	0	0
	8:45 AM	0	0	10	0	0	0	0	63	0	7	77	0	157	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	33	5	6	45	0	89	0	0	0	0	0
	9:15 AM	0	0	2	0	0	0	0	34	0	4	50	0	90	0	0	0	0	0
	9:30 AM	2	0	4	0	0	0	0	25	4	10	52	0	97	0	0	0	0	0
	9:45 AM	2	0	27	0	0	0	0	49	3	3	51	0	135	0	0	0	0	0
	VOLUMES	10	0	68	0	0	0	0	523	21	71	815	0	1,508	0	0	0	0	0
	APPROACH %	13%	0%	87%	0%	0%	0%	0%	96%	4%	8%	92%	0%						
	APP/DEPART	78	/	0	0	/	92	544	/	591	886	/	825	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	3	0	22	0	0	0	0	298	4	24	421	0	772					
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	99%	1%	5%	95%	0%						
	PEAK HR FACTOR		0.625			0.000			0.830			0.800		0.835					
	APP/DEPART	25	/	0	0	/	28	302	/	320	445	/	424	0					
MD	10:00 AM	2	0	6	0	0	0	0	43	3	10	41	0	105	0	0	0	0	0
	10:15 AM	2	0	10	0	0	0	0	37	2	6	49	0	106	0	0	0	0	0
	10:30 AM	3	0	2	0	0	0	0	37	4	12	48	0	106	0	0	0	0	0
	10:45 AM	3	0	5	0	0	0	0	38	2	10	47	0	105	0	0	0	0	0
	11:00 AM	1	0	8	0	0	0	0	47	4	6	46	0	112	0	0	0	0	0
	11:15 AM	0	0	2	0	0	0	0	45	2	12	39	0	100	0	0	0	0	0
	11:30 AM	2	0	5	0	0	0	0	47	2	8	48	0	112	0	0	0	0	0
	11:45 AM	2	0	11	0	0	0	0	49	2	9	42	0	115	0	0	0	0	0
	12:00 PM	2	0	6	0	0	0	0	48	2	7	46	0	111	0	0	0	0	0
	12:15 PM	3	0	8	0	0	0	0	64	7	11	43	0	136	0	0	0	0	0
	12:30 PM	3	0	8	0	0	0	0	55	3	8	45	0	122	0	0	0	0	0
	12:45 PM	4	0	11	0	0	0	0	57	4	7	56	0	139	0	0	0	1	1
	VOLUMES	27	0	82	0	0	0	0	567	37	106	550	0	1,369	0	0	0	1	1
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	94%	6%	16%	84%	0%						
	APP/DEPART	109	/	0	0	/	142	604	/	650	656	/	577	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	12	0	33	0	0	0	0	224	16	33	190	0	508					
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	93%	7%	15%	85%	0%						
	PEAK HR FACTOR		0.750			0.000			0.845			0.885		0.914					
	APP/DEPART	45	/	0	0	/	48	240	/	258	223	/	202	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	8:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	4	0	0	4	0	3	0	0	3	0	1	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	9:15 AM	0	4	0	0	4	0	3	0	0	3	0	1	0	0	1
	9:30 AM	0	8	0	0	8	0	8	0	0	8	0	0	0	0	0
	9:45 AM	2	2	0	0	4	0	1	0	0	1	2	1	0	0	3
	TOTAL	3	22	0	0	25	0	18	0	0	18	3	4	0	0	7
	AM BEGIN PEAK HR			8:00 AM			0	5	0	0	5					
MD	10:00 AM	0	4	0	0	4	0	2	0	0	2	0	2	0	0	2
	10:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	10:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	10:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	11:00 AM	2	4	0	0	6	0	2	0	0	2	2	2	0	0	4
	11:15 AM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	11:30 AM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	11:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	17	0	0	23	0	7	0	0	7	6	10	0	0	16
	MD BEGIN PEAK HR			12:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

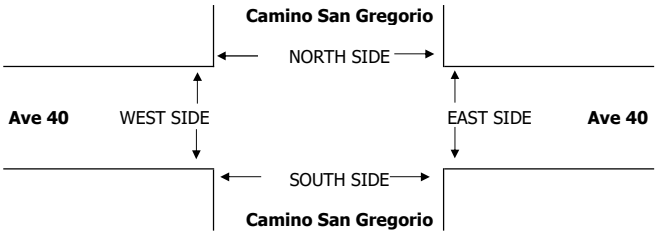
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	4	0	16	0	0	0	0	49	5	9	55	0	138	0	0	0	0	0
	1:15 PM	2	0	7	0	0	0	0	57	2	4	57	0	129	0	0	0	0	0
	1:30 PM	4	0	4	0	0	0	0	34	6	7	51	0	106	0	0	0	0	0
	1:45 PM	3	0	12	0	0	0	0	51	4	6	47	0	123	0	0	0	0	0
	2:00 PM	2	0	12	0	0	0	0	57	1	4	42	0	118	0	0	0	0	0
	2:15 PM	4	0	11	0	0	0	0	41	1	5	40	0	102	0	0	0	0	0
	2:30 PM	2	0	7	0	0	0	0	54	2	7	54	0	126	0	0	0	0	0
	2:45 PM	2	0	11	0	0	0	0	57	0	6	66	0	142	0	0	0	0	0
	3:00 PM	2	0	8	0	0	0	0	73	1	2	62	0	148	0	0	0	0	0
	3:15 PM	7	0	2	0	0	0	0	54	1	3	77	0	144	0	0	0	0	0
	3:30 PM	4	0	7	0	0	0	0	112	0	4	72	0	199	0	0	0	0	0
	3:45 PM	3	0	10	0	0	0	0	138	4	7	64	0	226	0	0	0	0	0
	VOLUMES	39	0	107	0	0	0	0	777	27	64	687	0	1,701	0	0	0	0	0
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	97%	3%	9%	91%	0%						
	APP/DEPART	146	/	0	0	/	91	804	/	884	751	/	726	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	16	0	27	0	0	0	0	377	6	16	275	0	717					
	APPROACH %	37%	0%	63%	0%	0%	0%	0%	98%	2%	5%	95%	0%						
	PEAK HR FACTOR		0.827			0.000			0.674			0.909		0.793					
	APP/DEPART	43	/	0	0	/	22	383	/	404	291	/	291	0					
PM	4:00 PM	2	0	8	0	0	0	0	78	3	10	61	0	162	0	0	0	0	0
	4:15 PM	2	0	5	0	0	0	0	63	0	9	46	0	125	0	0	0	0	0
	4:30 PM	1	0	7	0	0	0	0	62	2	7	34	0	113	0	0	0	0	0
	4:45 PM	1	0	7	0	0	0	0	43	3	5	32	0	91	0	0	0	0	0
	5:00 PM	3	0	5	0	0	0	0	59	1	8	40	0	116	0	0	0	0	0
	5:15 PM	0	0	6	0	0	0	0	50	0	4	32	0	92	0	0	0	0	0
	5:30 PM	3	0	4	0	0	0	0	45	1	4	31	0	88	0	0	0	0	0
	5:45 PM	6	0	6	0	0	0	0	54	1	1	27	0	95	0	0	0	0	0
	6:00 PM	1	0	11	0	0	0	0	62	0	0	35	0	109	0	0	0	0	0
	6:15 PM	0	0	5	0	0	0	0	42	0	1	25	0	73	0	0	0	0	0
	6:30 PM	0	0	1	0	0	0	0	33	0	1	16	0	51	0	0	0	0	0
	6:45 PM	2	0	1	0	0	0	0	38	0	1	15	0	57	0	0	0	0	0
	VOLUMES	21	0	66	0	0	0	0	629	11	51	394	0	1,172	0	0	0	0	0
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	98%	2%	11%	89%	0%						
	APP/DEPART	87	/	0	0	/	62	640	/	695	445	/	415	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	6	0	27	0	0	0	0	246	8	31	173	0	491					
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	97%	3%	15%	85%	0%						
	PEAK HR FACTOR		0.825			0.000			0.784			0.718		0.758					
	APP/DEPART	33	/	0	0	/	39	254	/	273	204	/	179	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	3:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	0	8	0	0	8	0	4	0	0	4	0	4	0	0	4
	MD BEGIN PEAK HR			3:00 PM			0	3	0	0	3					
PM	4:00 PM	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2
	4:15 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	2	0	0	4	0	2	0	0	2	2	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	7	0	0	12	0	5	0	0	5	5	2	0	0	7
	PM BEGIN PEAK HR			4:00 PM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Feb 9, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

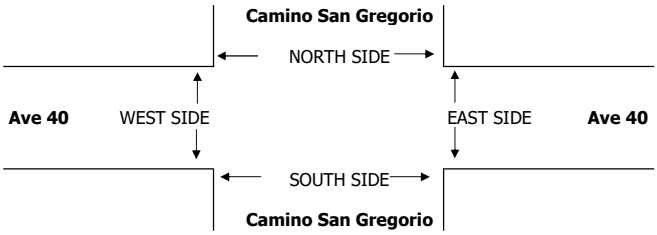
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	4	0	0	0	0	23	0	8	23	0	58	0	0	0	0	0
	7:15 AM	0	0	4	0	0	0	0	13	1	18	51	0	87	0	0	0	1	1
	7:30 AM	0	0	3	0	0	0	0	40	0	9	61	0	113	0	0	0	0	0
	7:45 AM	0	0	7	0	0	0	0	37	0	3	72	0	119	0	0	0	0	0
	8:00 AM	3	0	5	0	0	0	0	37	0	3	150	0	198	0	0	0	0	0
	8:15 AM	1	0	3	0	0	0	0	109	3	4	131	0	251	0	0	0	0	0
	8:30 AM	0	0	5	0	0	0	0	86	1	5	83	0	180	0	0	0	0	0
	8:45 AM	0	0	6	0	0	0	0	66	4	3	59	0	138	0	0	1	0	1
	9:00 AM	0	0	5	0	0	0	0	40	1	2	49	0	97	0	0	0	0	0
	9:15 AM	1	0	0	0	0	0	0	30	0	7	56	0	94	0	0	0	0	0
	9:30 AM	0	0	3	0	0	0	0	32	1	8	56	0	100	0	0	0	0	0
	9:45 AM	0	0	8	0	0	0	0	42	1	5	58	0	114	0	0	0	0	0
	VOLUMES	5	0	53	0	0	0	0	555	12	75	849	0	1,551	0	0	1	1	2
	APPROACH %	9%	0%	91%	0%	0%	0%	0%	98%	2%	8%	92%	0%						
	APP/DEPART	58	/	0	0	/	87	568	/	609	925	/	855	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	4	0	19	0	0	0	0	298	8	15	423	0	768					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	97%	3%	3%	97%	0%						
	PEAK HR FACTOR		0.719			0.000			0.685			0.716		0.765					
	APP/DEPART	23	/	0	0	/	23	307	/	317	438	/	428	0					
MD	10:00 AM	0	0	9	0	0	0	0	43	1	5	51	0	109	0	0	0	0	0
	10:15 AM	3	0	4	0	0	0	0	35	3	10	36	0	91	0	0	0	0	0
	10:30 AM	0	0	9	0	0	0	0	34	0	4	65	0	112	0	0	0	0	0
	10:45 AM	4	0	4	0	0	0	0	42	0	7	54	0	111	0	0	0	0	0
	11:00 AM	2	0	6	0	0	0	0	39	1	5	53	0	106	0	0	0	0	0
	11:15 AM	3	0	3	0	0	0	0	46	4	8	43	0	107	0	0	0	0	0
	11:30 AM	1	0	5	0	0	0	0	38	4	7	47	0	102	0	0	0	0	0
	11:45 AM	2	0	11	0	0	0	0	53	2	5	43	0	116	0	0	0	0	0
	12:00 PM	2	0	5	0	0	0	0	51	0	8	52	0	118	0	0	0	0	0
	12:15 PM	5	0	12	0	0	0	0	57	4	12	45	0	135	0	0	0	0	0
	12:30 PM	2	0	6	0	0	0	0	61	0	8	52	0	129	0	0	0	0	0
	12:45 PM	2	0	7	0	0	0	0	52	5	7	54	0	127	0	0	0	1	1
	VOLUMES	26	0	81	0	0	0	0	551	24	86	595	0	1,364	0	0	0	1	1
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	96%	4%	13%	87%	0%						
	APP/DEPART	107	/	0	0	/	110	575	/	633	682	/	621	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	11	0	30	0	0	0	0	221	9	35	203	0	510					
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	96%	4%	15%	85%	0%						
	PEAK HR FACTOR		0.603			0.000			0.943			0.964		0.944					
	APP/DEPART	41	/	0	0	/	44	230	/	252	239	/	214	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	9:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:30 AM	4	1	0	0	5	0	1	0	0	1	4	0	0	0	4
	9:45 AM	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2
	TOTAL	6	11	0	0	17	0	8	0	0	8	6	3	0	0	9
	AM BEGIN PEAK HR			8:00 AM			0	2	0	0	2					
MD	10:00 AM	0	7	0	0	7	0	6	0	0	6	0	1	0	0	1
	10:15 AM	3	1	0	0	4	0	1	0	0	1	3	0	0	0	3
	10:30 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	10:45 AM	2	2	0	0	4	0	0	0	0	0	2	2	0	0	4
	11:00 AM	2	4	0	0	6	0	0	0	0	0	2	4	0	0	6
	11:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	11:30 AM	2	2	0	0	4	0	0	0	0	0	2	2	0	0	4
	11:45 AM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
	12:00 PM	1	8	0	0	9	0	0	0	0	0	1	8	0	0	9
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	11	32	0	0	43	0	7	0	0	7	11	25	0	0	36
	MD BEGIN PEAK HR			12:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Feb 9, 22

LOCATION: Indio
NORTH & SOUTH: Camino San Gregorio
EAST & WEST: Ave 40

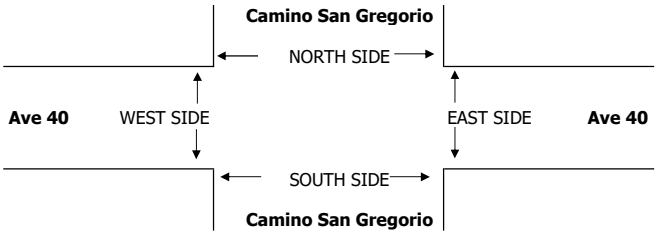
PROJECT #: SC3235
LOCATION #: 5
CONTROL: NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Camino San Gregorio			SOUTHBOUND Camino San Gregorio			EASTBOUND Ave 40			WESTBOUND Ave 40				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	0	X	0	X	X	X	X	1	0	0	1	X		0	0	0	0	
MD	1:00 PM	6	0	6	0	0	0	0	39	3	6	43	0	103	0	0	0	0	0
	1:15 PM	5	0	5	0	0	0	0	43	4	3	52	0	112	0	0	0	0	0
	1:30 PM	3	0	4	0	0	0	0	56	0	4	52	0	119	0	0	0	0	0
	1:45 PM	2	0	8	0	0	0	0	55	2	8	34	0	109	0	0	0	0	0
	2:00 PM	2	0	9	0	0	0	0	45	0	5	38	0	99	0	0	0	0	0
	2:15 PM	0	0	1	0	0	0	0	47	1	6	47	0	102	0	0	0	0	0
	2:30 PM	3	0	2	0	0	0	0	51	2	2	55	0	115	0	0	0	0	0
	2:45 PM	0	0	4	0	0	0	0	66	2	5	38	0	115	0	0	0	0	0
	3:00 PM	0	0	4	0	0	0	0	47	2	5	59	0	117	0	0	0	0	0
	3:15 PM	4	0	3	0	0	0	0	53	1	6	81	0	148	0	0	0	0	0
	3:30 PM	4	0	4	0	0	0	0	113	1	2	73	0	197	0	0	0	0	0
	3:45 PM	4	0	8	0	0	0	0	141	2	6	64	0	225	0	0	0	0	0
	VOLUMES	33	0	58	0	0	0	0	756	20	58	636	0	1,561	0	0	0	0	0
	APPROACH %	36%	0%	64%	0%	0%	0%	0%	97%	3%	8%	92%	0%						
	APP/DEPART	91	/	0	0	/	78	776	/	814	694	/	669	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	12	0	19	0	0	0	0	354	6	19	277	0	687					
	APPROACH %	39%	0%	61%	0%	0%	0%	0%	98%	2%	6%	94%	0%						
	PEAK HR FACTOR		0.646			0.000			0.629			0.851		0.763					
	APP/DEPART	31	/	0	0	/	25	360	/	373	296	/	289	0					
PM	4:00 PM	0	0	6	0	0	0	0	93	2	5	46	0	152	0	0	0	0	0
	4:15 PM	2	0	6	0	0	0	0	60	0	4	48	0	120	0	0	0	0	0
	4:30 PM	0	0	2	0	0	0	0	47	2	5	35	0	91	0	0	0	0	0
	4:45 PM	0	0	3	0	0	0	0	50	3	1	34	0	91	0	0	0	0	0
	5:00 PM	2	0	7	0	0	0	0	45	1	3	33	0	91	0	0	0	0	0
	5:15 PM	1	0	5	0	0	0	0	55	0	3	45	0	109	0	0	0	0	0
	5:30 PM	1	0	3	0	0	0	0	52	0	4	49	0	109	0	0	0	0	0
	5:45 PM	1	0	4	0	0	0	0	54	1	3	42	0	105	0	0	0	0	0
	6:00 PM	0	0	5	0	0	0	0	53	1	1	38	0	98	0	0	0	0	0
	6:15 PM	0	0	1	0	0	0	0	35	1	4	33	0	74	0	0	0	0	0
	6:30 PM	3	0	1	0	0	0	0	33	0	2	16	0	55	0	0	0	0	0
	6:45 PM	3	0	4	0	0	0	0	29	1	0	15	0	52	0	0	0	0	0
	VOLUMES	13	0	47	0	0	0	0	606	12	35	434	0	1,147	0	0	0	0	0
	APPROACH %	22%	0%	78%	0%	0%	0%	0%	98%	2%	7%	93%	0%						
	APP/DEPART	60	/	0	0	/	47	618	/	653	469	/	447	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	0	17	0	0	0	0	250	7	15	163	0	454					
	APPROACH %	11%	0%	89%	0%	0%	0%	0%	97%	3%	8%	92%	0%						
	PEAK HR FACTOR		0.594			0.000			0.676			0.856		0.747					
	APP/DEPART	19	/	0	0	/	22	257	/	267	178	/	165	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	TOTAL	4	4	0	0	8	0	1	0	0	1	4	3	0	0	7
	MD BEGIN PEAK HR			3:00 PM			0	1	0	0	1					
PM	4:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	PM BEGIN PEAK HR			4:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Mar 25, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

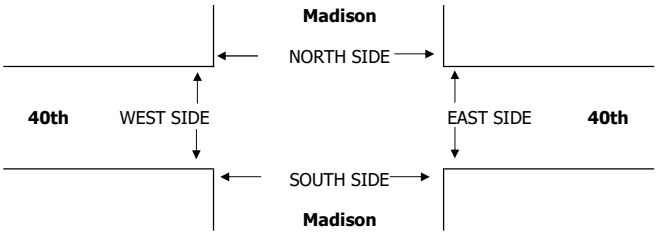
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	9	0	9	2	20	0	0	25	9	74	0	0	0	0	0
	7:15 AM	0	0	0	11	0	8	2	22	0	0	36	13	92	0	0	0	0	0
	7:30 AM	0	0	0	13	0	5	4	29	0	1	51	18	121	0	0	0	0	0
	7:45 AM	0	0	0	18	0	7	2	52	0	0	72	15	166	0	0	0	0	0
	8:00 AM	0	0	0	12	0	9	3	64	0	0	126	66	280	0	0	0	0	0
	8:15 AM	0	0	0	35	0	12	7	78	0	0	144	77	353	0	0	0	0	0
	8:30 AM	0	0	0	30	0	12	4	102	0	0	70	25	243	0	0	0	0	0
	8:45 AM	0	0	1	16	0	10	5	70	0	1	63	9	175	0	0	0	0	0
	9:00 AM	1	0	0	11	0	14	6	38	0	0	37	8	115	0	0	0	0	0
	9:15 AM	0	0	0	10	0	16	3	32	0	0	49	10	120	0	0	0	0	0
	9:30 AM	0	0	1	9	0	15	8	36	0	0	47	13	129	0	0	1	0	1
	9:45 AM	0	0	0	13	0	15	9	30	0	0	43	8	118	0	0	0	0	0
	VOLUMES	1	0	2	187	0	132	55	573	0	2	763	271	1,986	0	0	1	0	1
	APPROACH %	33%	0%	67%	59%	0%	41%	9%	91%	0%	0%	74%	26%						
	APP/DEPART	3	/	325	319	/	2	628	/	762	1,036	/	897	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	1	93	0	43	19	314	0	1	403	177	1,051					
	APPROACH %	0%	0%	100%	68%	0%	32%	6%	94%	0%	0%	69%	30%						
	PEAK HR FACTOR		0.250			0.723			0.785			0.657		0.744					
	APP/DEPART	1	/	196	136	/	1	333	/	408	581	/	446	0					
MD	10:00 AM	0	0	0	10	0	19	4	40	0	0	42	12	127	0	0	0	0	0
	10:15 AM	0	0	0	13	0	11	13	47	0	0	55	13	152	0	0	0	0	0
	10:30 AM	0	0	0	14	0	14	8	32	0	0	63	10	141	0	0	0	0	0
	10:45 AM	1	0	0	17	0	7	15	49	0	1	70	12	172	0	0	0	1	1
	11:00 AM	0	0	0	21	0	12	15	77	0	0	144	48	317	0	0	0	0	0
	11:15 AM	0	0	0	104	0	27	24	96	0	0	93	47	391	0	0	0	0	0
	11:30 AM	0	0	1	49	0	15	9	74	0	1	82	19	250	0	0	0	0	0
	11:45 AM	0	0	0	42	0	10	10	59	0	0	70	14	205	0	0	0	0	0
	12:00 PM	0	0	0	48	0	11	8	80	0	0	54	17	218	0	0	0	0	0
	12:15 PM	0	0	0	34	0	7	12	87	0	0	43	12	195	0	0	0	0	0
	12:30 PM	0	0	0	20	0	8	12	50	0	0	49	16	155	0	0	1	0	1
	12:45 PM	0	0	0	20	0	10	10	69	0	0	38	12	159	0	0	0	0	0
	VOLUMES	1	0	1	392	0	151	140	760	0	2	803	232	2,482	0	0	1	1	2
	APPROACH %	50%	0%	50%	72%	0%	28%	16%	84%	0%	0%	77%	22%						
	APP/DEPART	2	/	371	543	/	1	900	/	1,154	1,037	/	956	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	0	0	1	216	0	64	58	306	0	1	389	128	1,163					
	APPROACH %	0%	0%	100%	77%	0%	23%	16%	84%	0%	0%	75%	25%						
	PEAK HR FACTOR		0.250			0.534			0.758			0.674		0.744					
	APP/DEPART	1	/	186	280	/	1	364	/	523	518	/	453	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	0	1	2	0	1	0	0	1	0	0	0	1	1
	7:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	8:15 AM	0	1	1	0	2	0	1	0	0	1	0	0	1	0	1
	8:30 AM	1	10	1	1	13	1	2	0	1	4	0	8	1	0	9
	8:45 AM	1	7	0	1	9	1	1	0	1	3	0	6	0	0	6
	9:00 AM	0	6	0	2	8	0	6	0	2	8	0	0	0	0	0
	9:15 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	9:30 AM	1	3	0	2	6	1	2	0	2	5	0	1	0	0	1
	9:45 AM	0	3	1	0	4	0	1	0	0	1	0	2	1	0	3
	TOTAL	3	34	3	9	49	3	16	0	8	27	0	18	3	1	22
	AM BEGIN PEAK HR			8:00 AM			2	4	0	4	10					
MD	10:00 AM	2	2	0	0	4	2	1	0	0	3	0	1	0	0	1
	10:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0
	10:30 AM	1	4	0	4	9	0	0	0	4	4	1	4	0	0	5
	10:45 AM	0	2	1	2	5	0	2	0	2	4	0	0	1	0	1
	11:00 AM	1	2	0	1	4	1	0	0	1	2	0	2	0	0	2
	11:15 AM	0	4	0	1	5	0	0	0	0	0	0	4	0	1	5
	11:30 AM	2	5	0	0	7	0	5	0	0	5	2	0	0	0	2
	11:45 AM	1	2	0	1	4	1	2	0	1	4	0	0	0	0	0
	12:00 PM	0	4	0	0	4	0	2	0	0	2	0	2	0	0	2
	12:15 PM	0	6	2	0	8	0	0	0	0	0	0	6	2	0	8
	12:30 PM	2	3	0	0	5	0	3	0	0	3	2	0	0	0	2
	12:45 PM	0	2	2	0	4	0	0	0	0	0	0	2	2	0	4
	TOTAL	9	40	5	9	63	4	19	0	8	31	5	21	5	1	32
	MD BEGIN PEAK HR			11:00 AM			2	7	0	2	11					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Fri, Mar 25, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

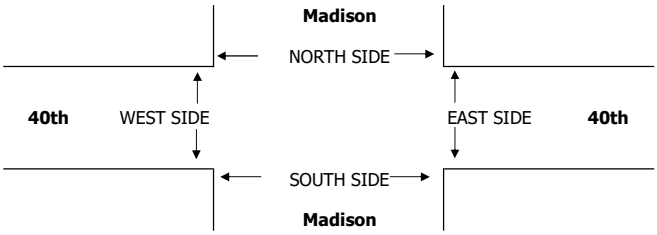
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	1	24	1	17	16	52	0	0	35	12	158	0	0	0	0	0
	1:15 PM	0	0	0	20	0	15	26	36	0	1	37	8	143	0	0	0	0	0
	1:30 PM	0	0	0	12	0	13	24	40	0	0	39	11	139	0	0	0	0	0
	1:45 PM	0	0	0	23	0	19	24	36	0	0	33	16	151	0	0	0	0	0
	2:00 PM	0	0	0	31	0	16	31	40	0	0	32	13	163	0	0	0	0	0
	2:15 PM	0	0	0	32	0	16	24	58	0	0	40	17	187	0	0	0	0	0
	2:30 PM	0	1	0	26	0	7	18	47	0	0	33	16	148	0	0	0	0	0
	2:45 PM	0	0	0	19	0	12	9	36	0	0	27	13	116	0	0	0	0	0
	3:00 PM	0	0	1	21	0	10	16	45	1	0	38	15	147	0	0	0	0	0
	3:15 PM	0	0	1	12	0	5	18	55	0	1	26	15	133	0	0	1	0	1
	3:30 PM	0	0	1	15	0	13	3	54	0	0	30	21	137	0	0	0	0	0
	3:45 PM	0	0	0	17	0	9	16	46	0	0	32	25	145	0	0	0	0	0
	VOLUMES	0	1	4	252	1	152	225	545	1	2	402	182	1,767	0	0	1	0	1
	APPROACH %	0%	20%	80%	62%	0%	38%	29%	71%	0%	0%	69%	31%						
	APP/DEPART	5	/	407	405	/	4	771	/	801	586	/	555	0					
	BEGIN PEAK HR		1:45 PM																
	VOLUMES	0	1	0	112	0	58	97	181	0	0	138	62	649					
	APPROACH %	0%	100%	0%	66%	0%	34%	35%	65%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.250			0.885			0.848			0.877		0.868					
	APP/DEPART	1	/	160	170	/	0	278	/	293	200	/	196	0					
PM	4:00 PM	0	0	0	10	0	5	16	56	0	0	41	16	144	0	0	0	0	0
	4:15 PM	0	0	0	22	0	8	16	44	0	0	39	14	143	0	0	0	0	0
	4:30 PM	0	0	1	16	0	10	6	43	0	0	38	11	125	0	0	0	0	0
	4:45 PM	0	0	0	18	0	9	11	41	0	0	35	9	123	0	0	0	0	0
	5:00 PM	0	0	0	17	0	8	12	42	0	0	32	12	123	0	0	0	0	0
	5:15 PM	0	0	0	15	0	7	14	39	0	0	34	8	117	0	0	0	0	0
	5:30 PM	0	0	1	21	0	11	9	38	0	0	28	7	115	0	0	0	0	0
	5:45 PM	0	0	0	16	0	9	13	41	0	0	26	11	116	0	0	0	0	0
	6:00 PM	0	0	0	14	0	7	12	44	0	0	27	8	112	0	0	0	0	0
	6:15 PM	0	0	0	11	0	12	11	39	0	0	29	5	107	0	0	0	0	0
	6:30 PM	0	0	0	9	0	9	9	38	0	0	28	6	99	0	0	0	0	0
	6:45 PM	0	0	0	8	0	11	8	31	0	0	25	8	91	0	0	0	0	0
	VOLUMES	0	0	2	177	0	106	137	496	0	0	382	115	1,415	0	0	0	0	0
	APPROACH %	0%	0%	100%	63%	0%	37%	22%	78%	0%	0%	77%	23%						
	APP/DEPART	2	/	252	283	/	0	633	/	675	497	/	488	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	1	66	0	32	49	184	0	0	153	50	535					
	APPROACH %	0%	0%	100%	67%	0%	33%	21%	79%	0%	0%	75%	25%						
	PEAK HR FACTOR		0.250			0.817			0.809			0.890		0.929					
	APP/DEPART	1	/	99	98	/	0	233	/	251	203	/	185	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	1:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	1	1	0	2	0	0	1	0	1	0	1	0	0	1
	3:30 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	3	3	2	10	0	0	1	0	1	2	3	2	2	9
	MD BEGIN PEAK HR			1:45 PM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	6:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	1	2	1	6	0	0	2	0	2	2	1	0	1	4
	PM BEGIN PEAK HR			4:00 PM			0	0	1	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Mar 28, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

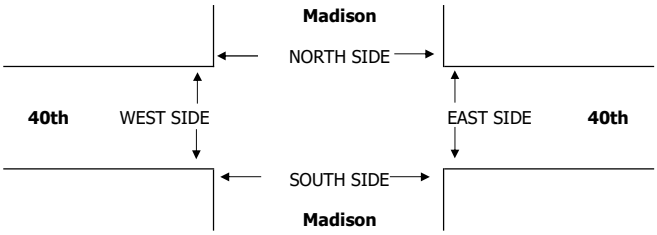
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	9	0	7	4	21	0	0	25	5	71	0	0	0	0	0
	7:15 AM	0	0	0	11	0	8	6	22	0	0	46	6	99	0	0	0	0	0
	7:30 AM	0	0	0	11	0	11	5	28	0	0	51	8	114	0	0	0	0	0
	7:45 AM	0	0	0	12	0	9	4	31	0	0	75	15	146	0	0	0	0	0
	8:00 AM	0	0	0	33	0	11	6	33	0	0	132	65	280	0	0	0	0	0
	8:15 AM	0	0	0	28	0	13	8	88	0	0	121	72	330	0	0	0	0	0
	8:30 AM	0	0	1	25	0	15	10	75	0	0	81	18	225	0	0	0	0	0
	8:45 AM	0	0	0	16	0	9	7	61	0	0	45	12	150	0	0	0	0	0
	9:00 AM	0	0	0	11	0	12	9	32	0	0	35	6	105	0	0	0	0	0
	9:15 AM	0	0	0	9	0	11	8	31	0	0	34	7	100	0	0	0	0	0
	9:30 AM	0	0	0	8	0	16	7	28	0	0	31	5	95	0	0	0	0	0
	9:45 AM	0	0	0	9	0	15	5	25	0	0	35	3	92	0	0	0	0	0
	VOLUMES	0	0	1	182	0	137	79	475	0	0	711	222	1,807	0	0	0	0	0
	APPROACH %	0%	0%	100%	57%	0%	43%	14%	86%	0%	0%	76%	24%						
	APP/DEPART	1	/	301	319	/	0	554	/	658	933	/	848	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	1	102	0	48	31	257	0	0	379	167	985					
	APPROACH %	0%	0%	100%	68%	0%	32%	11%	89%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.250			0.852			0.750			0.693		0.746					
	APP/DEPART	1	/	198	150	/	0	288	/	360	546	/	427	0					
MD	10:00 AM	0	0	0	9	0	12	11	38	0	0	38	7	115	0	0	0	0	0
	10:15 AM	0	1	0	12	0	14	9	31	0	0	35	8	110	0	0	0	0	0
	10:30 AM	0	0	0	15	0	15	8	38	0	0	48	5	129	0	0	0	0	0
	10:45 AM	0	0	1	12	0	13	9	39	0	0	38	9	121	0	0	0	0	0
	11:00 AM	0	0	0	13	0	11	7	41	1	0	51	8	132	0	0	0	0	0
	11:15 AM	0	1	1	11	0	9	11	28	0	0	45	6	112	0	0	0	0	0
	11:30 AM	0	0	0	8	0	11	15	39	0	0	46	9	128	0	0	0	0	0
	11:45 AM	0	0	0	8	0	14	12	35	1	0	43	11	124	0	0	0	0	0
	12:00 PM	0	0	0	10	0	13	11	31	0	1	41	9	116	0	0	0	0	0
	12:15 PM	0	0	0	12	0	11	14	35	0	0	48	8	128	0	0	0	0	0
	12:30 PM	1	0	0	6	0	12	12	48	0	0	42	11	132	0	0	1	0	1
	12:45 PM	0	0	0	8	0	6	8	41	0	0	35	9	107	0	0	0	0	0
	VOLUMES	1	2	2	124	0	141	127	444	2	1	510	100	1,454	0	0	1	0	1
	APPROACH %	20%	40%	40%	47%	0%	53%	22%	77%	0%	0%	83%	16%						
	APP/DEPART	5	/	228	265	/	3	573	/	570	611	/	653	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	1	0	0	36	0	50	49	149	1	1	174	39	500					
	APPROACH %	100%	0%	0%	42%	0%	58%	25%	75%	1%	0%	81%	18%						
	PEAK HR FACTOR		0.250			0.935			0.829			0.955		0.947					
	APP/DEPART	1	/	87	86	/	2	199	/	185	214	/	226	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	7:45 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	8:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	9:15 AM	0	3	0	1	4	0	2	0	1	3	0	1	0	0	1
	9:30 AM	2	1	0	1	4	1	1	0	1	3	1	0	0	0	1
	9:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	5	11	0	6	22	3	6	0	6	15	2	5	0	0	7
	AM BEGIN PEAK HR	8:00 AM					1	2	0	0	3					
MD	10:00 AM	2	2	0	0	4	0	1	0	0	1	2	1	0	0	3
	10:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	10:30 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	10:45 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	11:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	11:15 AM	0	1	0	1	2	0	0	0	1	1	0	1	0	0	1
	11:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	11:45 AM	1	4	0	2	7	0	1	0	0	1	1	3	0	2	6
	12:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	12:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	12:30 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	21	0	4	30	1	5	0	1	7	4	16	0	3	23
	MD BEGIN PEAK HR	11:45 AM					0	2	0	0	2					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Mon, Mar 28, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

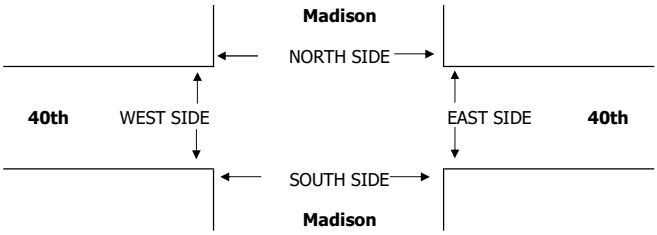
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	0	11	0	10	11	38	0	0	38	11	119	0	0	0	0	0
	1:15 PM	2	0	0	10	0	14	12	40	1	0	41	14	134	0	0	0	0	0
	1:30 PM	0	0	0	12	0	12	9	44	0	1	42	15	135	0	0	0	0	0
	1:45 PM	1	0	0	13	0	10	13	46	0	1	44	16	144	0	0	0	0	0
	2:00 PM	0	0	0	11	0	12	12	47	0	0	42	12	136	0	0	1	0	1
	2:15 PM	0	0	0	12	0	9	9	50	0	0	43	11	134	0	0	0	0	0
	2:30 PM	2	0	0	8	0	7	12	46	0	0	41	12	128	0	0	0	0	0
	2:45 PM	0	0	1	13	0	6	11	48	2	0	42	18	141	0	0	0	0	0
	3:00 PM	0	0	0	17	0	8	13	47	0	0	55	15	155	0	0	0	0	0
	3:15 PM	0	0	0	23	0	9	12	50	1	0	71	31	197	0	0	0	0	0
	3:30 PM	0	0	0	26	0	11	14	112	0	0	66	28	257	0	0	0	0	0
	3:45 PM	0	0	0	116	0	12	15	128	1	0	56	26	354	0	0	0	0	0
	VOLUMES	5	0	1	272	0	120	143	696	5	2	581	209	2,034	0	0	1	0	1
	APPROACH %	83%	0%	17%	69%	0%	31%	17%	82%	1%	0%	73%	26%						
	APP/DEPART	6	/	351	392	/	7	844	/	969	792	/	707	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	182	0	40	54	337	2	0	248	100	963					
	APPROACH %	0%	0%	0%	82%	0%	18%	14%	86%	1%	0%	71%	29%						
	PEAK HR FACTOR		0.000			0.434			0.682			0.853		0.680					
	APP/DEPART	0	/	154	222	/	2	393	/	519	348	/	288	0					
PM	4:00 PM	0	0	0	32	0	9	12	65	0	0	44	8	170	0	0	0	0	0
	4:15 PM	0	0	0	13	0	8	13	53	0	0	36	9	132	0	0	0	0	0
	4:30 PM	0	0	1	14	0	9	15	54	0	0	36	7	136	0	0	0	0	0
	4:45 PM	0	0	0	15	0	7	12	58	0	0	34	8	134	0	0	0	0	0
	5:00 PM	0	0	0	13	0	9	13	55	0	0	29	11	130	0	0	0	0	0
	5:15 PM	1	0	0	11	0	6	11	46	0	0	25	12	112	0	0	0	0	0
	5:30 PM	1	0	1	9	0	9	9	41	0	0	24	11	105	0	0	0	0	0
	5:45 PM	0	0	0	8	0	7	10	38	0	1	21	13	98	0	0	0	0	0
	6:00 PM	0	0	0	9	0	5	8	35	0	0	23	14	94	0	0	0	0	0
	6:15 PM	1	0	2	8	0	4	9	24	0	1	24	12	85	0	0	0	0	0
	6:30 PM	0	0	0	9	0	3	7	21	0	0	22	9	71	0	0	0	0	0
	6:45 PM	0	0	0	8	0	2	6	23	0	0	19	8	66	0	0	0	0	0
	VOLUMES	3	0	4	149	0	78	125	513	0	2	337	122	1,333	0	0	0	0	0
	APPROACH %	43%	0%	57%	66%	0%	34%	20%	80%	0%	0%	73%	26%						
	APP/DEPART	7	/	247	227	/	2	638	/	666	461	/	418	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	1	74	0	33	52	230	0	0	150	32	572					
	APPROACH %	0%	0%	100%	69%	0%	31%	18%	82%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.250			0.652			0.916			0.875		0.841					
	APP/DEPART	1	/	84	107	/	0	282	/	305	182	/	183	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	1:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	1:30 PM	1	1	0	1	3	1	1	0	0	2	0	0	0	1	1
	1:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	2:00 PM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	2:15 PM	0	1	1	1	3	0	0	1	1	2	0	1	0	0	1
	2:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	2:45 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	3:00 PM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	3:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	6	1	3	16	4	4	1	2	11	2	2	0	1	5
	MD BEGIN PEAK HR	3:00 PM					1	1	0	0	2					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	1	1	1	0	3	1	0	0	0	1	0	1	1	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	1	1	1	4	0	1	0	0	1	1	0	1	1	3
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	1	0	1	1	3	0	0	0	1	1	1	0	1	0	2
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	3	3	3	13	2	1	0	2	5	2	2	3	1	8
	PM BEGIN PEAK HR	4:00 PM					1	1	0	0	2					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Mar 26, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

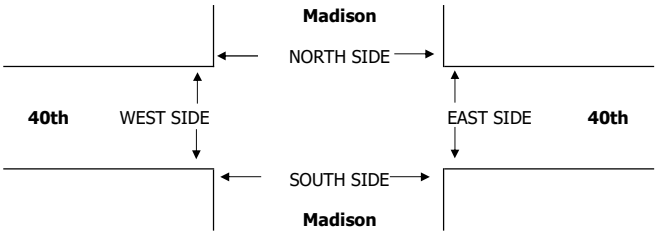
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	5	0	5	1	15	0	1	15	8	50	0	0	0	0	0
	7:15 AM	0	0	0	6	0	6	1	11	0	0	12	11	47	0	0	0	0	0
	7:30 AM	0	0	0	7	0	7	2	19	0	0	15	15	65	0	0	0	0	0
	7:45 AM	0	0	0	9	0	4	1	18	0	0	38	12	82	0	0	0	0	0
	8:00 AM	0	0	0	8	0	8	2	21	0	1	39	25	104	0	0	0	0	0
	8:15 AM	0	0	0	15	0	9	1	31	0	0	54	21	131	0	0	0	0	0
	8:30 AM	0	0	0	17	0	8	2	42	0	1	41	18	129	0	0	0	0	0
	8:45 AM	0	0	1	11	0	7	3	35	0	0	38	11	106	0	0	0	0	0
	9:00 AM	1	0	0	9	0	8	2	28	0	0	28	15	91	0	0	0	0	0
	9:15 AM	0	0	0	8	0	4	1	21	0	0	25	8	67	0	0	0	0	0
	9:30 AM	0	0	1	7	0	6	5	18	0	0	21	11	69	0	0	1	0	1
	9:45 AM	0	0	0	8	0	3	3	15	0	0	18	9	56	0	0	0	0	0
	VOLUMES	1	0	2	110	0	75	24	274	0	3	344	164	997	0	0	1	0	1
	APPROACH %	33%	0%	67%	59%	0%	41%	8%	92%	0%	1%	67%	32%						
	APP/DEPART	3	/	187	185	/	3	298	/	386	511	/	421	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	1	51	0	32	8	129	0	2	172	75	470					
	APPROACH %	0%	0%	100%	61%	0%	39%	6%	94%	0%	1%	69%	30%						
	PEAK HR FACTOR		0.250			0.830			0.778			0.830		0.897					
	APP/DEPART	1	/	83	83	/	2	137	/	181	249	/	204	0					
MD	10:00 AM	0	0	0	8	0	11	5	22	0	0	38	9	93	0	0	0	0	0
	10:15 AM	0	0	0	7	0	9	8	25	0	0	41	8	98	0	0	0	0	0
	10:30 AM	0	0	0	11	0	12	9	21	0	0	42	10	105	0	0	0	0	0
	10:45 AM	1	0	0	9	0	9	11	31	0	0	45	7	113	0	0	0	0	0
	11:00 AM	0	0	0	11	0	8	12	41	0	1	45	16	134	0	0	0	1	1
	11:15 AM	0	0	0	25	0	15	15	55	0	0	44	21	175	0	0	0	0	0
	11:30 AM	0	0	1	28	0	11	14	54	0	1	38	15	162	0	0	0	0	0
	11:45 AM	0	0	0	15	0	8	9	28	0	0	31	11	102	0	0	0	0	0
	12:00 PM	0	0	0	14	0	9	11	54	0	0	35	13	136	0	0	0	0	0
	12:15 PM	0	0	0	21	0	11	8	51	0	0	31	9	131	0	0	0	0	0
	12:30 PM	0	0	0	15	0	12	9	28	0	0	28	15	107	0	0	0	0	0
	12:45 PM	0	0	0	14	0	8	12	22	0	0	27	8	91	0	0	1	0	1
	VOLUMES	1	0	1	178	0	123	123	432	0	2	445	142	1,447	0	0	1	1	2
	APPROACH %	50%	0%	50%	59%	0%	41%	22%	78%	0%	0%	76%	24%						
	APP/DEPART	2	/	264	301	/	1	555	/	612	589	/	570	0					
	BEGIN PEAK HR		10:45 AM																
	VOLUMES	1	0	1	73	0	43	52	181	0	2	172	59	584					
	APPROACH %	50%	0%	50%	63%	0%	37%	22%	78%	0%	1%	74%	25%						
	PEAK HR FACTOR		0.500			0.725			0.832			0.896		0.834					
	APP/DEPART	2	/	111	116	/	1	233	/	256	233	/	216	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	1	2	0	0	0	1	1	0	1	0	0	1
	8:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	9:15 AM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
	9:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	3	0	3	7	1	1	0	2	4	0	2	0	1	3
	AM BEGIN PEAK HR			8:00 AM			0	0	0	1	1					
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	10:45 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	11:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	1	0	0	1	2	0	0	0	1	1	1	0	0	0	1
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	1	3	0	0	4	1	3	0	0	4	0	0	0	0	0
	12:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	4	6	1	2	13	3	4	0	2	9	1	2	1	0	4
	MD BEGIN PEAK HR			10:45 AM			1	1	0	2	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Mar 26, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

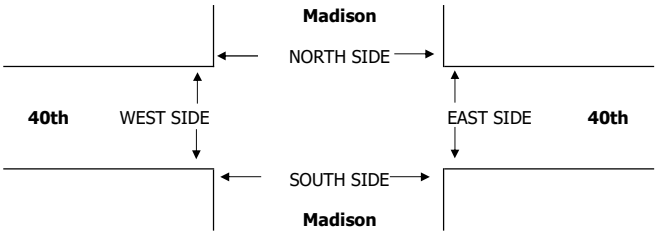
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	1	4	0	6	1	31	0	0	9	9	61	0	0	0	0	0
	1:15 PM	0	0	0	5	0	7	2	42	0	0	16	12	84	0	0	0	0	0
	1:30 PM	0	0	1	8	0	8	1	62	0	0	15	14	109	0	0	0	0	0
	1:45 PM	0	0	0	11	0	6	4	50	0	1	19	16	107	0	0	1	0	1
	2:00 PM	0	0	1	12	0	7	1	51	0	0	32	31	135	0	0	0	0	0
	2:15 PM	1	0	0	14	0	11	1	36	0	1	46	34	144	0	0	0	0	0
	2:30 PM	0	0	0	15	0	12	1	25	0	0	45	29	127	0	0	0	0	0
	2:45 PM	0	0	0	17	0	8	2	37	0	0	35	25	124	0	0	0	0	0
	3:00 PM	0	0	0	12	0	9	3	25	0	1	38	22	110	0	0	0	0	0
	3:15 PM	0	0	0	15	0	11	2	42	0	0	35	13	118	0	0	0	0	0
	3:30 PM	0	0	0	11	0	15	1	35	0	0	36	11	109	0	0	0	0	0
	3:45 PM	0	0	0	12	0	5	2	36	0	0	25	15	95	0	0	0	0	0
	VOLUMES	1	0	3	136	0	105	21	472	0	3	351	231	1,323	0	0	1	0	1
	APPROACH %	25%	0%	75%	56%	0%	44%	4%	96%	0%	1%	60%	39%						
	APP/DEPART	4	/	251	241	/	3	493	/	611	585	/	458	0					
	BEGIN PEAK HR		2:00 PM																
	VOLUMES	1	0	1	58	0	38	5	149	0	1	158	119	530					
	APPROACH %	50%	0%	50%	60%	0%	40%	3%	97%	0%	0%	57%	43%						
	PEAK HR FACTOR		0.500			0.889			0.740			0.858		0.920					
	APP/DEPART	2	/	124	96	/	1	154	/	208	278	/	197	0					
PM	4:00 PM	0	0	0	9	0	9	6	19	0	0	35	7	85	0	0	0	0	0
	4:15 PM	0	0	0	8	0	11	9	22	0	0	38	9	97	0	0	0	0	0
	4:30 PM	0	0	1	9	0	13	11	18	0	0	25	6	83	0	0	0	0	0
	4:45 PM	0	0	0	10	0	11	12	21	0	0	21	8	83	0	0	0	0	0
	5:00 PM	0	0	0	12	0	12	15	22	0	0	19	21	101	0	0	1	0	1
	5:15 PM	0	0	0	28	0	14	12	28	0	0	18	19	119	0	0	0	0	0
	5:30 PM	1	0	0	25	0	12	11	25	0	0	21	16	111	0	0	0	0	0
	5:45 PM	0	0	0	22	0	13	9	22	0	0	15	12	93	0	0	0	0	0
	6:00 PM	0	0	0	19	0	12	8	23	0	1	16	11	90	0	0	0	0	0
	6:15 PM	0	0	0	28	0	9	7	19	0	0	17	8	88	0	0	0	0	0
	6:30 PM	0	0	0	11	0	11	8	16	0	0	16	11	73	0	0	0	0	0
	6:45 PM	0	0	0	12	0	9	9	15	0	0	11	9	65	0	0	0	0	0
	VOLUMES	1	0	1	193	0	136	117	250	0	1	252	137	1,088	0	0	1	0	1
	APPROACH %	50%	0%	50%	59%	0%	41%	32%	68%	0%	0%	65%	35%						
	APP/DEPART	2	/	253	329	/	1	367	/	444	390	/	390	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	1	0	0	87	0	51	47	97	0	0	73	68	424					
	APPROACH %	100%	0%	0%	63%	0%	37%	33%	67%	0%	0%	52%	48%						
	PEAK HR FACTOR		0.250			0.821			0.900			0.881		0.891					
	APP/DEPART	1	/	114	138	/	0	144	/	184	141	/	126	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	1	0	2	3	0	0	0	1	1	0	1	0	1	2
	2:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	2:15 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	2	1	4	9	2	0	0	2	4	0	2	1	2	5
	MD BEGIN PEAK HR	2:00 PM					1	0	0	1	2					
PM	4:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	4	0	2	7	1	1	0	2	4	0	3	0	0	3
	PM BEGIN PEAK HR	5:00 PM					0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Mar 27, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

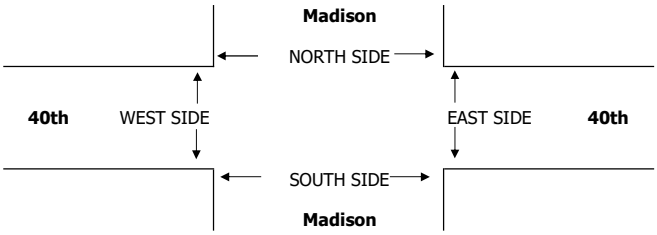
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	4	0	2	2	11	0	1	12	9	41	0	0	0	0	0
	7:15 AM	0	0	0	5	0	5	3	9	0	0	13	8	43	0	0	0	0	0
	7:30 AM	0	0	0	6	0	6	1	11	0	0	14	11	49	0	0	0	0	0
	7:45 AM	0	0	0	8	0	3	2	15	0	0	21	13	62	0	0	0	0	0
	8:00 AM	0	0	1	7	0	5	0	17	0	1	25	15	71	0	0	0	0	0
	8:15 AM	0	0	0	10	0	4	0	18	0	0	33	17	82	0	0	0	0	0
	8:30 AM	0	0	0	7	0	5	1	21	0	1	38	16	89	0	0	0	0	0
	8:45 AM	0	0	0	9	0	3	2	18	0	0	32	12	76	0	0	0	0	0
	9:00 AM	1	0	0	5	0	5	1	21	0	0	25	8	66	0	0	0	0	0
	9:15 AM	0	0	0	4	0	10	2	19	0	0	22	9	66	0	0	0	0	0
	9:30 AM	0	0	1	6	0	4	4	15	0	0	18	8	56	0	0	1	0	1
	9:45 AM	0	0	0	7	0	7	2	12	0	0	21	7	56	0	0	0	0	0
	VOLUMES	1	0	2	78	0	59	20	187	0	3	274	133	757	0	0	1	0	1
	APPROACH %	33%	0%	67%	57%	0%	43%	10%	90%	0%	1%	67%	32%						
	APP/DEPART	3	/	152	137	/	3	207	/	267	410	/	335	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	1	33	0	17	3	74	0	2	128	60	318					
	APPROACH %	0%	0%	100%	66%	0%	34%	4%	96%	0%	1%	67%	32%						
	PEAK HR FACTOR		0.250			0.893			0.875			0.864		0.893					
	APP/DEPART	1	/	63	50	/	2	77	/	108	190	/	145	0					
MD	10:00 AM	1	0	0	10	0	11	5	18	0	0	25	11	81	0	0	0	0	0
	10:15 AM	0	0	0	12	0	12	8	22	0	0	21	15	90	0	0	0	0	0
	10:30 AM	0	0	0	13	0	11	9	19	0	1	26	13	92	0	0	0	0	0
	10:45 AM	0	0	1	15	0	9	11	15	0	0	38	12	101	0	0	0	0	0
	11:00 AM	0	0	0	16	0	8	9	31	0	0	41	15	120	0	0	0	0	0
	11:15 AM	1	0	0	21	0	15	15	51	0	0	37	10	150	0	0	0	0	0
	11:30 AM	0	0	0	22	0	14	8	42	0	0	38	21	145	0	0	0	0	0
	11:45 AM	0	0	0	25	0	11	9	31	0	0	31	11	118	0	0	0	0	0
	12:00 PM	1	0	0	28	0	12	7	48	0	0	29	15	140	0	0	0	0	0
	12:15 PM	0	0	0	29	0	15	11	38	0	0	21	16	130	0	0	0	0	0
	12:30 PM	0	0	0	21	0	11	9	21	0	1	33	13	109	0	0	0	0	0
	12:45 PM	0	0	0	16	0	9	8	28	0	0	25	9	95	0	0	0	0	0
	VOLUMES	3	0	1	228	0	138	109	364	0	2	365	161	1,371	0	0	0	0	0
	APPROACH %	75%	0%	25%	62%	0%	38%	23%	77%	0%	0%	69%	30%						
	APP/DEPART	4	/	270	366	/	2	473	/	593	528	/	506	0					
	BEGIN PEAK HR		11:15 AM																
	VOLUMES	2	0	0	96	0	52	39	172	0	0	135	57	553					
	APPROACH %	100%	0%	0%	65%	0%	35%	18%	82%	0%	0%	70%	30%						
	PEAK HR FACTOR		0.500			0.925			0.799			0.814		0.922					
	APP/DEPART	2	/	96	148	/	0	211	/	268	192	/	189	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	8:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	9:00 AM	0	2	0	1	3	0	2	0	1	3	0	0	0	0	0
	9:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	9:30 AM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	8	1	3	14	2	6	0	3	11	0	2	1	0	3
	AM BEGIN PEAK HR			8:00 AM			0	2	0	1	3					
MD	10:00 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	10:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	10:30 AM	0	0	1	2	3	0	0	0	2	2	0	0	1	0	1
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	3	0	0	1	4	1	0	0	1	2	2	0	0	0	2
	12:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	6	4	2	3	15	3	2	0	3	8	3	2	2	0	7
	MD BEGIN PEAK HR			11:15 AM			1	1	0	0	2					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sun, Mar 27, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

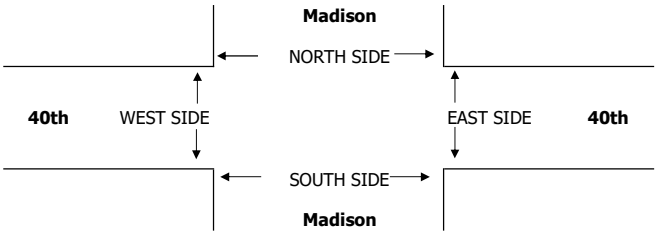
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	0	3	0	1	1	29	0	0	13	11	58	0	0	0	0	0
	1:15 PM	0	0	0	4	0	4	2	25	0	0	15	9	59	0	0	0	0	0
	1:30 PM	0	0	0	5	0	5	2	38	0	0	13	8	71	0	0	0	0	0
	1:45 PM	0	0	0	7	0	4	1	36	0	0	25	11	84	0	0	0	0	0
	2:00 PM	0	0	0	5	0	3	1	37	0	0	28	12	86	0	0	0	0	0
	2:15 PM	0	0	0	8	0	5	0	40	0	0	35	15	103	0	0	0	0	0
	2:30 PM	0	0	1	8	0	4	2	32	0	0	38	11	96	0	0	0	0	0
	2:45 PM	0	0	0	9	0	4	2	27	0	0	35	13	90	0	0	1	0	1
	3:00 PM	0	0	0	6	0	6	2	35	0	0	31	15	95	0	0	0	0	0
	3:15 PM	0	0	1	5	0	2	1	38	0	1	28	12	88	0	0	0	0	0
	3:30 PM	0	0	0	4	0	5	2	29	0	1	21	11	73	0	0	0	0	0
	3:45 PM	0	0	0	8	0	1	3	25	0	0	22	8	67	0	0	0	0	0
	VOLUMES	0	0	2	72	0	44	19	391	0	2	304	136	970	0	0	1	0	1
	APPROACH %	0%	0%	100%	62%	0%	38%	5%	95%	0%	0%	69%	31%						
	APP/DEPART	2	/	154	116	/	2	410	/	465	442	/	349	0					
	BEGIN PEAK HR		2:15 PM																
	VOLUMES	0	0	1	31	0	19	6	134	0	0	139	54	384					
	APPROACH %	0%	0%	100%	62%	0%	38%	4%	96%	0%	0%	72%	28%						
	PEAK HR FACTOR		0.250			0.962			0.875			0.965		0.932					
	APP/DEPART	1	/	59	50	/	0	140	/	166	193	/	159	0					
PM	4:00 PM	1	0	0	9	0	9	4	16	0	0	18	12	69	0	0	0	0	0
	4:15 PM	0	0	0	8	0	8	5	14	0	0	16	13	64	0	0	0	0	0
	4:30 PM	0	0	0	7	0	5	8	18	0	0	13	11	62	0	0	0	0	0
	4:45 PM	0	0	0	5	0	4	9	10	0	0	12	9	49	0	0	0	0	0
	5:00 PM	0	0	0	9	0	9	11	11	0	0	15	8	63	0	0	0	0	0
	5:15 PM	1	0	0	9	0	5	8	9	0	0	12	8	52	0	0	0	0	0
	5:30 PM	0	0	0	8	0	9	7	11	0	0	11	7	53	0	0	0	0	0
	5:45 PM	0	0	0	9	0	8	4	8	0	1	9	9	48	0	0	0	0	0
	6:00 PM	0	0	1	7	0	7	5	9	0	0	8	7	44	0	0	0	0	0
	6:15 PM	0	0	0	6	0	9	6	8	0	0	10	9	48	0	0	0	0	0
	6:30 PM	0	0	0	5	0	5	5	5	0	0	9	7	36	0	0	0	0	0
	6:45 PM	0	0	0	4	0	4	4	7	0	0	7	5	31	0	0	0	0	0
	VOLUMES	2	0	1	86	0	82	76	126	0	1	140	105	619	0	0	0	0	0
	APPROACH %	67%	0%	33%	51%	0%	49%	38%	62%	0%	0%	57%	43%						
	APP/DEPART	3	/	181	168	/	1	202	/	213	246	/	224	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	1	0	0	29	0	26	26	58	0	0	59	45	244					
	APPROACH %	100%	0%	0%	53%	0%	47%	31%	69%	0%	0%	57%	43%						
	PEAK HR FACTOR		0.250			0.764			0.808			0.867		0.884					
	APP/DEPART	1	/	71	55	/	0	84	/	87	104	/	86	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	2:15 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	1	1	0	2	0	1	0	0	1	0	0	1	0	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	1	1	5	1	1	0	1	3	0	1	1	0	2
	MD BEGIN PEAK HR			2:15 PM			0	1	0	1	2					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	6:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	1	3	1	1	6	0	2	0	1	3	1	1	1	0	3
	PM BEGIN PEAK HR			4:00 PM			0	0	0	1	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Mar 24, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

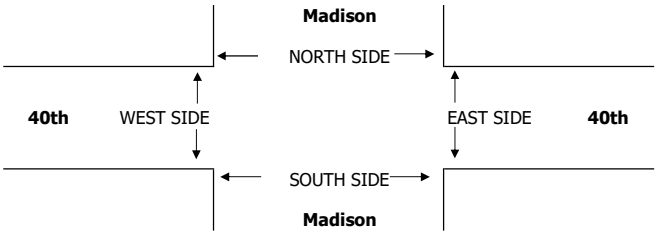
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	13	0	8	2	17	1	0	29	9	79	0	0	0	0	0
	7:15 AM	0	0	0	11	0	9	2	30	0	0	31	6	89	0	0	0	0	0
	7:30 AM	0	0	0	14	0	15	5	27	0	0	39	11	111	0	0	0	0	0
	7:45 AM	0	0	0	14	0	10	4	30	0	0	57	5	120	0	0	0	0	0
	8:00 AM	0	0	0	13	0	7	4	36	0	0	62	11	133	0	0	0	0	0
	8:15 AM	0	0	0	12	0	7	0	22	0	0	46	15	102	0	0	0	0	0
	8:30 AM	0	0	0	10	0	7	1	26	0	0	57	14	115	0	0	0	0	0
	8:45 AM	1	0	0	12	0	11	9	65	0	1	91	23	213	0	0	0	0	0
	9:00 AM	0	0	0	17	0	14	5	50	0	1	121	55	263	0	0	0	1	1
	9:15 AM	0	0	2	35	0	17	4	94	0	0	122	71	345	0	0	0	0	0
	9:30 AM	0	0	1	31	0	15	3	122	0	0	82	18	272	0	0	0	0	0
	9:45 AM	0	0	0	10	0	18	5	60	0	0	56	9	158	0	0	0	0	0
	VOLUMES	1	0	3	192	0	138	44	579	1	2	793	247	2,000	0	0	0	1	1
	APPROACH %	25%	0%	75%	58%	0%	42%	7%	93%	0%	0%	76%	24%						
	APP/DEPART	4	/	291	330	/	2	624	/	775	1,042	/	932	0					
	BEGIN PEAK HR		8:45 AM																
	VOLUMES	1	0	3	95	0	57	21	331	0	2	416	167	1,093					
	APPROACH %	25%	0%	75%	63%	0%	38%	6%	94%	0%	0%	71%	29%						
	PEAK HR FACTOR		0.500			0.731			0.704			0.758		0.792					
	APP/DEPART	4	/	188	152	/	1	352	/	430	585	/	474	0					
MD	10:00 AM	0	0	0	8	0	16	2	44	0	0	51	7	128	0	0	0	0	0
	10:15 AM	0	0	0	11	0	13	10	37	0	0	41	9	121	0	0	0	0	0
	10:30 AM	0	0	0	9	0	16	8	43	0	0	48	7	131	0	0	0	0	0
	10:45 AM	1	0	0	10	0	14	9	41	0	0	40	6	121	0	0	1	0	1
	11:00 AM	0	0	0	7	0	20	18	33	0	0	51	5	134	0	0	0	0	0
	11:15 AM	0	0	0	9	0	18	15	39	0	0	33	4	118	0	0	0	0	0
	11:30 AM	0	1	2	4	0	9	14	45	1	0	47	5	128	0	0	1	0	1
	11:45 AM	0	0	0	9	0	15	20	53	0	0	43	7	147	0	0	0	0	0
	12:00 PM	0	0	0	12	0	16	11	45	0	0	47	8	139	0	0	0	0	0
	12:15 PM	0	0	0	8	0	10	9	50	0	0	60	10	147	0	0	0	0	0
	12:30 PM	0	0	0	11	0	11	17	55	0	0	40	10	144	0	0	0	0	0
	12:45 PM	0	0	0	10	0	10	15	49	0	0	35	10	129	0	0	1	0	1
	VOLUMES	1	1	2	108	0	168	148	534	1	0	536	88	1,587	0	0	3	0	3
	APPROACH %	25%	25%	50%	39%	0%	61%	22%	78%	0%	0%	86%	14%						
	APP/DEPART	4	/	234	276	/	1	683	/	644	624	/	708	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	0	0	0	40	0	52	57	203	0	0	190	35	577					
	APPROACH %	0%	0%	0%	43%	0%	57%	22%	78%	0%	0%	84%	16%						
	PEAK HR FACTOR		0.000			0.821			0.890			0.804		0.981					
	APP/DEPART	0	/	92	92	/	0	260	/	243	225	/	242	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	3	0	3	6	0	0	0	0	0	0	3	0	3	6
	7:30 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	7:45 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:15 AM	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2
	8:30 AM	0	2	0	1	3	0	1	0	0	1	0	1	0	1	2
	8:45 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	9:00 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	9:15 AM	0	3	0	1	4	0	1	0	1	2	0	2	0	0	2
	9:30 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0
	9:45 AM	1	1	1	2	5	1	1	0	2	4	0	0	1	0	1
	TOTAL	2	22	1	9	34	2	13	0	4	19	0	9	1	5	15
	AM BEGIN PEAK HR			8:45 AM			0	7	0	1	8					
MD	10:00 AM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	10:15 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	10:30 AM	1	5	0	3	9	0	2	0	0	2	1	3	0	3	7
	10:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	11:00 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	11:15 AM	2	3	0	2	7	2	2	0	2	6	0	1	0	0	1
	11:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	12:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	12:30 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	17	0	8	30	3	7	0	4	14	2	10	0	4	16
	MD BEGIN PEAK HR			11:45 AM			1	1	0	2	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Mar 24, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

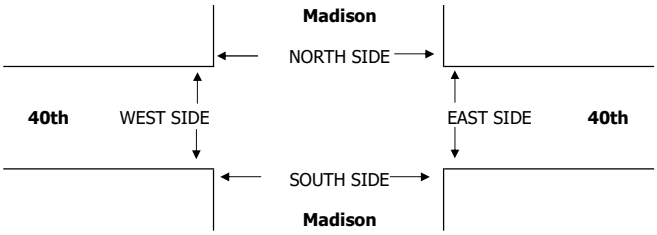
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	0	14	0	12	19	48	0	0	31	13	137	0	0	1	0	1
	1:15 PM	0	0	0	8	0	9	8	57	0	0	45	12	139	0	0	0	0	0
	1:30 PM	0	0	1	10	0	15	14	53	1	0	37	6	137	0	0	0	0	0
	1:45 PM	1	0	1	7	0	10	10	37	1	1	53	13	134	0	0	0	0	0
	2:00 PM	1	0	0	12	0	9	11	41	0	1	40	15	130	0	0	0	0	0
	2:15 PM	0	0	2	9	0	7	8	35	0	1	56	14	132	0	0	0	0	0
	2:30 PM	1	0	1	10	0	9	10	38	1	1	53	12	136	0	0	0	0	0
	2:45 PM	1	0	1	11	0	10	9	43	1	1	48	13	138	0	0	0	0	0
	3:00 PM	1	0	2	18	0	8	18	53	0	2	76	20	198	0	0	0	0	0
	3:15 PM	0	0	0	22	0	14	9	73	0	0	66	23	207	0	0	0	0	0
	3:30 PM	0	0	0	22	0	11	12	53	0	0	73	32	203	0	0	0	0	0
	3:45 PM	0	0	0	91	0	10	8	142	0	0	60	24	335	0	0	0	0	0
	VOLUMES	5	0	8	234	0	124	136	673	4	7	638	197	2,026	0	0	1	0	1
	APPROACH %	38%	0%	62%	65%	0%	35%	17%	83%	0%	1%	76%	23%						
	APP/DEPART	13	/	332	358	/	11	813	/	915	842	/	768	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	1	0	2	153	0	43	47	321	0	2	275	99	943					
	APPROACH %	33%	0%	67%	78%	0%	22%	13%	87%	0%	1%	73%	26%						
	PEAK HR FACTOR		0.250			0.485			0.613			0.895		0.704					
	APP/DEPART	3	/	146	196	/	2	368	/	476	376	/	319	0					
PM	4:00 PM	0	0	0	30	0	6	14	111	0	0	48	11	220	0	0	0	0	0
	4:15 PM	0	0	0	17	0	6	11	65	0	1	34	15	149	0	0	0	1	1
	4:30 PM	0	0	0	12	0	6	16	57	0	0	39	14	144	0	0	0	0	0
	4:45 PM	0	0	0	8	0	3	10	45	0	0	35	20	121	0	0	0	0	0
	5:00 PM	0	0	2	12	0	7	7	39	0	0	34	7	108	0	0	0	0	0
	5:15 PM	0	0	0	13	0	1	9	59	0	0	49	17	148	0	0	0	0	0
	5:30 PM	0	0	1	9	0	4	9	54	0	0	35	19	131	0	0	0	0	0
	5:45 PM	1	0	0	14	0	6	7	55	1	0	46	7	137	0	0	0	0	0
	6:00 PM	0	0	1	10	0	8	6	52	0	0	29	7	113	0	0	1	0	1
	6:15 PM	0	0	0	7	0	4	8	32	0	0	28	9	88	0	0	0	0	0
	6:30 PM	0	0	0	7	0	3	3	23	0	0	20	11	67	0	0	0	0	0
	6:45 PM	0	0	0	9	0	4	8	24	0	0	19	17	81	0	0	0	0	0
	VOLUMES	1	0	4	148	0	58	108	616	1	1	416	154	1,507	0	0	1	1	2
	APPROACH %	20%	0%	80%	72%	0%	28%	15%	85%	0%	0%	73%	27%						
	APP/DEPART	5	/	261	206	/	1	725	/	769	571	/	476	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	67	0	21	51	278	0	1	156	60	634					
	APPROACH %	0%	0%	0%	76%	0%	24%	16%	84%	0%	0%	72%	28%						
	PEAK HR FACTOR		0.000			0.611			0.658			0.919		0.720					
	APP/DEPART	0	/	111	88	/	0	329	/	346	217	/	177	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:00 PM	1	2	0	2	5	1	1	0	1	3	0	1	0	1	2
	3:15 PM	3	1	0	0	4	0	1	0	0	1	3	0	0	0	3
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	TOTAL	8	3	0	3	14	4	2	0	2	8	4	1	0	1	6
	MD BEGIN PEAK HR	3:00 PM					2	2	0	1	5					
PM	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:15 PM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	TOTAL	4	5	0	0	9	0	0	0	0	0	4	5	0	0	9
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Mar 29, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

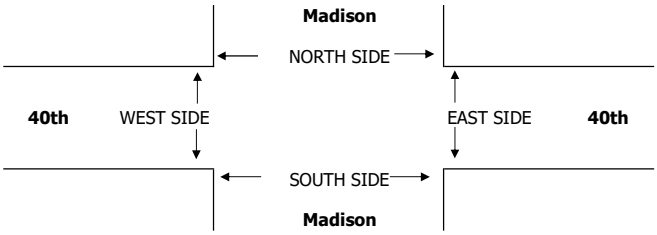
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	11	0	9	4	21	0	0	33	5	83	0	0	0	0	0
	7:15 AM	0	0	0	9	0	12	3	22	0	0	35	6	87	0	0	0	0	0
	7:30 AM	1	0	0	11	0	11	5	25	0	1	44	9	107	0	0	0	0	0
	7:45 AM	0	0	1	8	0	9	3	25	2	0	62	11	121	0	0	0	0	0
	8:00 AM	2	0	0	11	0	11	3	31	0	1	42	28	129	0	0	0	0	0
	8:15 AM	0	0	0	21	0	15	5	28	0	0	55	21	145	0	0	0	0	0
	8:30 AM	0	0	0	25	0	16	9	31	1	0	81	28	191	0	0	0	0	0
	8:45 AM	1	0	1	11	0	12	8	67	0	0	98	22	220	0	0	0	0	0
	9:00 AM	0	0	0	15	0	9	9	60	0	0	132	59	284	0	0	0	0	0
	9:15 AM	0	0	0	21	0	11	8	91	0	0	126	76	333	0	0	0	0	0
	9:30 AM	0	0	0	32	0	15	7	128	0	0	84	17	283	0	0	0	0	0
	9:45 AM	0	0	0	14	0	14	3	55	0	0	58	15	159	0	0	0	0	0
	VOLUMES	4	0	2	189	0	144	67	584	3	2	850	297	2,142	0	0	0	0	0
	APPROACH %	67%	0%	33%	57%	0%	43%	10%	89%	0%	0%	74%	26%						
	APP/DEPART	6	/	364	333	/	5	654	/	775	1,149	/	998	0					
	BEGIN PEAK HR		8:45 AM																
	VOLUMES	1	0	1	79	0	47	32	346	0	0	440	174	1,120					
	APPROACH %	50%	0%	50%	63%	0%	37%	8%	92%	0%	0%	72%	28%						
	PEAK HR FACTOR		0.250			0.670			0.700			0.760		0.841					
	APP/DEPART	2	/	206	126	/	0	378	/	426	614	/	488	0					
MD	10:00 AM	0	1	0	9	0	14	11	38	0	0	54	8	135	0	0	0	0	0
	10:15 AM	0	0	0	8	0	15	7	32	0	0	42	7	111	0	0	0	0	0
	10:30 AM	0	0	0	11	0	18	8	38	0	1	51	9	136	0	0	0	0	0
	10:45 AM	0	0	0	8	0	16	9	41	0	0	52	8	134	0	0	0	0	0
	11:00 AM	0	0	0	14	0	11	8	38	2	0	48	6	127	0	0	0	0	0
	11:15 AM	0	0	0	11	0	9	11	35	0	0	39	7	112	0	0	0	0	0
	11:30 AM	1	0	0	12	0	8	12	39	0	0	45	9	126	0	0	0	0	0
	11:45 AM	0	0	0	10	0	12	8	35	0	0	41	9	115	0	0	0	0	0
	12:00 PM	1	0	0	12	0	12	10	50	0	0	52	12	149	0	0	0	0	0
	12:15 PM	0	0	0	7	0	10	17	56	0	0	41	9	140	0	0	1	0	1
	12:30 PM	0	0	0	12	0	12	10	56	0	0	35	9	134	0	0	0	0	0
	12:45 PM	0	0	0	7	0	11	14	39	0	0	40	6	117	0	0	0	0	0
	VOLUMES	2	1	0	121	0	148	125	497	2	1	540	99	1,536	0	0	1	0	1
	APPROACH %	67%	33%	0%	45%	0%	55%	20%	80%	0%	0%	84%	15%						
	APP/DEPART	3	/	224	269	/	3	624	/	618	640	/	691	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	1	0	0	38	0	45	51	201	0	0	168	36	540					
	APPROACH %	100%	0%	0%	46%	0%	54%	20%	80%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.250			0.865			0.863			0.797		0.906					
	APP/DEPART	1	/	86	83	/	0	252	/	239	204	/	215	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	2	0	1	4	1	1	0	1	3	0	1	0	0	1
	7:30 AM	1	0	0	2	3	0	0	0	2	2	1	0	0	0	1
	7:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	9:00 AM	0	1	0	1	2	0	0	0	1	1	0	1	0	0	1
	9:15 AM	1	1	0	1	3	0	0	0	1	1	1	1	0	0	2
	9:30 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	9:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	4	9	0	7	20	2	3	0	7	12	2	6	0	0	8
	AM BEGIN PEAK HR			8:45 AM			0	0	0	4	4					
MD	10:00 AM	1	1	0	1	3	0	1	0	1	2	1	0	0	0	1
	10:15 AM	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1
	10:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	10:45 AM	0	1	0	2	3	0	0	0	1	1	0	1	0	1	2
	11:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	11:15 AM	2	0	0	1	3	1	0	0	1	2	1	0	0	0	1
	11:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	11:45 AM	0	2	0	1	3	0	1	0	0	1	0	1	0	1	2
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	12:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	13	0	5	22	1	5	0	3	9	3	8	0	2	13
	MD BEGIN PEAK HR			12:00 PM			0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Mar 29, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

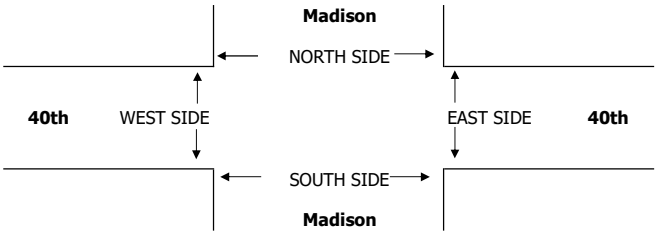
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	0	16	0	12	5	40	0	1	44	12	130	0	0	1	0	1
	1:15 PM	0	0	1	6	0	13	13	47	0	0	53	13	146	0	0	1	0	1
	1:30 PM	0	0	0	10	0	12	8	49	0	0	47	10	136	0	0	0	0	0
	1:45 PM	0	0	0	4	0	6	9	49	0	0	38	12	118	0	0	0	0	0
	2:00 PM	0	0	0	16	0	11	13	41	0	0	45	5	131	0	0	1	0	1
	2:15 PM	0	0	0	14	0	6	11	40	0	0	31	11	113	0	0	0	0	0
	2:30 PM	0	3	1	15	0	11	8	47	4	0	47	8	144	0	0	0	0	0
	2:45 PM	0	0	0	17	0	6	17	61	0	0	42	17	160	0	0	0	0	0
	3:00 PM	0	0	0	15	0	8	11	47	0	0	57	19	157	0	0	0	0	0
	3:15 PM	0	0	0	20	0	5	14	56	0	0	66	34	195	0	0	0	0	0
	3:30 PM	0	0	0	42	0	12	13	122	0	0	54	34	277	0	0	0	0	0
	3:45 PM	0	0	0	89	0	11	12	118	0	0	73	22	325	0	0	0	0	0
	VOLUMES	0	3	2	264	0	113	134	717	4	1	597	197	2,032	0	0	3	0	3
	APPROACH %	0%	60%	40%	70%	0%	30%	16%	84%	0%	0%	75%	25%						
	APP/DEPART	5	/	331	377	/	5	855	/	983	795	/	713	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	166	0	36	50	343	0	0	250	109	954					
	APPROACH %	0%	0%	0%	82%	0%	18%	13%	87%	0%	0%	70%	30%						
	PEAK HR FACTOR		0.000			0.505			0.728			0.898		0.734					
	APP/DEPART	0	/	159	202	/	0	393	/	509	359	/	286	0					
PM	4:00 PM	0	0	0	11	0	8	15	78	0	0	42	18	172	0	0	0	0	0
	4:15 PM	0	0	1	11	0	7	9	57	0	0	40	12	137	0	0	0	0	0
	4:30 PM	0	0	0	17	0	7	10	48	0	0	37	19	138	0	0	0	0	0
	4:45 PM	0	0	1	16	0	6	9	46	0	0	54	11	143	0	0	0	0	0
	5:00 PM	0	0	0	8	0	4	10	48	0	0	35	15	120	0	0	0	0	0
	5:15 PM	0	0	1	11	0	8	8	61	0	1	38	15	143	0	0	0	0	0
	5:30 PM	0	0	0	6	0	5	7	52	0	0	36	15	121	0	0	0	0	0
	5:45 PM	0	1	0	14	0	2	10	61	0	1	35	15	139	0	0	0	0	0
	6:00 PM	0	0	0	7	0	5	8	47	0	0	31	10	108	0	0	0	0	0
	6:15 PM	0	0	0	6	0	5	10	32	0	0	28	13	94	0	0	0	0	0
	6:30 PM	0	0	0	10	0	4	5	28	0	1	20	8	76	0	0	0	1	1
	6:45 PM	0	0	0	12	0	1	3	30	0	0	17	8	71	0	0	0	0	0
	VOLUMES	0	1	3	129	0	62	104	588	0	3	413	159	1,462	0	0	0	1	1
	APPROACH %	0%	25%	75%	68%	0%	32%	15%	85%	0%	1%	72%	28%						
	APP/DEPART	4	/	264	191	/	2	692	/	721	575	/	475	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	2	55	0	28	43	229	0	0	173	60	590					
	APPROACH %	0%	0%	100%	66%	0%	34%	16%	84%	0%	0%	74%	26%						
	PEAK HR FACTOR		0.500			0.865			0.731			0.896		0.858					
	APP/DEPART	2	/	103	83	/	0	272	/	286	233	/	201	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	2	0	0	2	4	2	0	0	2	4	0	0	0	0	0
	2:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	3	3	0	2	8	2	3	0	2	7	1	0	0	0	1
	MD BEGIN PEAK HR	3:00 PM					0	1	0	0	1					
PM	4:00 PM	0	1	0	2	3	0	1	0	2	3	0	0	0	0	0
	4:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	3	0	1	4	0	2	0	1	3	0	1	0	0	1
	5:45 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	TOTAL	1	10	0	4	15	0	6	0	3	9	1	4	0	1	6
	PM BEGIN PEAK HR	4:00 PM					0	2	0	2	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Mar 30, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

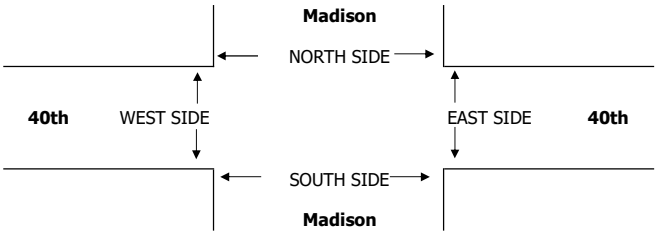
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	10	0	11	5	19	0	0	21	4	70	0	0	0	0	0
	7:15 AM	0	0	0	12	0	11	2	29	0	0	48	4	106	0	0	0	0	0
	7:30 AM	0	0	0	15	0	12	4	31	0	0	56	10	128	0	0	0	0	0
	7:45 AM	0	0	0	10	0	10	2	38	0	0	82	16	158	0	0	0	0	0
	8:00 AM	0	0	0	17	0	9	4	39	0	0	135	68	272	0	0	0	0	0
	8:15 AM	0	0	0	36	0	16	7	79	0	0	124	76	338	0	0	0	0	0
	8:30 AM	0	0	0	36	0	18	11	77	0	0	78	13	233	0	0	0	0	0
	8:45 AM	0	0	1	12	0	7	5	59	0	0	49	17	150	0	0	0	0	0
	9:00 AM	0	0	0	9	0	10	7	29	0	0	38	7	100	0	0	0	0	0
	9:15 AM	0	0	0	10	0	8	9	43	0	0	35	5	110	0	0	0	0	0
	9:30 AM	0	0	0	9	0	17	5	31	0	0	33	9	104	0	0	0	0	0
	9:45 AM	0	0	0	8	0	17	2	35	0	0	41	4	107	0	0	0	0	0
	VOLUMES	0	0	1	184	0	146	63	509	0	0	740	233	1,876	0	0	0	0	0
	APPROACH %	0%	0%	100%	56%	0%	44%	11%	89%	0%	0%	76%	24%						
	APP/DEPART	1	/	296	330	/	0	572	/	694	973	/	886	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	99	0	53	24	233	0	0	419	173	1,001					
	APPROACH %	0%	0%	0%	65%	0%	35%	9%	91%	0%	0%	71%	29%						
	PEAK HR FACTOR		0.000			0.704			0.730			0.729		0.740					
	APP/DEPART	0	/	197	152	/	0	257	/	332	592	/	472	0					
MD	10:00 AM	0	1	0	11	0	15	14	42	0	0	44	6	133	0	0	0	0	0
	10:15 AM	0	0	0	11	0	16	5	34	0	0	36	9	111	0	0	0	0	0
	10:30 AM	0	0	0	15	0	17	7	41	0	0	54	8	142	0	0	0	0	0
	10:45 AM	0	0	0	11	0	15	7	44	0	0	48	7	132	0	0	0	0	0
	11:00 AM	0	0	0	15	0	5	5	43	0	0	51	7	126	0	0	0	0	0
	11:15 AM	0	0	0	7	0	11	13	31	0	0	48	5	115	0	0	0	0	0
	11:30 AM	0	0	0	9	0	8	17	40	0	0	49	11	134	0	0	0	0	0
	11:45 AM	0	0	0	10	0	15	6	37	0	0	46	12	126	0	0	0	0	0
	12:00 PM	0	0	2	11	0	16	12	37	0	0	46	11	135	0	0	0	0	0
	12:15 PM	0	0	0	15	0	12	16	38	0	0	52	10	143	0	0	0	0	0
	12:30 PM	1	0	1	4	0	10	10	51	1	0	46	12	136	0	0	1	0	1
	12:45 PM	0	0	1	7	0	6	5	43	0	1	38	8	109	0	0	0	0	0
	VOLUMES	1	1	4	126	0	146	117	481	1	1	558	106	1,542	0	0	1	0	1
	APPROACH %	17%	17%	67%	46%	0%	54%	20%	80%	0%	0%	84%	16%						
	APP/DEPART	6	/	223	272	/	2	599	/	611	665	/	706	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	1	0	3	40	0	53	44	163	1	0	190	45	540					
	APPROACH %	25%	0%	75%	43%	0%	57%	21%	78%	0%	0%	81%	19%						
	PEAK HR FACTOR		0.500			0.861			0.839			0.948		0.944					
	APP/DEPART	4	/	88	93	/	1	208	/	206	235	/	245	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	7:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	7:30 AM	1	0	0	3	4	1	0	0	3	4	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	9	0	0	10	0	1	0	0	1	1	8	0	0	9
	8:45 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	9:00 AM	1	1	0	2	4	1	1	0	2	4	0	0	0	0	0
	9:15 AM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	9:30 AM	1	2	0	2	5	0	2	0	2	4	1	0	0	0	1
	9:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	TOTAL	5	20	0	9	34	3	8	0	9	20	2	12	0	0	14
	AM BEGIN PEAK HR			7:45 AM			0	1	0	0	1					
MD	10:00 AM	2	4	0	0	6	0	3	0	0	3	2	1	0	0	3
	10:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	10:30 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	10:45 AM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	11:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	11:15 AM	2	1	0	2	5	2	0	0	2	4	0	1	0	0	1
	11:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	11:45 AM	1	5	0	2	8	0	2	0	0	2	1	3	0	2	6
	12:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	12:15 PM	0	2	0	1	3	0	1	0	1	2	0	1	0	0	1
	12:30 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	27	0	6	39	2	11	0	3	16	4	16	0	3	23
	MD BEGIN PEAK HR			11:45 AM			0	3	0	1	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Mar 30, 22

LOCATION: Indio
NORTH & SOUTH: Madison
EAST & WEST: 40th

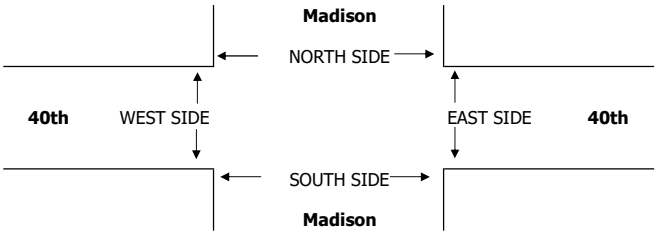
PROJECT #: SC3235
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND 40th			WESTBOUND 40th				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	1:00 PM	0	0	1	12	0	12	9	47	0	0	35	17	133	0	0	0	0	0
	1:15 PM	0	0	0	9	0	19	10	48	0	0	39	8	133	0	0	1	0	1
	1:30 PM	0	0	0	10	0	8	12	31	2	0	35	17	115	0	0	0	0	0
	1:45 PM	1	0	0	12	0	11	11	45	0	0	34	11	125	0	0	0	0	0
	2:00 PM	0	0	0	7	0	9	12	38	0	0	41	15	122	0	0	0	0	0
	2:15 PM	0	0	2	9	0	13	12	39	1	0	33	6	115	0	0	0	0	0
	2:30 PM	0	1	0	12	0	6	16	37	1	0	38	11	122	0	0	0	0	0
	2:45 PM	0	0	1	16	0	4	12	45	1	0	44	20	143	0	0	0	0	0
	3:00 PM	0	0	1	10	0	7	12	49	0	0	62	22	163	0	0	0	0	0
	3:15 PM	0	0	0	17	0	5	5	26	0	0	62	38	153	0	0	0	0	0
	3:30 PM	0	0	0	43	0	18	16	95	0	0	64	32	268	0	0	0	0	0
	3:45 PM	1	0	0	100	0	13	14	139	0	1	47	25	340	0	0	0	0	0
	VOLUMES	2	1	5	257	0	125	141	639	5	1	534	222	1,932	0	0	1	0	1
	APPROACH %	25%	13%	63%	67%	0%	33%	18%	81%	1%	0%	71%	29%						
	APP/DEPART	8	/	363	382	/	6	785	/	901	757	/	662	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	1	0	1	170	0	43	47	309	0	1	235	117	924					
	APPROACH %	50%	0%	50%	80%	0%	20%	13%	87%	0%	0%	67%	33%						
	PEAK HR FACTOR		0.500			0.471			0.582			0.883		0.679					
	APP/DEPART	2	/	164	213	/	1	356	/	480	353	/	279	0					
PM	4:00 PM	0	0	0	16	0	10	15	54	0	0	48	11	154	0	0	0	0	0
	4:15 PM	0	0	0	16	0	13	14	50	0	0	28	9	130	0	0	0	0	0
	4:30 PM	0	1	0	14	0	9	6	57	0	1	26	7	121	0	0	0	0	0
	4:45 PM	0	0	1	11	0	3	7	37	0	0	42	6	107	0	0	0	0	0
	5:00 PM	0	0	0	15	0	7	15	45	0	0	27	20	129	0	0	0	0	0
	5:15 PM	0	0	0	14	0	8	12	43	0	0	31	21	129	0	0	0	0	0
	5:30 PM	0	0	0	6	0	7	10	49	0	0	30	13	115	0	0	0	0	0
	5:45 PM	0	0	0	10	0	6	9	40	0	0	29	15	109	0	0	0	0	0
	6:00 PM	0	0	0	7	0	1	11	37	0	0	29	9	94	0	0	0	0	0
	6:15 PM	0	0	0	7	0	3	5	17	0	0	32	15	79	0	0	0	0	0
	6:30 PM	0	0	0	11	0	2	3	35	0	0	33	11	95	0	0	0	0	0
	6:45 PM	0	0	0	9	0	1	5	30	0	0	16	13	74	0	0	0	0	0
	VOLUMES	0	1	1	136	0	70	112	494	0	1	371	150	1,336	0	0	0	0	0
	APPROACH %	0%	50%	50%	66%	0%	34%	18%	82%	0%	0%	71%	29%						
	APP/DEPART	2	/	263	206	/	1	606	/	631	522	/	441	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	1	1	57	0	35	42	198	0	1	144	33	512					
	APPROACH %	0%	50%	50%	62%	0%	38%	18%	83%	0%	1%	81%	19%						
	PEAK HR FACTOR		0.500			0.793			0.870			0.754		0.831					
	APP/DEPART	2	/	76	92	/	1	240	/	256	178	/	179	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	1	1	0	1	3	1	1	0	1	3	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	2	0	2	4	0	1	0	1	2	0	1	0	1	2
	2:00 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	2:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	2:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	2	1	1	4	0	1	1	0	2	0	1	0	1	2
	3:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	TOTAL	2	9	1	6	18	1	5	1	4	11	1	4	0	2	7
	MD BEGIN PEAK HR	3:00 PM					0	2	1	1	4					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	3	0	0	2	5	2	0	0	1	3	1	0	0	1	2
	4:30 PM	0	3	3	0	6	0	0	0	0	0	0	3	3	0	6
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	6:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	6	4	3	17	2	0	0	1	3	2	6	4	2	14
	PM BEGIN PEAK HR	4:00 PM					2	0	0	1	3					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Varner

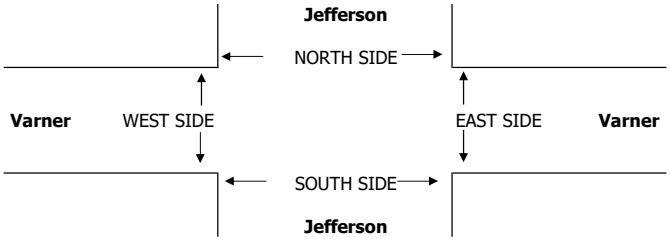
PROJECT #: SC3235
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Varner			WESTBOUND Varner				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 2	ER 2	WL 2	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	54	57	3	6	87	20	11	14	23	6	21	9	311	1	0	0	0	1
	7:15 AM	75	63	10	5	132	19	4	23	25	14	43	5	418	0	0	0	0	0
	7:30 AM	85	81	20	7	137	23	11	16	35	28	33	11	487	0	0	0	0	0
	7:45 AM	135	125	14	7	181	24	10	20	39	13	37	20	625	0	0	0	0	0
	8:00 AM	106	251	12	24	158	28	12	14	35	27	39	37	743	0	0	0	0	0
	8:15 AM	133	154	15	34	174	30	29	23	37	14	31	23	697	1	0	0	0	1
	8:30 AM	59	99	17	16	231	35	12	16	55	17	16	12	585	1	0	0	0	1
	8:45 AM	88	107	12	20	201	25	13	15	39	18	29	8	575	0	0	0	0	0
	VOLUMES	735	937	103	119	1,301	204	102	141	288	137	249	125	4,441	3	0	0	0	3
	APPROACH %	41%	53%	6%	7%	80%	13%	19%	27%	54%	27%	49%	24%						
	APP/DEPART	1,775	/	1,164	1,624	/	1,729	531	/	363	511	/	1,185	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	433	629	58	81	744	117	63	73	166	71	123	92	2,650					
	APPROACH %	39%	56%	5%	9%	79%	12%	21%	24%	55%	25%	43%	32%						
	PEAK HR FACTOR		0.759			0.835			0.848			0.694		0.892					
	APP/DEPART	1,120	/	784	942	/	983	302	/	212	286	/	671	0					
PM	4:00 PM	46	163	30	34	188	28	32	46	90	7	13	9	686	0	0	0	0	0
	4:15 PM	73	148	41	13	153	21	18	42	69	14	23	18	633	0	0	0	0	0
	4:30 PM	49	138	19	7	116	20	36	23	89	12	21	9	539	0	0	0	0	0
	4:45 PM	35	109	18	6	123	14	17	29	60	7	19	24	461	0	0	0	0	0
	5:00 PM	47	167	31	7	97	18	21	26	86	7	13	12	532	1	0	0	0	1
	5:15 PM	38	169	29	11	95	15	21	37	73	11	19	10	528	0	0	0	0	0
	5:30 PM	41	161	33	14	96	20	18	44	66	8	11	12	524	0	0	0	0	0
	5:45 PM	28	146	25	12	105	13	23	18	44	12	18	11	455	0	0	0	0	0
	VOLUMES	357	1,201	226	104	973	149	186	265	577	78	137	105	4,358	1	0	0	0	1
	APPROACH %	20%	67%	13%	8%	79%	12%	18%	26%	56%	24%	43%	33%						
	APP/DEPART	1,784	/	1,492	1,226	/	1,629	1,028	/	595	320	/	642	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	203	558	108	60	580	83	103	140	308	40	76	60	2,319					
	APPROACH %	23%	64%	12%	8%	80%	11%	19%	25%	56%	23%	43%	34%						
	PEAK HR FACTOR		0.829			0.723			0.820			0.800		0.845					
	APP/DEPART	869	/	721	723	/	928	551	/	308	176	/	362	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	AM BEGIN PEAK HR			7:45 AM			0	0	1	0	1					
PM	4:00 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	PM BEGIN PEAK HR			4:00 PM			1	0	1	0	2					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: I-10 WB Ramps

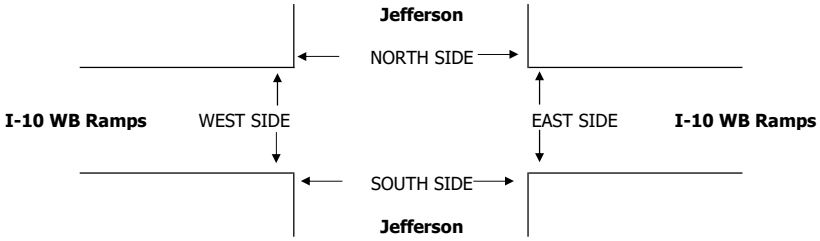
PROJECT #: SC3235
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
	LANES:	NL X	NT 3	NR 1	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 1.5	WT 0	WR 1.5	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	88	197	0	87	30	0	0	0	28	0	26	456	0	0	0	0	0
	7:15 AM	0	119	222	0	136	33	0	0	0	61	1	29	601	0	0	0	0	0
	7:30 AM	0	166	294	0	150	50	0	0	0	93	0	20	773	0	0	0	0	0
	7:45 AM	0	230	220	0	206	27	0	0	0	102	0	44	829	0	0	0	0	0
	8:00 AM	0	343	194	0	184	36	0	0	0	73	1	26	857	0	0	0	0	0
	8:15 AM	0	258	209	0	198	28	0	0	0	61	1	44	799	0	0	0	0	0
	8:30 AM	0	138	183	0	282	22	0	0	0	30	0	37	692	0	0	0	0	0
	8:45 AM	0	165	161	0	225	33	0	0	0	39	0	46	669	0	0	0	0	0
	VOLUMES	0	1,507	1,680	0	1,468	259	0	0	0	487	3	272	5,676	0	0	0	0	0
	APPROACH %	0%	47%	53%	0%	85%	15%	0%	0%	0%	64%	0%	36%						
	APP/DEPART	3,187	/	1,779	1,727	/	1,955	0	/	1,680	762	/	262	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	997	917	0	738	141	0	0	0	329	2	134	3,258					
	APPROACH %	0%	52%	48%	0%	84%	16%	0%	0%	0%	71%	0%	29%						
	PEAK HR FACTOR		0.891			0.943			0.000			0.796		0.950					
	APP/DEPART	1,914	/	1,131	879	/	1,067	0	/	917	465	/	143	0					
PM	4:00 PM	0	210	189	0	248	37	0	0	0	58	0	32	774	0	0	0	0	0
	4:15 PM	0	236	189	0	221	15	0	0	0	74	0	26	761	0	0	0	0	0
	4:30 PM	0	180	176	0	200	17	0	0	0	48	0	26	647	0	0	0	0	0
	4:45 PM	0	145	170	0	165	25	0	0	0	36	0	17	558	0	0	0	0	0
	5:00 PM	0	226	184	0	165	26	0	0	0	57	0	19	677	0	0	0	0	0
	5:15 PM	0	217	185	0	159	17	0	0	0	59	0	19	656	0	0	0	0	0
	5:30 PM	0	208	144	0	158	12	0	0	0	61	0	27	610	0	0	0	0	0
	5:45 PM	0	180	150	0	147	14	0	0	0	43	0	19	553	0	0	0	0	0
	VOLUMES	0	1,602	1,387	0	1,463	163	0	0	0	436	0	185	5,236	0	0	0	0	0
	APPROACH %	0%	54%	46%	0%	90%	10%	0%	0%	0%	70%	0%	30%						
	APP/DEPART	2,989	/	1,787	1,626	/	1,899	0	/	1,387	621	/	163	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	771	724	0	834	94	0	0	0	216	0	101	2,740					
	APPROACH %	0%	52%	48%	0%	90%	10%	0%	0%	0%	68%	0%	32%						
	PEAK HR FACTOR		0.879			0.814			0.000			0.793		0.885					
	APP/DEPART	1,495	/	872	928	/	1,050	0	/	724	317	/	94	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:30 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	PM BEGIN PEAK HR			4:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: I-10 EB Ramps

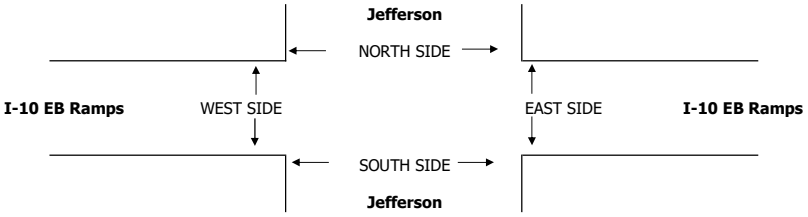
PROJECT #: SC3235
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL 2	NT 3	NR X	SL X	ST 3	SR 1	EL 2	ET X	ER 2	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	13	269	0	0	97	18	16	0	160	0	0	0	573	0	0	0	0	0
	7:15 AM	20	323	0	0	180	17	18	0	132	0	0	0	690	0	0	0	0	0
	7:30 AM	24	451	0	0	214	29	9	0	169	0	0	0	896	0	0	0	0	0
	7:45 AM	27	442	0	0	273	35	9	0	211	0	0	0	997	0	0	0	0	0
	8:00 AM	25	517	0	0	237	17	20	0	199	0	0	0	1,015	0	0	0	0	0
	8:15 AM	25	438	0	0	230	29	29	0	136	0	0	0	887	0	0	0	0	0
	8:30 AM	24	296	0	0	269	43	25	0	134	0	0	0	791	0	0	0	0	0
	8:45 AM	19	304	0	0	235	29	22	0	140	0	0	0	749	0	0	0	0	0
	VOLUMES	177	3,040	0	0	1,735	217	148	0	1,281	0	0	0	6,598	0	0	0	0	0
	APPROACH %	6%	94%	0%	0%	89%	11%	10%	0%	90%	0%	0%	0%						
	APP/DEPART	3,217	/	3,188	1,952	/	3,016	1,429	/	0	0	/	394	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	101	1,848	0	0	954	110	67	0	715	0	0	0	3,795					
	APPROACH %	5%	95%	0%	0%	90%	10%	9%	0%	91%	0%	0%	0%						
	PEAK HR FACTOR		0.899			0.864			0.889			0.000		0.935					
	APP/DEPART	1,949	/	1,915	1,064	/	1,669	782	/	0	0	/	211	0					
PM	4:00 PM	43	375	0	0	269	37	27	0	220	0	0	0	971	0	0	0	0	0
	4:15 PM	26	379	0	0	261	34	46	0	206	0	0	0	952	0	0	0	0	0
	4:30 PM	23	324	0	0	219	29	32	0	226	0	0	0	853	0	0	0	0	0
	4:45 PM	30	295	0	0	175	21	20	0	242	0	0	0	783	0	0	0	0	0
	5:00 PM	30	354	0	0	193	29	56	0	215	0	0	0	877	0	0	0	0	0
	5:15 PM	29	361	0	0	190	28	41	0	253	0	0	0	902	0	0	0	0	0
	5:30 PM	23	310	0	0	195	24	42	0	214	0	0	0	808	0	0	0	0	0
	5:45 PM	31	300	0	0	165	25	30	0	191	0	0	0	742	0	0	0	0	0
	VOLUMES	235	2,698	0	0	1,667	227	294	0	1,767	0	0	0	6,888	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	88%	12%	14%	0%	86%	0%	0%	0%						
	APP/DEPART	2,933	/	2,992	1,894	/	3,434	2,061	/	0	0	/	462	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	122	1,373	0	0	924	121	125	0	894	0	0	0	3,559					
	APPROACH %	8%	92%	0%	0%	88%	12%	12%	0%	88%	0%	0%	0%						
	PEAK HR FACTOR		0.894			0.854			0.972			0.000		0.916					
	APP/DEPART	1,495	/	1,498	1,045	/	1,818	1,019	/	0	0	/	243	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Indio
EAST & WEST: Jefferson

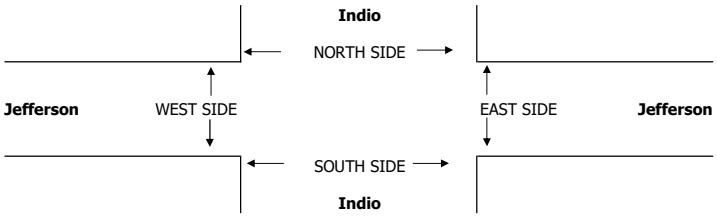
PROJECT #: SC3235
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND (Indio)			SOUTHBOUND (Indio)			EASTBOUND (Jefferson)			WESTBOUND (Jefferson)				U-TURNS				
	LANES:	NL 2	NT 2	NR X	SL X	ST 2	SR 1	EL 2	ET X	ER 2	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	104	123	0	0	68	190	158	0	45	0	0	0	688	0	0	0	0	0
	7:15 AM	104	154	0	0	89	227	203	0	45	0	0	0	822	0	0	0	0	0
	7:30 AM	113	197	0	0	90	282	275	0	56	0	0	0	1,013	0	0	0	0	0
	7:45 AM	136	188	0	0	132	338	285	0	62	0	0	0	1,141	0	0	0	0	0
	8:00 AM	98	236	0	0	126	328	308	0	59	0	0	0	1,155	0	0	0	0	0
	8:15 AM	92	199	0	0	129	240	265	0	40	0	0	0	965	0	0	0	0	0
	8:30 AM	80	121	0	0	130	266	194	0	30	0	0	0	821	0	1	0	0	1
	8:45 AM	91	113	0	0	118	256	204	0	52	0	0	0	834	0	0	0	0	0
	VOLUMES	818	1,331	0	0	882	2,127	1,892	0	389	0	0	0	7,440	0	1	0	0	1
	APPROACH %	38%	62%	0%	0%	29%	71%	83%	0%	17%	0%	0%	0%						
	APP/DEPART	2,149	/	3,224	3,010	/	1,271	2,281	/	0	0	/	2,945	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	439	820	0	0	477	1,188	1,133	0	217	0	0	0	4,274					
	APPROACH %	35%	65%	0%	0%	29%	71%	84%	0%	16%	0%	0%	0%						
	PEAK HR FACTOR		0.942			0.886			0.920			0.000		0.925					
	APP/DEPART	1,259	/	1,953	1,665	/	694	1,350	/	0	0	/	1,627	0					
PM	4:00 PM	53	131	0	0	189	283	282	0	86	0	0	0	1,024	0	0	0	0	0
	4:15 PM	47	115	0	0	190	293	276	0	86	0	0	0	1,007	1	0	0	0	1
	4:30 PM	76	134	0	0	171	265	226	0	73	0	0	0	945	0	0	0	0	0
	4:45 PM	57	116	0	0	178	244	217	0	66	0	0	0	878	0	0	0	0	0
	5:00 PM	69	142	0	0	166	252	268	0	75	0	0	0	972	0	0	0	0	0
	5:15 PM	71	133	0	0	173	262	245	0	97	0	0	0	981	0	0	0	0	0
	5:30 PM	53	104	0	0	146	259	210	0	77	0	0	0	849	0	0	0	0	0
	5:45 PM	59	110	0	0	137	216	229	0	53	0	0	0	804	0	0	0	0	0
	VOLUMES	485	985	0	0	1,350	2,074	1,953	0	613	0	0	0	7,461	1	0	0	0	1
	APPROACH %	33%	67%	0%	0%	39%	61%	76%	0%	24%	0%	0%	0%						
	APP/DEPART	1,471	/	2,938	3,424	/	1,964	2,566	/	0	0	/	2,559	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	233	496	0	0	728	1,085	1,001	0	311	0	0	0	3,855					
	APPROACH %	32%	68%	0%	0%	40%	60%	76%	0%	24%	0%	0%	0%						
	PEAK HR FACTOR		0.869			0.938			0.891			0.000		0.941					
	APP/DEPART	730	/	1,497	1,813	/	1,040	1,312	/	0	0	/	1,318	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Ave 42

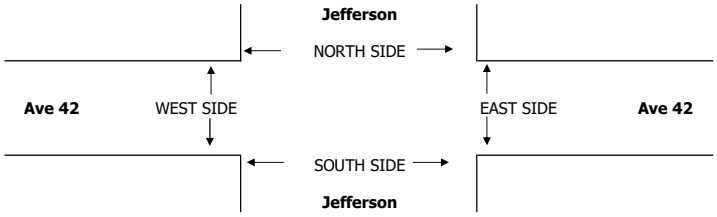
PROJECT #: SC3235
LOCATION #: 11
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Ave 42			WESTBOUND Ave 42				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 2	ER 1	WL 2	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	84	158	0	9	190	114	46	41	50	13	23	8	736	0	1	0	2	3
	7:15 AM	103	222	3	8	215	105	49	32	70	7	58	4	876	0	0	0	0	0
	7:30 AM	162	248	2	9	274	128	79	55	104	11	49	8	1,129	0	1	0	1	2
	7:45 AM	167	250	7	7	327	142	80	53	144	8	51	7	1,243	0	0	0	0	0
	8:00 AM	121	309	6	12	266	113	57	45	129	12	24	7	1,101	0	0	0	0	0
	8:15 AM	113	223	2	18	228	99	50	19	84	13	27	4	880	0	1	0	0	1
	8:30 AM	82	194	5	10	239	83	42	24	90	11	18	7	805	0	2	0	1	3
	8:45 AM	96	195	1	5	239	99	53	23	84	10	25	5	835	0	0	0	1	1
	VOLUMES	928	1,799	26	78	1,978	883	456	292	755	85	275	50	7,605	0	5	0	5	10
	APPROACH %	34%	65%	1%	3%	67%	30%	30%	19%	50%	21%	67%	12%						
	APP/DEPART	2,753	/	2,310	2,939	/	2,813	1,503	/	396	410	/	2,086	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	563	1,030	17	46	1,095	482	266	172	461	44	151	26	4,353					
	APPROACH %	35%	64%	1%	3%	67%	30%	30%	19%	51%	20%	68%	12%						
	PEAK HR FACTOR		0.923			0.852			0.811			0.813		0.876					
	APP/DEPART	1,610	/	1,324	1,623	/	1,599	899	/	234	221	/	1,196	0					
PM	4:00 PM	73	241	3	13	257	68	104	77	124	8	17	6	991	0	3	0	0	3
	4:15 PM	90	257	3	12	263	57	97	71	129	9	14	7	1,009	0	1	0	0	1
	4:30 PM	74	202	4	8	256	84	94	65	135	9	15	5	951	0	1	0	0	1
	4:45 PM	78	209	2	14	222	63	80	69	118	21	17	5	898	0	0	0	0	0
	5:00 PM	75	253	8	10	226	75	90	66	114	12	18	3	950	0	5	0	0	5
	5:15 PM	79	215	6	12	247	73	108	66	144	14	15	10	989	0	2	0	1	3
	5:30 PM	77	199	0	12	229	67	80	55	108	12	9	2	850	0	0	0	1	1
	5:45 PM	55	220	6	8	217	62	58	44	87	7	12	9	785	1	1	0	0	2
	VOLUMES	601	1,796	32	89	1,917	549	711	513	959	92	117	47	7,423	1	13	0	2	16
	APPROACH %	25%	74%	1%	3%	75%	21%	33%	23%	44%	36%	46%	18%						
	APP/DEPART	2,429	/	2,567	2,555	/	2,967	2,183	/	623	256	/	1,266	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	315	909	12	47	998	272	375	282	506	47	63	23	3,849					
	APPROACH %	25%	74%	1%	4%	76%	21%	32%	24%	44%	35%	47%	17%						
	PEAK HR FACTOR		0.883			0.946			0.953			0.773		0.954					
	APP/DEPART	1,236	/	1,312	1,317	/	1,551	1,163	/	336	133	/	650	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	1	1	0	3	0	1	0	0	1	1	0	1	0	2
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	1	0	4	0	1	0	0	1	1	1	1	0	3
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Jefferson
EAST & WEST: Fred Waring

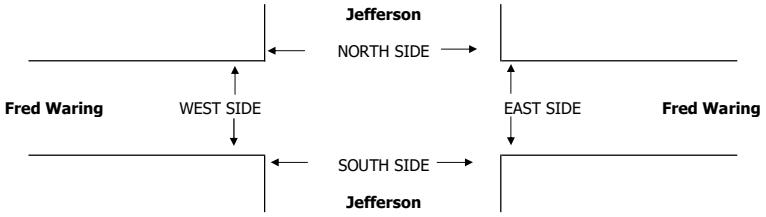
PROJECT #: SC3235
LOCATION #: 12
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Jefferson			SOUTHBOUND Jefferson			EASTBOUND Fred Waring			WESTBOUND Fred Waring				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 3	ER 1	WL 2	WT 3	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	39	171	21	8	183	29	46	51	17	21	119	21	726	2	0	2	0	4
	7:15 AM	60	202	26	10	202	68	53	73	29	39	198	21	981	3	0	7	0	10
	7:30 AM	56	298	20	14	240	95	65	85	25	41	250	25	1,214	0	0	7	0	7
	7:45 AM	72	321	45	15	321	106	69	114	38	61	242	28	1,432	3	0	11	1	15
	8:00 AM	84	318	41	23	317	110	87	91	23	72	209	20	1,395	2	0	9	0	11
	8:15 AM	68	231	41	24	274	61	81	132	52	62	191	36	1,253	5	0	8	0	13
	8:30 AM	48	202	26	13	220	81	50	102	54	51	171	17	1,035	2	0	3	1	6
	8:45 AM	52	206	27	15	256	79	58	68	39	63	166	23	1,052	5	0	7	0	12
	VOLUMES	479	1,949	247	122	2,013	629	509	716	277	410	1,546	191	9,088	22	0	54	2	78
	APPROACH %	18%	73%	9%	4%	73%	23%	34%	48%	18%	19%	72%	9%						
	APP/DEPART	2,675	/	2,595	2,764	/	2,720	1,502	/	1,087	2,147	/	2,686	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	280	1,168	147	76	1,152	372	302	422	138	236	892	109	5,294					
	APPROACH %	18%	73%	9%	5%	72%	23%	35%	49%	16%	19%	72%	9%						
	PEAK HR FACTOR		0.900			0.889			0.813			0.934		0.924					
	APP/DEPART	1,595	/	1,544	1,600	/	1,535	862	/	646	1,237	/	1,569	0					
PM	4:00 PM	58	215	45	35	306	59	64	158	46	47	110	17	1,160	11	0	5	0	16
	4:15 PM	52	247	44	23	299	83	60	158	49	44	114	24	1,197	6	0	2	1	9
	4:30 PM	70	205	42	39	275	54	59	165	45	47	122	23	1,146	6	0	5	1	12
	4:45 PM	51	211	47	31	288	45	53	157	49	51	96	21	1,100	9	0	7	1	17
	5:00 PM	54	268	48	24	290	50	65	146	65	48	107	16	1,181	10	0	3	0	13
	5:15 PM	59	207	62	24	283	55	76	240	64	67	119	28	1,284	12	0	8	0	20
	5:30 PM	71	207	42	21	272	62	56	187	58	38	113	21	1,148	16	0	4	0	20
	5:45 PM	47	206	31	30	218	59	52	170	50	48	113	22	1,046	3	0	2	0	5
	VOLUMES	462	1,766	361	227	2,231	467	485	1,381	426	390	894	172	9,262	73	0	36	3	112
	APPROACH %	18%	68%	14%	8%	76%	16%	21%	60%	19%	27%	61%	12%						
	APP/DEPART	2,589	/	2,387	2,925	/	3,117	2,292	/	1,972	1,456	/	1,786	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	235	893	199	100	1,133	212	250	730	236	204	435	86	4,713					
	APPROACH %	18%	67%	15%	7%	78%	15%	21%	60%	19%	28%	60%	12%						
	PEAK HR FACTOR		0.897			0.992			0.800			0.847		0.918					
	APP/DEPART	1,327	/	1,207	1,445	/	1,619	1,216	/	1,030	725	/	857	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:15 AM	2	0	2	0	4	0	0	0	0	0	2	0	2	0	4
	7:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:45 AM	2	0	0	1	3	2	0	0	0	2	0	0	0	1	1
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	2	0	2	0	4	2	0	2	0	4	0	0	0	0	0
	8:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	8	1	5	1	15	4	0	2	0	6	4	1	3	1	9
	AM BEGIN PEAK HR			7:30 AM			4	0	2	0	6					
PM	4:00 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	4:15 PM	2	3	3	1	9	1	1	2	0	4	1	2	1	1	5
	4:30 PM	1	2	0	0	3	1	1	0	0	2	0	1	0	0	1
	4:45 PM	0	0	1	2	3	0	0	1	0	1	0	0	0	2	2
	5:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	8	4	6	21	2	3	3	1	9	1	5	1	5	12
	PM BEGIN PEAK HR			4:45 PM			0	0	1	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Monroe
EAST & WEST: Ave 41

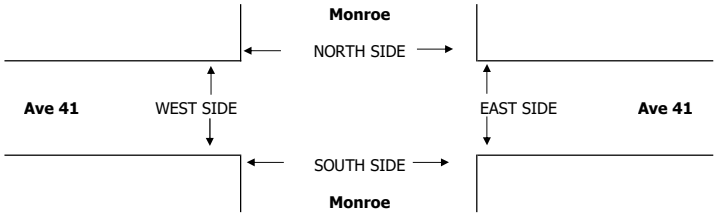
PROJECT #: SC3235
LOCATION #: 13
CONTROL: STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Monroe			SOUTHBOUND Monroe			EASTBOUND Ave 41			WESTBOUND Ave 41				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	31	6	7	26	0	0	0	0	27	0	16	113	0	0	0	0	0
	7:15 AM	0	37	6	8	39	0	0	0	0	37	0	23	150	0	0	0	0	0
	7:30 AM	0	31	6	9	49	0	0	0	0	52	0	23	170	0	0	0	0	0
	7:45 AM	0	60	14	16	57	0	0	0	0	40	0	57	244	0	0	0	0	0
	8:00 AM	0	102	12	30	56	0	0	0	0	31	0	119	350	0	0	0	0	0
	8:15 AM	0	74	14	41	86	0	0	0	0	19	0	64	298	0	0	0	0	0
	8:30 AM	0	55	10	45	102	0	0	0	0	21	0	34	267	0	0	0	0	0
	8:45 AM	0	45	12	27	65	0	0	0	0	20	0	14	183	0	0	0	0	0
	VOLUMES	0	435	80	183	480	0	0	0	0	247	0	350	1,775	0	0	0	0	0
	APPROACH %	0%	84%	16%	28%	72%	0%	0%	0%	0%	41%	0%	59%						
	APP/DEPART	515	/	785	663	/	727	0	/	263	597	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	291	50	132	301	0	0	0	0	111	0	274	1,159					
	APPROACH %	0%	85%	15%	30%	70%	0%	0%	0%	0%	29%	0%	71%						
	PEAK HR FACTOR		0.748			0.736			0.000			0.642		0.828					
	APP/DEPART	341	/	565	433	/	412	0	/	182	385	/	0	0					
PM	4:00 PM	0	49	23	32	85	0	0	0	0	10	0	24	223	0	0	0	0	0
	4:15 PM	0	36	35	26	52	0	0	0	0	7	0	18	174	0	0	0	0	0
	4:30 PM	0	38	31	23	56	0	0	0	0	14	0	22	184	0	0	0	0	0
	4:45 PM	0	34	29	16	60	0	0	0	0	17	0	19	175	0	0	0	0	0
	5:00 PM	0	44	30	22	42	0	0	0	0	14	0	17	169	0	0	0	0	0
	5:15 PM	0	38	33	20	38	0	0	0	0	11	0	18	158	0	0	0	0	0
	5:30 PM	0	41	26	18	49	0	0	0	0	14	0	16	164	0	0	0	0	0
	5:45 PM	0	37	36	14	41	0	0	0	0	17	0	21	166	1	0	0	0	1
	VOLUMES	0	317	243	171	423	0	0	0	0	104	0	155	1,414	1	0	0	0	1
	APPROACH %	0%	57%	43%	29%	71%	0%	0%	0%	0%	40%	0%	60%						
	APP/DEPART	561	/	472	594	/	528	0	/	414	259	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	157	118	97	253	0	0	0	0	48	0	83	756					
	APPROACH %	0%	57%	43%	28%	72%	0%	0%	0%	0%	37%	0%	63%						
	PEAK HR FACTOR		0.955			0.748			0.000			0.910		0.848					
	APP/DEPART	275	/	240	350	/	301	0	/	215	131	/	0	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	2	1	4	0	0	2	0	2	0	1	0	1	2
	8:30 AM	1	1	0	1	3	1	0	0	0	1	0	1	0	1	2
	8:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	1	2	5	2	10	1	0	5	0	6	0	2	0	2	4
	AM BEGIN PEAK HR			7:45 AM			1	0	2	0	3					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	PM BEGIN PEAK HR			4:00 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Monroe
EAST & WEST: Ave 42

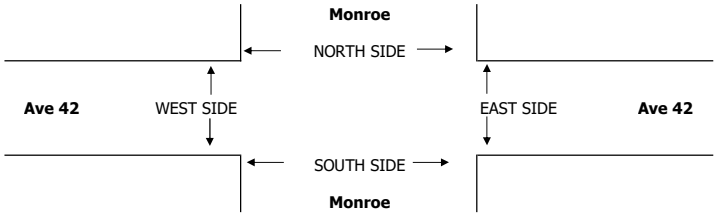
PROJECT #: SC3235
LOCATION #: 14
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Monroe			SOUTHBOUND Monroe			EASTBOUND Ave 42			WESTBOUND Ave 42				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 0.5	ST 1	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	11	40	10	15	65	6	0	12	4	60	23	4	250	0	0	0	0	0
	7:15 AM	11	38	27	19	72	15	4	27	1	77	32	6	329	2	0	0	0	2
	7:30 AM	25	31	34	27	103	13	2	19	9	78	41	7	389	3	0	0	0	3
	7:45 AM	20	53	43	25	86	13	4	31	8	87	42	15	427	0	0	0	0	0
	8:00 AM	25	81	43	23	80	17	6	38	8	82	45	29	477	0	0	0	2	2
	8:15 AM	23	71	38	39	89	6	2	52	10	68	44	19	461	2	0	0	0	2
	8:30 AM	11	40	36	55	62	2	9	42	9	55	22	21	364	3	0	0	0	3
	8:45 AM	24	41	27	45	67	13	0	30	12	41	22	16	338	1	0	0	1	2
	VOLUMES	150	395	258	248	624	85	27	251	61	548	271	117	3,035	11	0	0	3	14
	APPROACH %	19%	49%	32%	26%	65%	9%	8%	74%	18%	59%	29%	13%						
	APP/DEPART	803	/	539	957	/	1,241	339	/	760	936	/	495	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	93	236	158	114	358	49	14	140	35	315	172	70	1,754					
	APPROACH %	19%	48%	32%	22%	69%	9%	7%	74%	19%	57%	31%	13%						
	PEAK HR FACTOR		0.817			0.911			0.738			0.893		0.919					
	APP/DEPART	487	/	320	521	/	711	189	/	414	557	/	309	0					
PM	4:00 PM	9	76	57	57	62	2	17	67	20	43	16	14	440	1	0	0	1	2
	4:15 PM	11	58	60	36	52	7	12	76	14	26	41	20	413	1	0	0	0	1
	4:30 PM	14	66	60	40	41	10	11	52	10	49	19	18	390	0	0	0	2	2
	4:45 PM	16	61	49	25	57	4	13	28	5	33	28	9	328	1	0	0	0	1
	5:00 PM	4	66	57	21	57	6	14	49	10	45	22	23	374	2	0	0	0	2
	5:15 PM	10	68	67	17	39	2	11	66	6	40	23	18	367	0	0	0	0	0
	5:30 PM	8	76	64	20	49	4	14	60	12	50	21	20	398	1	0	0	1	2
	5:45 PM	6	73	69	27	37	4	13	48	14	32	27	21	371	0	0	0	0	0
	VOLUMES	78	544	483	243	394	39	105	446	91	318	197	143	3,081	6	0	0	4	10
	APPROACH %	7%	49%	44%	36%	58%	6%	16%	69%	14%	48%	30%	22%						
	APP/DEPART	1,105	/	792	676	/	805	642	/	1,176	658	/	308	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	50	261	226	158	212	23	53	223	49	151	104	61	1,571					
	APPROACH %	9%	49%	42%	40%	54%	6%	16%	69%	15%	48%	33%	19%						
	PEAK HR FACTOR		0.945			0.812			0.781			0.908		0.893					
	APP/DEPART	537	/	375	393	/	412	325	/	610	316	/	174	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	1	0	0	1					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Feb 8, 22

LOCATION: Indio
NORTH & SOUTH: Monroe
EAST & WEST: Buena Vista

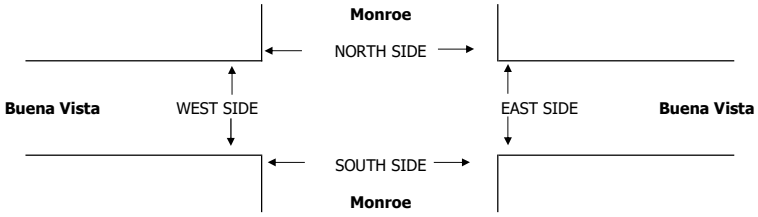
PROJECT #: SC3235
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Monroe			SOUTHBOUND Monroe			EASTBOUND Buena Vista			WESTBOUND Buena Vista				U-TURNS				
	LANES:	NL X	NT 2	NR 1	SL 2	ST 2	SR X	EL X	ET X	ER X	WL 2	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	77	43	0	123	0	0	0	0	56	0	3	302	0	0	0	0	0
	7:15 AM	0	84	30	1	150	0	0	0	0	69	0	2	336	0	0	0	0	0
	7:30 AM	0	91	32	0	187	0	0	0	0	52	0	5	367	1	0	0	0	1
	7:45 AM	0	111	42	1	184	0	0	0	0	61	0	7	406	0	1	0	0	1
	8:00 AM	0	150	39	2	165	0	0	0	0	52	0	4	412	0	0	0	0	0
	8:15 AM	0	127	52	3	165	0	0	0	0	54	0	6	407	0	2	0	0	2
	8:30 AM	0	88	51	0	128	0	0	0	0	56	0	6	329	0	1	0	0	1
	8:45 AM	0	89	67	3	121	0	0	0	0	57	0	7	344	0	0	0	0	0
	VOLUMES	0	817	356	10	1,223	0	0	0	0	457	0	40	2,908	1	4	0	0	5
	APPROACH %	0%	70%	30%	1%	99%	0%	0%	0%	0%	92%	0%	8%						
	APP/DEPART	1,174	/	861	1,237	/	1,681	0	/	366	497	/	0	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	479	165	6	701	0	0	0	0	219	0	22	1,596					
	APPROACH %	0%	74%	26%	1%	99%	0%	0%	0%	0%	91%	0%	9%						
	PEAK HR FACTOR		0.853			0.949			0.000			0.886		0.968					
	APP/DEPART	645	/	504	710	/	921	0	/	171	241	/	0	0					
PM	4:00 PM	0	129	71	1	120	0	0	0	0	87	0	10	418	0	0	0	0	0
	4:15 PM	0	132	83	0	81	0	0	0	0	79	0	5	380	0	0	0	1	1
	4:30 PM	0	127	73	0	99	0	0	0	0	71	0	9	379	0	1	0	0	1
	4:45 PM	0	126	68	0	99	0	0	0	0	73	0	7	373	0	1	0	0	1
	5:00 PM	0	139	59	2	108	0	0	0	0	78	0	7	393	0	0	0	0	0
	5:15 PM	0	154	78	1	84	0	0	0	0	72	0	5	394	0	2	0	0	2
	5:30 PM	0	147	67	0	118	0	0	0	0	77	0	5	414	0	1	0	0	1
	5:45 PM	0	147	69	1	79	0	0	0	0	74	0	7	377	0	0	0	0	0
	VOLUMES	0	1,101	568	5	788	0	0	0	0	611	0	55	3,134	0	5	0	1	6
	APPROACH %	0%	66%	34%	1%	99%	0%	0%	0%	0%	92%	0%	8%						
	APP/DEPART	1,669	/	1,161	798	/	1,399	0	/	574	667	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	587	273	4	389	0	0	0	0	301	0	24	1,581					
	APPROACH %	0%	68%	32%	1%	98%	0%	0%	0%	0%	93%	0%	7%						
	PEAK HR FACTOR		0.927			0.832			0.000			0.956		0.952					
	APP/DEPART	860	/	614	396	/	690	0	/	277	325	/	0	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	AM BEGIN PEAK HR			7:30 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	3	0	2	0	5	2	0	2	0	4	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	2	0	0	1	3	1	0	0	0	1	1	0	0	1	2
	TOTAL	6	0	2	1	9	4	0	2	0	6	2	0	0	1	3
	PM BEGIN PEAK HR			5:00 PM			3	0	2	0	5					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Indio	PROJECT #:	SC3235
Tue, Feb 8, 22	NORTH & SOUTH:	Monroe	LOCATION #:	16
	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

NOTES:

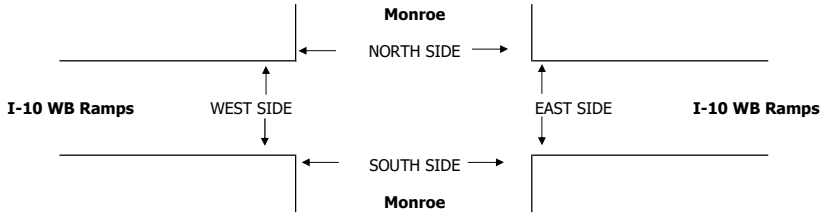
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Monroe			SOUTHBOUND Monroe			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps			
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 1	EL X	ET X	ER X	WL 0.5	WT 0.5	WR 1	TOTAL
AM	7:00 AM	107	106	0	0	95	84	0	0	0	28	0	15	435
	7:15 AM	97	84	0	0	118	100	0	0	0	27	1	31	458
	7:30 AM	115	110	0	0	123	116	0	0	0	33	0	15	512
	7:45 AM	101	126	0	0	139	106	0	0	0	29	0	27	528
	8:00 AM	78	162	0	0	131	85	0	0	0	26	0	27	509
	8:15 AM	97	156	0	0	144	74	0	0	0	26	0	24	521
	8:30 AM	89	124	0	0	127	57	0	0	0	27	0	15	439
	8:45 AM	51	138	0	0	116	62	0	0	0	27	0	19	413
	VOLUMES	735	1,006	0	0	993	684	0	0	0	223	1	173	3,815
	APPROACH %	42%	58%	0%	0%	59%	41%	0%	0%	0%	56%	0%	44%	
	APP/DEPART	1,741	/	1,179	1,677	/	1,216	0	/	0	397	/	1,420	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	391	554	0	0	537	381	0	0	0	114	0	93	2,070
	APPROACH %	41%	59%	0%	0%	58%	42%	0%	0%	0%	55%	0%	45%	
	PEAK HR FACTOR		0.934			0.937			0.000			0.924		0.980
	APP/DEPART	945	/	647	918	/	651	0	/	0	207	/	772	0
PM	4:00 PM	62	179	0	0	151	56	0	0	0	26	0	21	495
	4:15 PM	56	192	0	0	113	47	0	0	0	26	0	24	458
	4:30 PM	74	168	0	0	110	59	0	0	0	28	1	33	473
	4:45 PM	59	167	0	0	128	44	0	0	0	35	0	27	460
	5:00 PM	61	175	0	0	136	50	0	0	0	41	0	24	487
	5:15 PM	52	202	0	0	116	40	0	0	0	43	0	30	483
	5:30 PM	56	185	0	0	139	56	0	0	0	37	0	29	502
	5:45 PM	59	198	0	0	126	26	0	0	0	36	0	19	464
	VOLUMES	479	1,466	0	0	1,019	378	0	0	0	272	1	207	3,822
	APPROACH %	25%	75%	0%	0%	73%	27%	0%	0%	0%	57%	0%	43%	
	APP/DEPART	1,945	/	1,673	1,397	/	1,291	0	/	0	480	/	858	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	228	760	0	0	517	172	0	0	0	157	0	102	1,936
	APPROACH %	23%	77%	0%	0%	75%	25%	0%	0%	0%	61%	0%	39%	
	PEAK HR FACTOR		0.961			0.883			0.000			0.887		0.964
	APP/DEPART	988	/	862	689	/	674	0	/	0	259	/	400	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	AM BEGIN PEAK HR			7:30 AM			0	0	1	0	1					
PM	4:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:00 PM	0	0	1	1	2	0	0	1	0	1	0	0	0	1	1
	5:15 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	TOTAL	0	0	2	7	9	0	0	2	5	7	0	0	0	2	2
	PM BEGIN PEAK HR			5:00 PM			0	0	1	3	4					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Indio	PROJECT #:	SC3235
Tue, Feb 8, 22	NORTH & SOUTH:	Monroe	LOCATION #:	17
	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

NOTES:

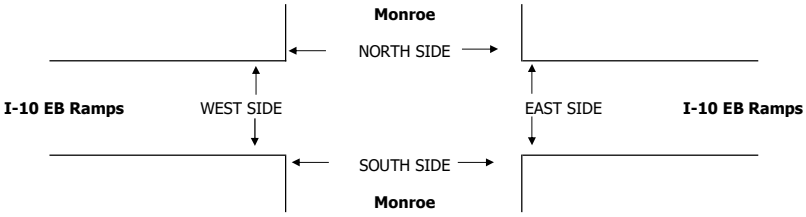
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Monroe			SOUTHBOUND Monroe			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps			
	LANES:	NL X	NT 1	NR 0	SL 1	ST 1	SR X	EL 0.5	ET 0.5	ER 1	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	179	16	13	109	0	34	1	58	0	0	0	410
	7:15 AM	0	155	27	18	127	0	26	0	89	0	0	0	442
	7:30 AM	0	195	20	15	140	0	31	1	66	0	0	0	468
	7:45 AM	0	198	26	12	155	0	29	1	78	0	0	0	499
	8:00 AM	0	198	27	14	143	0	43	1	68	0	0	0	494
	8:15 AM	0	213	20	16	153	0	40	0	50	0	0	0	492
	8:30 AM	0	182	30	18	136	0	32	0	57	0	0	0	455
	8:45 AM	0	150	27	14	129	0	39	0	70	0	0	0	429
	VOLUMES	0	1,470	193	120	1,092	0	274	4	536	0	0	0	3,689
	APPROACH %	0%	88%	12%	10%	90%	0%	34%	0%	66%	0%	0%	0%	
	APP/DEPART	1,663	/	1,744	1,212	/	1,628	814	/	317	0	/	0	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	804	93	57	591	0	143	3	262	0	0	0	1,953
	APPROACH %	0%	90%	10%	9%	91%	0%	35%	1%	64%	0%	0%	0%	
	PEAK HR FACTOR		0.962			0.959			0.911			0.000		0.978
	APP/DEPART	897	/	947	648	/	853	408	/	153	0	/	0	0
PM	4:00 PM	0	172	32	20	157	0	70	0	86	0	0	0	537
	4:15 PM	0	188	37	20	118	0	61	0	92	0	0	0	516
	4:30 PM	0	174	33	16	121	0	68	0	96	0	0	0	508
	4:45 PM	0	151	27	28	135	0	75	1	86	0	0	0	503
	5:00 PM	0	156	35	25	151	0	81	1	82	0	0	0	531
	5:15 PM	0	169	29	28	131	0	85	0	95	0	0	0	537
	5:30 PM	0	162	31	14	162	0	80	1	83	0	0	0	533
	5:45 PM	0	193	31	22	140	0	64	0	66	0	0	0	516
	VOLUMES	0	1,365	255	173	1,115	0	584	3	686	0	0	0	4,181
	APPROACH %	0%	84%	16%	13%	87%	0%	46%	0%	54%	0%	0%	0%	
	APP/DEPART	1,620	/	1,949	1,288	/	1,801	1,273	/	431	0	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	680	126	89	584	0	310	2	326	0	0	0	2,117
	APPROACH %	0%	84%	16%	13%	87%	0%	49%	0%	51%	0%	0%	0%	
	PEAK HR FACTOR		0.900			0.956			0.886			0.000		0.986
	APP/DEPART	806	/	990	673	/	910	638	/	217	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
	0	0	0	0	
AM 7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
PM 4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:45 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
	AM BEGIN PEAK HR			7:30 AM			0	0	0	1	1					
PM	4:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:15 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	5:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	5:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	TOTAL	0	0	0	6	6	0	0	0	4	4	0	0	0	2	2
	PM BEGIN PEAK HR			5:00 PM			0	0	0	3	3					

SPEED1 Avenue 40 between Burr and Kevin .07. Eastbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	1	0	0	0	1	1	1	0	0	4	0.16%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.08%
3:00:00 AM	0	0	0	1	0	0	0	0	0	2	0	0	0	0	3	0.12%
3:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
3:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.12%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.08%
5:00:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.16%
5:15:00 AM	0	0	0	0	0	0	1	1	2	2	0	1	0	0	7	0.29%
5:30:00 AM	0	0	0	0	0	0	1	0	2	2	1	0	0	0	6	0.25%
5:45:00 AM	0	0	0	0	0	0	0	3	3	3	1	1	0	1	12	0.49%
6:00:00 AM	0	0	0	0	0	0	1	2	2	3	0	0	0	0	8	0.33%
6:15:00 AM	0	0	0	0	0	0	1	3	4	8	2	0	0	0	18	0.74%
6:30:00 AM	0	0	0	0	0	0	1	2	4	6	5	1	0	1	20	0.82%
6:45:00 AM	0	0	0	0	0	0	4	3	4	11	4	0	0	0	26	1.07%
7:00:00 AM	0	0	0	0	0	0	2	4	4	7	3	0	1	0	21	0.86%
7:15:00 AM	0	0	0	0	0	0	0	6	8	9	6	3	0	0	32	1.32%
7:30:00 AM	0	0	0	0	0	0	1	5	10	12	5	0	0	1	34	1.40%
7:45:00 AM	0	0	0	0	0	0	5	8	15	12	12	1	0	0	53	2.18%
8:00:00 AM	0	0	0	0	0	2	4	14	25	27	14	3	1	0	90	3.70%
8:15:00 AM	0	0	0	0	0	0	2	24	43	31	4	0	0	1	105	4.32%
8:30:00 AM	0	0	0	0	0	0	4	14	29	19	7	0	0	0	73	3.00%
8:45:00 AM	0	0	0	0	0	0	9	16	23	11	3	0	0	0	62	2.55%
9:00:00 AM	0	0	0	0	0	0	3	14	18	7	0	1	0	0	43	1.77%
9:15:00 AM	0	0	0	0	0	0	3	12	27	8	2	0	0	0	52	2.14%
9:30:00 AM	0	0	0	0	0	1	2	13	25	14	1	0	0	0	56	2.30%
9:45:00 AM	0	0	0	0	0	0	3	14	20	15	2	0	0	0	54	2.22%
10:00:00 AM	0	0	0	0	0	1	3	10	16	13	4	1	0	0	48	1.97%
10:15:00 AM	0	0	0	0	0	0	5	9	11	10	3	0	0	2	40	1.64%
10:30:00 AM	0	0	0	0	0	0	2	9	23	16	0	0	0	0	50	2.06%
10:45:00 AM	0	0	0	0	0	0	0	14	14	11	4	0	0	0	43	1.77%
11:00:00 AM	0	0	0	0	0	1	2	11	16	7	5	0	0	0	42	1.73%
11:15:00 AM	0	0	0	0	0	6	1	7	13	13	2	0	1	0	43	1.77%
11:30:00 AM	0	0	1	0	1	4	6	13	18	4	1	0	0	0	48	1.97%
11:45:00 AM	0	0	0	0	0	0	1	12	21	10	1	1	1	0	47	1.93%
AM TOTAL	0	0	1	1	1	16	72	244	405	296	95	14	5	6	1,156	47.51%
PERCENTAGE	0.0%	0.0%	0.1%	0.1%	0.1%	1.4%	6.2%	21.1%	35.0%	25.6%	8.2%	1.2%	0.4%	0.5%		
CUMULATIVE	0	0	1	2	3	19	91	335	740	1,036	1,131	1,145	1,150	1,156		
PERCENTAGE	0.0%	0.0%	0.1%	0.2%	0.3%	1.6%	7.9%	29.0%	64.0%	89.6%	97.8%	99.0%	99.5%	100.0%		

15th Percentile	41	Mean Speed Average	48
50th Percentile	48	10 MPH Pace Speed	49-58
85th Percentile	56	Number in Pace	247
95th Percentile	59	Percent in Pace	21%

SPEED1 Avenue 40 between Burr and Kevin .07. Eastbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	0	4	12	11	8	2	1	1	0	39	1.60%
12:15:00 PM	0	0	0	0	0	0	3	10	21	9	3	0	0	0	46	1.89%
12:30:00 PM	0	0	0	0	0	0	0	10	16	10	8	0	0	0	44	1.81%
12:45:00 PM	0	0	0	0	0	1	3	15	16	7	4	3	0	0	49	2.01%
1:00:00 PM	0	0	0	0	0	0	2	12	11	4	2	1	1	0	33	1.36%
1:15:00 PM	0	0	0	0	0	1	2	6	18	12	5	0	0	0	44	1.81%
1:30:00 PM	0	0	0	0	0	0	0	8	12	14	5	2	0	0	41	1.69%

1:45:00 PM	0	0	0	0	0	0	7	15	10	9	5	0	1	0	47	1.93%
2:00:00 PM	0	0	0	0	1	0	3	11	15	7	2	2	0	0	41	1.69%
2:15:00 PM	0	0	0	0	0	0	2	8	19	5	3	1	0	1	39	1.60%
2:30:00 PM	0	0	0	0	0	0	3	5	25	5	5	0	1	0	44	1.81%
2:45:00 PM	0	0	1	0	0	1	10	6	19	10	2	0	1	0	50	2.06%
3:00:00 PM	0	0	0	0	0	0	12	22	14	10	6	1	0	0	65	2.67%
3:15:00 PM	0	0	0	0	0	1	0	39	31	6	9	1	1	0	88	3.62%
3:30:00 PM	0	0	0	0	0	1	3	10	31	20	4	0	0	0	69	2.84%
3:45:00 PM	0	0	0	0	0	0	5	13	27	8	6	2	1	1	63	2.59%
4:00:00 PM	0	0	0	0	0	0	3	10	18	10	2	0	0	0	43	1.77%
4:15:00 PM	0	0	0	0	0	1	6	5	12	9	1	0	0	0	34	1.40%
4:30:00 PM	0	2	0	0	0	0	3	7	10	8	4	1	2	1	38	1.56%
4:45:00 PM	0	0	0	0	0	0	3	11	3	9	5	1	0	0	32	1.32%
5:00:00 PM	0	0	0	1	0	0	0	2	15	11	2	0	0	0	31	1.27%
5:15:00 PM	0	0	0	0	0	1	0	10	12	8	2	0	1	1	35	1.44%
5:30:00 PM	0	0	0	0	0	0	1	12	19	9	4	0	0	0	45	1.85%
5:45:00 PM	0	0	0	0	0	0	2	6	12	8	2	0	1	0	31	1.27%
6:00:00 PM	0	0	0	0	0	1	1	7	14	1	1	0	0	0	25	1.03%
6:15:00 PM	0	0	0	0	0	0	0	4	4	5	4	1	0	0	18	0.74%
6:30:00 PM	0	0	0	0	0	0	2	6	4	2	0	0	0	0	14	0.58%
6:45:00 PM	0	0	0	0	0	0	2	5	3	4	0	0	0	0	14	0.58%
7:00:00 PM	0	0	0	0	0	0	1	2	3	3	1	2	0	0	12	0.49%
7:15:00 PM	0	0	0	0	0	0	0	4	3	2	0	0	0	0	9	0.37%
7:30:00 PM	0	0	0	0	0	0	0	0	1	4	0	1	0	0	6	0.25%
7:45:00 PM	0	0	0	0	0	0	1	2	4	1	1	0	0	0	9	0.37%
8:00:00 PM	0	0	0	0	0	0	0	0	2	3	0	1	0	0	6	0.25%
8:15:00 PM	0	0	0	0	0	0	0	1	1	1	0	1	0	0	4	0.16%
8:30:00 PM	0	0	0	0	0	0	1	3	5	1	0	1	0	2	13	0.53%
8:45:00 PM	0	0	0	0	0	0	0	4	4	1	3	0	0	1	13	0.53%
9:00:00 PM	0	0	0	0	0	0	0	2	0	4	1	0	0	0	7	0.29%
9:15:00 PM	0	0	0	0	0	0	0	0	2	1	0	1	0	0	4	0.16%
9:30:00 PM	0	0	0	0	0	0	0	1	2	1	0	0	1	0	5	0.21%
9:45:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.08%
10:00:00 PM	0	0	0	0	0	0	1	1	3	1	1	0	0	1	8	0.33%
10:15:00 PM	0	0	0	0	0	0	1	3	1	1	2	0	0	0	8	0.33%
10:30:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.08%
10:45:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	0.12%
11:00:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
11:15:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0.08%
PM TOTAL	0	2	1	1	1	10	88	313	454	254	107	26	12	8	1,277	52.49%
PERCENTAGE	0.0%	0.2%	0.1%	0.1%	0.1%	0.8%	6.9%	24.5%	35.6%	19.9%	8.4%	2.0%	0.9%	0.6%		
CUMULATIVE	0	2	3	4	5	15	103	416	870	1,124	1,231	1,257	1,269	1,277		
PERCENTAGE	0.0%	0.2%	0.2%	0.3%	0.4%	1.2%	8.1%	32.6%	68.1%	88.0%	96.4%	98.4%	99.4%	100.0%		

15th Percentile	41	Mean Speed Average	49
50th Percentile	49	10 MPH Pace Speed	49-58
85th Percentile	57	Number in Pace	256
95th Percentile	60	Percent in Pace	20%

DAY TOTAL	0	2	2	2	2	26	160	557	859	550	202	40	17	14	2,433	
PERCENTAGE	0.0%	0.1%	0.1%	0.1%	0.1%	1.1%	6.6%	22.9%	35.3%	22.6%	8.3%	1.6%	0.7%	0.6%	2,433	100.00%
	0.0%	0.1%	0.2%	0.2%	0.3%	1.4%	8.0%	30.9%	66.2%	88.8%	97.1%	98.7%	99.4%	100.0%		
85th Percentile	56															

SPEED1 Avenue 40 between Burr and Kevin .07. Westbound

Project# **SC3235**

Monday, February 07, 2022

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Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0.07%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
12:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.07%
1:00:00 AM	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3	0.11%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3	0.11%
2:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
3:45:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	3	0.11%
4:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
4:15:00 AM	0	0	0	0	0	0	0	1	2	2	0	0	0	0	5	0.18%
4:30:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	0	3	0.11%
4:45:00 AM	0	0	0	0	0	1	0	1	1	1	1	1	1	0	7	0.26%
5:00:00 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	1	4	0.15%
5:15:00 AM	0	0	0	0	0	0	0	1	0	0	1	1	0	1	4	0.15%
5:30:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	1	0	3	0.11%
5:45:00 AM	0	0	0	0	0	0	1	0	0	1	1	1	1	0	5	0.18%
6:00:00 AM	0	0	0	0	0	0	0	0	1	3	0	3	0	0	7	0.26%
6:15:00 AM	0	0	0	0	0	0	0	2	0	3	0	2	0	1	8	0.30%
6:30:00 AM	0	0	0	0	0	0	0	1	2	0	2	1	0	0	6	0.22%
6:45:00 AM	0	0	0	0	0	0	1	0	4	2	2	3	0	0	12	0.44%
7:00:00 AM	0	0	0	0	0	1	4	3	4	5	0	1	0	1	19	0.70%
7:15:00 AM	0	0	0	0	0	0	1	5	5	4	1	1	0	1	18	0.67%
7:30:00 AM	0	0	0	0	0	0	0	4	4	6	2	5	0	0	21	0.78%
7:45:00 AM	0	0	0	0	0	0	0	2	4	5	5	1	5	3	25	0.92%
8:00:00 AM	0	0	0	0	0	1	1	5	15	15	8	2	0	0	47	1.74%
8:15:00 AM	1	0	0	0	0	0	0	6	24	25	9	4	0	0	69	2.55%
8:30:00 AM	0	0	0	0	0	0	1	9	18	39	9	3	0	0	79	2.92%
8:45:00 AM	0	0	0	0	0	2	5	4	22	17	6	0	2	0	58	2.15%
9:00:00 AM	2	0	0	2	0	0	1	7	12	7	15	0	1	0	47	1.74%
9:15:00 AM	3	0	0	0	0	0	0	6	10	8	6	5	0	2	40	1.48%
9:30:00 AM	0	0	0	0	0	0	2	1	7	6	12	5	2	1	36	1.33%
9:45:00 AM	5	1	0	0	0	0	2	3	13	14	10	6	2	0	56	2.07%
10:00:00 AM	0	0	0	0	0	2	1	2	7	15	7	1	1	0	36	1.33%
10:15:00 AM	1	0	0	0	0	0	0	3	5	12	10	4	0	0	35	1.29%
10:30:00 AM	0	0	0	0	0	0	0	5	6	14	6	1	1	0	33	1.22%
10:45:00 AM	0	0	0	0	0	0	2	0	8	24	9	6	0	1	50	1.85%
11:00:00 AM	0	0	0	0	0	5	6	6	20	7	7	5	0	0	56	2.07%
11:15:00 AM	0	0	0	0	0	0	5	2	13	12	9	4	0	0	45	1.66%
11:30:00 AM	0	0	1	0	0	4	6	8	14	4	7	0	0	0	44	1.63%
11:45:00 AM	0	0	0	0	0	0	1	4	10	10	3	4	0	1	33	1.22%
AM TOTAL	12	1	1	2	0	17	42	93	238	268	151	71	21	14	931	34.44%
PERCENTAGE	1.3%	0.1%	0.1%	0.2%	0.0%	1.8%	4.5%	10.0%	25.6%	28.8%	16.2%	7.6%	2.3%	1.5%		
CUMULATIVE	12	13	14	16	16	33	75	168	406	674	825	896	917	931		
PERCENTAGE	1.3%	1.4%	1.5%	1.7%	1.7%	3.5%	8.1%	18.0%	43.6%	72.4%	88.6%	96.2%	98.5%	100.0%		

15th Percentile	43	Mean Speed Average	51
50th Percentile	51	10 MPH Pace Speed	50-59
85th Percentile	60	Number in Pace	277
95th Percentile	64	Percent in Pace	30%

SPEED1 Avenue 40 between Burr and Kevin .07. Westbound

Project# SC3235

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	1	4	2	16	9	16	5	1	0	54	2.00%
12:15:00 PM	0	1	0	0	1	0	1	3	18	16	8	2	1	0	51	1.89%
12:30:00 PM	1	0	0	0	0	3	4	5	15	14	10	8	1	1	62	2.29%
12:45:00 PM	0	0	0	0	0	0	1	7	8	16	8	7	1	2	50	1.85%
1:00:00 PM	1	0	0	0	0	0	1	5	10	13	14	2	1	0	47	1.74%
1:15:00 PM	0	0	0	0	0	0	1	7	5	13	16	1	1	0	44	1.63%
1:30:00 PM	2	0	0	0	0	0	2	10	12	12	8	6	1	1	54	2.00%

1:45:00 PM	0	0	0	0	0	0	1	4	14	13	17	1	1	0	51	1.89%
2:00:00 PM	0	2	0	0	0	0	0	2	6	15	12	4	0	2	43	1.59%
2:15:00 PM	0	0	0	0	0	0	2	6	7	19	13	9	2	2	60	2.22%
2:30:00 PM	1	0	0	0	0	0	0	5	15	9	9	6	1	1	47	1.74%
2:45:00 PM	0	0	0	0	0	1	0	3	10	18	19	4	4	2	61	2.26%
3:00:00 PM	0	0	0	0	0	1	0	3	7	14	13	7	1	1	47	1.74%
3:15:00 PM	0	0	0	0	1	0	0	4	8	24	14	3	2	0	56	2.07%
3:30:00 PM	0	0	0	0	0	0	1	2	33	34	25	13	3	1	112	4.14%
3:45:00 PM	0	0	0	0	0	0	0	4	34	41	26	10	6	0	121	4.48%
4:00:00 PM	0	0	0	0	0	0	1	1	5	33	24	8	2	0	74	2.74%
4:15:00 PM	0	0	0	0	0	0	0	1	11	22	9	9	4	1	57	2.11%
4:30:00 PM	0	0	0	0	0	0	1	2	5	14	12	10	4	0	48	1.78%
4:45:00 PM	0	0	0	0	0	0	0	1	7	15	14	5	6	2	50	1.85%
5:00:00 PM	0	0	0	0	1	0	1	2	12	14	19	7	0	0	56	2.07%
5:15:00 PM	0	1	0	0	0	0	0	0	9	23	15	9	2	0	59	2.18%
5:30:00 PM	0	0	0	0	4	2	4	8	10	23	9	2	2	1	65	2.40%
5:45:00 PM	0	0	0	0	0	0	0	2	13	22	13	2	2	1	55	2.03%
6:00:00 PM	0	0	0	0	0	0	1	3	14	13	13	4	2	1	51	1.89%
6:15:00 PM	0	0	0	0	0	0	0	8	19	9	5	5	1	1	48	1.78%
6:30:00 PM	0	0	0	0	0	0	1	2	6	9	7	1	1	0	27	1.00%
6:45:00 PM	0	0	0	0	0	0	0	1	3	12	6	3	3	1	29	1.07%
7:00:00 PM	0	0	0	0	0	0	1	0	3	6	3	2	0	0	15	0.55%
7:15:00 PM	0	0	0	0	0	0	1	0	7	7	2	0	1	1	19	0.70%
7:30:00 PM	0	0	0	0	0	0	1	0	4	8	4	3	3	2	25	0.92%
7:45:00 PM	0	0	0	0	0	0	0	0	3	3	2	5	0	0	13	0.48%
8:00:00 PM	0	0	0	0	0	0	0	2	2	0	1	1	1	1	8	0.30%
8:15:00 PM	0	0	0	0	0	0	0	3	3	4	2	5	0	1	18	0.67%
8:30:00 PM	0	0	0	0	0	0	1	0	6	7	4	3	0	0	21	0.78%
8:45:00 PM	0	0	0	0	0	0	0	1	3	3	3	1	1	0	12	0.44%
9:00:00 PM	0	0	0	1	0	0	0	0	4	1	2	2	0	0	10	0.37%
9:15:00 PM	0	0	0	0	0	0	1	2	1	2	4	1	0	0	11	0.41%
9:30:00 PM	0	0	0	0	0	0	0	0	0	4	1	1	0	0	6	0.22%
9:45:00 PM	0	0	0	0	0	1	0	2	1	2	3	4	0	2	15	0.55%
10:00:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	1	5	0.18%
10:15:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.04%
10:30:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.07%
10:45:00 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	0.11%
11:00:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0.07%
11:15:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
11:30:00 PM	0	0	0	0	0	0	1	0	0	2	1	0	0	0	4	0.15%
11:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
PM TOTAL	5	5	0	1	7	9	33	114	373	544	409	181	62	29	1,772	65.56%
PERCENTAGE	0.3%	0.3%	0.0%	0.1%	0.4%	0.5%	1.9%	6.4%	21.0%	30.7%	23.1%	10.2%	3.5%	1.6%		
CUMULATIVE	5	10	10	11	18	27	60	174	547	1,091	1,500	1,681	1,743	1,772		
PERCENTAGE	0.3%	0.6%	0.6%	0.6%	1.0%	1.5%	3.4%	9.8%	30.9%	61.6%	84.7%	94.9%	98.4%	100.0%		

15th Percentile	43	Mean Speed Average	53
50th Percentile	53	10 MPH Pace Speed	51-60
85th Percentile	63	Number in Pace	279
95th Percentile	69	Percent in Pace	16%

DAY TOTAL	17	6	1	3	7	26	75	207	611	812	560	252	83	43	2,703	
PERCENTAGE	0.6%	0.2%	0.0%	0.1%	0.3%	1.0%	2.8%	7.7%	22.6%	30.0%	20.7%	9.3%	3.1%	1.59%	2,703	100.00%
	0.6%	0.9%	0.9%	1.0%	1.3%	2.2%	5.0%	12.7%	35.3%	65.3%	86.0%	95.3%	98.4%	100.00%		
85th Percentile	61															

SPEED1 Avenue 40 between Burr and Kevin .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	1	0	0	1	1	1	1	1	0	6	0.12%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.02%
12:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.04%
1:00:00 AM	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3	0.06%
1:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.04%
2:15:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3	0.06%
2:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.04%
3:00:00 AM	0	0	0	1	0	1	0	0	0	2	0	0	0	0	4	0.08%
3:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
3:30:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.06%
3:45:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	3	0.06%
4:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0.04%
4:15:00 AM	0	0	0	0	0	0	0	1	2	2	0	0	0	0	5	0.10%
4:30:00 AM	0	0	0	0	0	0	2	0	2	1	0	0	1	0	6	0.12%
4:45:00 AM	0	0	0	0	0	1	0	1	1	1	3	1	1	0	9	0.18%
5:00:00 AM	0	0	0	0	0	0	0	1	2	3	1	0	0	1	8	0.16%
5:15:00 AM	0	0	0	0	0	0	1	2	2	2	1	2	0	1	11	0.21%
5:30:00 AM	0	0	0	0	0	0	1	0	2	3	2	0	1	0	9	0.18%
5:45:00 AM	0	0	0	0	0	0	1	3	3	4	2	2	1	1	17	0.33%
6:00:00 AM	0	0	0	0	0	0	1	2	3	6	0	3	0	0	15	0.29%
6:15:00 AM	0	0	0	0	0	0	1	5	4	11	2	2	0	1	26	0.51%
6:30:00 AM	0	0	0	0	0	0	1	3	6	6	7	2	0	1	26	0.51%
6:45:00 AM	0	0	0	0	0	0	5	3	8	13	6	3	0	0	38	0.74%
7:00:00 AM	0	0	0	0	0	1	6	7	8	12	3	1	1	1	40	0.78%
7:15:00 AM	0	0	0	0	0	0	1	11	13	13	7	4	0	1	50	0.97%
7:30:00 AM	0	0	0	0	0	0	1	9	14	18	7	5	0	1	55	1.07%
7:45:00 AM	0	0	0	0	0	0	5	10	19	17	17	2	5	3	78	1.52%
8:00:00 AM	0	0	0	0	0	3	5	19	40	42	22	5	1	0	137	2.67%
8:15:00 AM	1	0	0	0	0	0	2	30	67	56	13	4	0	1	174	3.39%
8:30:00 AM	0	0	0	0	0	0	5	23	47	58	16	3	0	0	152	2.96%
8:45:00 AM	0	0	0	0	0	2	14	20	45	28	9	0	2	0	120	2.34%
9:00:00 AM	2	0	0	2	0	0	4	21	30	14	15	1	1	0	90	1.75%
9:15:00 AM	3	0	0	0	0	0	3	18	37	16	8	5	0	2	92	1.79%
9:30:00 AM	0	0	0	0	0	1	4	14	32	20	13	5	2	1	92	1.79%
9:45:00 AM	5	1	0	0	0	0	5	17	33	29	12	6	2	0	110	2.14%
10:00:00 AM	0	0	0	0	0	3	4	12	23	28	11	2	1	0	84	1.64%
10:15:00 AM	1	0	0	0	0	0	5	12	16	22	13	4	0	2	75	1.46%
10:30:00 AM	0	0	0	0	0	0	2	14	29	30	6	1	1	0	83	1.62%
10:45:00 AM	0	0	0	0	0	0	2	14	22	35	13	6	0	1	93	1.81%
11:00:00 AM	0	0	0	0	0	6	8	17	36	14	12	5	0	0	98	1.91%
11:15:00 AM	0	0	0	0	0	6	6	9	26	25	11	4	1	0	88	1.71%
11:30:00 AM	0	0	2	0	1	8	12	21	32	8	8	0	0	0	92	1.79%
11:45:00 AM	0	0	0	0	0	0	2	16	31	20	4	5	1	1	80	1.56%
AM TOTAL	12	1	2	3	1	33	114	337	643	564	246	85	26	20	2,087	40.63%
PERCENTAGE	0.6%	0.0%	0.1%	0.1%	0.0%	1.6%	5.5%	16.1%	30.8%	27.0%	11.8%	4.1%	1.2%	1.0%		
CUMULATIVE	12	13	15	18	19	52	166	503	1,146	1,710	1,956	2,041	2,067	2,087		
PERCENTAGE	0.6%	0.6%	0.7%	0.9%	0.9%	2.5%	8.0%	24.1%	54.9%	81.9%	93.7%	97.8%	99.0%	100.0%		

15th Percentile	39	Mean Speed Average	49
50th Percentile	50	10 MPH Pace Speed	49-58
85th Percentile	59	Number in Pace	274
95th Percentile	64	Percent in Pace	13%

SPEED1 Avenue 40 between Burr and Kevin .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	1	8	14	27	17	18	6	2	0	93	1.81%
12:15:00 PM	0	1	0	0	1	0	4	13	39	25	11	2	1	0	97	1.89%
12:30:00 PM	1	0	0	0	0	3	4	15	31	24	18	8	1	1	106	2.06%
12:45:00 PM	0	0	0	0	0	1	4	22	24	23	12	10	1	2	99	1.93%

1:00:00 PM	1	0	0	0	0	0	3	17	21	17	16	3	2	0	80	1.56%
1:15:00 PM	0	0	0	0	0	1	3	13	23	25	21	1	1	0	88	1.71%
1:30:00 PM	2	0	0	0	0	0	2	18	24	26	13	8	1	1	95	1.85%
1:45:00 PM	0	0	0	0	0	0	8	19	24	22	22	1	2	0	98	1.91%
2:00:00 PM	0	2	0	0	1	0	3	13	21	22	14	6	0	2	84	1.64%
2:15:00 PM	0	0	0	0	0	0	4	14	26	24	16	10	2	3	99	1.93%
2:30:00 PM	1	0	0	0	0	0	3	10	40	14	14	6	2	1	91	1.77%
2:45:00 PM	0	0	1	0	0	2	10	9	29	28	21	4	5	2	111	2.16%
3:00:00 PM	0	0	0	0	0	1	12	25	21	24	19	8	1	1	112	2.18%
3:15:00 PM	0	0	0	0	1	1	0	43	39	30	23	4	3	0	144	2.80%
3:30:00 PM	0	0	0	0	0	1	4	12	64	54	29	13	3	1	181	3.52%
3:45:00 PM	0	0	0	0	0	0	5	17	61	49	32	12	7	1	184	3.58%
4:00:00 PM	0	0	0	0	0	0	4	11	23	43	26	8	2	0	117	2.28%
4:15:00 PM	0	0	0	0	0	1	6	6	23	31	10	9	4	1	91	1.77%
4:30:00 PM	0	2	0	0	0	0	4	9	15	22	16	11	6	1	86	1.67%
4:45:00 PM	0	0	0	0	0	0	3	12	10	24	19	6	6	2	82	1.60%
5:00:00 PM	0	0	0	1	1	0	1	4	27	25	21	7	0	0	87	1.69%
5:15:00 PM	0	1	0	0	0	1	0	10	21	31	17	9	3	1	94	1.83%
5:30:00 PM	0	0	0	0	4	2	5	20	29	32	13	2	2	1	110	2.14%
5:45:00 PM	0	0	0	0	0	0	2	8	25	30	15	2	3	1	86	1.67%
6:00:00 PM	0	0	0	0	0	1	2	10	28	14	14	4	2	1	76	1.48%
6:15:00 PM	0	0	0	0	0	0	0	12	23	14	9	6	1	1	66	1.29%
6:30:00 PM	0	0	0	0	0	0	3	8	10	11	7	1	1	0	41	0.80%
6:45:00 PM	0	0	0	0	0	0	2	6	6	16	6	3	3	1	43	0.84%
7:00:00 PM	0	0	0	0	0	0	2	2	6	9	4	4	0	0	27	0.53%
7:15:00 PM	0	0	0	0	0	0	1	4	10	9	2	0	1	1	28	0.55%
7:30:00 PM	0	0	0	0	0	0	1	0	5	12	4	4	3	2	31	0.60%
7:45:00 PM	0	0	0	0	0	0	1	2	7	4	3	5	0	0	22	0.43%
8:00:00 PM	0	0	0	0	0	0	0	2	4	3	1	2	1	1	14	0.27%
8:15:00 PM	0	0	0	0	0	0	0	4	4	5	2	6	0	1	22	0.43%
8:30:00 PM	0	0	0	0	0	0	2	3	11	8	4	4	0	2	34	0.66%
8:45:00 PM	0	0	0	0	0	0	0	5	7	4	6	1	1	1	25	0.49%
9:00:00 PM	0	0	0	1	0	0	0	2	4	5	3	2	0	0	17	0.33%
9:15:00 PM	0	0	0	0	0	0	1	2	3	3	4	2	0	0	15	0.29%
9:30:00 PM	0	0	0	0	0	0	0	1	2	5	1	1	1	0	11	0.21%
9:45:00 PM	0	0	0	0	0	2	1	2	1	2	3	4	0	2	17	0.33%
10:00:00 PM	0	0	0	0	0	0	1	1	5	3	1	0	0	2	13	0.25%
10:15:00 PM	0	0	0	0	0	0	1	3	1	1	3	0	0	0	9	0.18%
10:30:00 PM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	4	0.08%
10:45:00 PM	0	0	0	0	0	0	0	1	1	1	2	1	0	0	6	0.12%
11:00:00 PM	0	1	0	0	0	0	0	1	0	1	0	0	0	0	3	0.06%
11:15:00 PM	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0.06%
11:30:00 PM	0	0	0	0	0	0	1	0	0	2	1	0	0	0	4	0.08%
11:45:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	0.06%
PM TOTAL	5	7	1	2	8	19	121	427	827	798	516	207	74	37	3,049	59.37%
PERCENTAGE	0.2%	0.2%	0.0%	0.1%	0.3%	0.6%	4.0%	14.0%	27.1%	26.2%	16.9%	6.8%	2.4%	1.2%		
CUMULATIVE	5	12	13	15	23	42	163	590	1,417	2,215	2,731	2,938	3,012	3,049		
PERCENTAGE	0.2%	0.4%	0.4%	0.5%	0.8%	1.4%	5.3%	19.4%	46.5%	72.6%	89.6%	96.4%	98.8%	100.0%		

15th Percentile	40	Mean Speed Average	51
50th Percentile	51	10 MPH Pace Speed	50-59
85th Percentile	62	Number in Pace	273
95th Percentile	69	Percent in Pace	9%

DAY TOTAL	17	8	3	5	9	52	235	764	1,470	1,362	762	292	100	57	5,136	
PERCENTAGE	0.3%	0.2%	0.1%	0.1%	0.2%	1.0%	4.6%	14.9%	28.6%	26.5%	14.8%	5.7%	1.9%	1.1%	5,136	100.00%
	0.3%	0.5%	0.5%	0.6%	0.8%	1.8%	6.4%	21.3%	49.9%	76.4%	91.3%	96.9%	98.9%	100.0%		
85th Percentile	61															

SPEED1 Avenue 40 between Burr and Kevin .08-09. Eastbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
12:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0.07%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.04%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
3:15:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.07%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
4:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.04%
4:15:00 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.07%
4:30:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.07%
4:45:00 AM	0	0	0	0	0	0	0	0	3	1	1	0	0	0	5	0.18%
5:00:00 AM	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4	0.15%
5:15:00 AM	0	0	0	0	0	0	1	0	3	1	0	0	0	0	5	0.18%
5:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	3	0.11%
5:45:00 AM	0	0	0	0	0	0	0	2	2	3	1	0	1	0	9	0.33%
6:00:00 AM	0	0	0	0	0	0	2	1	1	3	1	1	0	0	9	0.33%
6:15:00 AM	0	0	0	0	0	0	0	6	6	4	1	0	0	1	18	0.66%
6:30:00 AM	0	0	0	0	0	0	1	4	5	5	4	0	0	0	19	0.70%
6:45:00 AM	0	0	0	0	0	0	1	2	4	9	3	2	0	0	21	0.77%
7:00:00 AM	0	0	0	0	0	0	1	5	8	6	2	1	1	1	25	0.92%
7:15:00 AM	0	0	0	0	0	0	1	7	12	13	9	4	1	0	47	1.73%
7:30:00 AM	0	0	0	0	0	0	0	8	24	15	3	0	1	2	53	1.95%
7:45:00 AM	0	0	0	0	0	0	4	13	20	16	15	1	0	0	69	2.54%
8:00:00 AM	0	0	0	0	0	4	13	31	37	34	12	2	1	0	134	4.94%
8:15:00 AM	0	0	0	0	0	0	1	40	43	32	2	0	1	1	120	4.42%
8:30:00 AM	1	0	0	0	0	0	3	21	35	18	6	1	0	1	86	3.17%
8:45:00 AM	0	0	0	0	0	2	9	20	28	11	4	0	0	0	74	2.73%
9:00:00 AM	0	0	0	0	0	0	2	13	24	3	2	1	0	0	45	1.66%
9:15:00 AM	0	0	0	0	0	1	2	11	23	6	3	0	0	0	46	1.70%
9:30:00 AM	0	0	0	0	0	1	2	14	20	11	3	1	0	0	52	1.92%
9:45:00 AM	0	0	0	0	0	0	5	11	18	19	0	0	0	0	53	1.95%
10:00:00 AM	0	0	0	0	0	0	2	12	21	6	0	1	0	0	42	1.55%
10:15:00 AM	0	0	0	0	0	1	4	16	11	11	4	0	0	1	48	1.77%
10:30:00 AM	0	0	0	0	0	0	2	15	17	16	2	0	0	0	52	1.92%
10:45:00 AM	0	0	0	0	0	0	2	15	13	12	5	1	1	0	49	1.81%
11:00:00 AM	0	0	0	0	0	3	2	8	14	8	5	2	0	0	42	1.55%
11:15:00 AM	0	0	0	0	0	4	3	6	14	11	1	0	1	0	40	1.47%
11:30:00 AM	0	0	0	0	0	3	7	15	12	4	1	1	1	0	44	1.62%
11:45:00 AM	0	0	0	0	0	3	5	9	18	5	1	0	1	0	42	1.55%
AM TOTAL	1	0	1	0	2	22	75	310	441	289	92	21	11	8	1,273	46.92%
PERCENTAGE	0.1%	0.0%	0.1%	0.0%	0.2%	1.7%	5.9%	24.4%	34.6%	22.7%	7.2%	1.6%	0.9%	0.6%		
CUMULATIVE	1	1	2	2	4	26	101	411	852	1,141	1,233	1,254	1,265	1,273		
PERCENTAGE	0.1%	0.1%	0.2%	0.2%	0.3%	2.0%	7.9%	32.3%	66.9%	89.6%	96.9%	98.5%	99.4%	100.0%		

15th Percentile	41	Mean Speed Average	48
50th Percentile	48	10 MPH Pace Speed	39-48
85th Percentile	56	Number in Pace	251
95th Percentile	61	Percent in Pace	20%

SPEED1 Avenue 40 between Burr and Kevin .08-09. Eastbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	3	1	4	6	22	11	2	1	0	0	50	1.84%
12:15:00 PM	0	0	0	0	0	3	10	12	13	6	1	0	1	2	48	1.77%
12:30:00 PM	0	0	0	0	0	0	4	18	16	5	0	0	1	0	44	1.62%

12:45:00 PM	0	0	0	0	0	2	10	12	21	12	2	0	1	0	60	2.21%
1:00:00 PM	0	0	0	0	1	0	3	12	29	9	2	1	0	0	57	2.10%
1:15:00 PM	0	0	0	0	1	1	5	15	17	11	5	0	1	1	57	2.10%
1:30:00 PM	0	0	0	0	0	2	4	15	20	7	4	1	1	0	54	1.99%
1:45:00 PM	0	0	0	0	0	0	4	18	22	4	1	0	1	0	50	1.84%
2:00:00 PM	0	0	0	0	0	0	4	19	2	11	3	2	0	0	41	1.51%
2:15:00 PM	1	0	0	0	0	4	8	12	11	3	5	1	1	0	46	1.70%
2:30:00 PM	0	0	0	0	0	0	2	7	18	20	5	2	1	1	56	2.06%
2:45:00 PM	0	0	0	0	0	0	3	26	15	16	8	0	0	0	68	2.51%
3:00:00 PM	0	0	0	0	0	0	4	7	22	21	4	4	0	0	62	2.29%
3:15:00 PM	0	0	0	0	0	0	4	20	33	15	8	1	0	0	81	2.99%
3:30:00 PM	0	0	0	0	0	0	3	11	35	23	5	0	0	0	77	2.84%
3:45:00 PM	0	0	0	0	1	1	4	18	20	12	7	2	0	0	65	2.40%
4:00:00 PM	0	0	0	0	0	0	8	12	18	13	7	0	0	2	60	2.21%
4:15:00 PM	0	0	0	0	0	4	2	11	16	6	7	1	0	0	47	1.73%
4:30:00 PM	0	0	0	0	0	0	2	6	16	10	1	0	0	0	35	1.29%
4:45:00 PM	0	0	0	0	0	1	2	2	17	7	1	1	0	0	31	1.14%
5:00:00 PM	0	0	0	0	0	1	2	22	12	3	2	0	1	0	43	1.58%
5:15:00 PM	0	0	0	0	0	0	1	6	15	4	4	2	0	0	32	1.18%
5:30:00 PM	0	0	0	0	0	1	2	12	11	6	1	0	0	0	33	1.22%
5:45:00 PM	1	0	0	0	0	1	2	9	11	6	1	3	0	0	34	1.25%
6:00:00 PM	0	0	0	0	0	0	3	10	10	7	4	1	0	0	35	1.29%
6:15:00 PM	0	0	0	0	0	0	3	3	11	4	2	0	0	1	24	0.88%
6:30:00 PM	0	0	0	0	0	0	1	4	5	4	0	1	0	0	15	0.55%
6:45:00 PM	0	0	0	0	0	1	1	4	3	6	0	1	0	0	16	0.59%
7:00:00 PM	0	0	0	0	0	0	0	3	5	1	1	0	0	1	11	0.41%
7:15:00 PM	0	0	0	0	0	0	3	5	4	2	0	0	0	0	14	0.52%
7:30:00 PM	0	0	0	0	0	0	0	2	2	0	2	1	0	0	7	0.26%
7:45:00 PM	0	0	0	0	0	0	1	3	5	4	2	0	0	0	15	0.55%
8:00:00 PM	0	0	0	0	0	0	0	2	5	2	3	0	0	0	12	0.44%
8:15:00 PM	0	0	0	0	0	0	1	0	5	2	0	1	0	0	9	0.33%
8:30:00 PM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0.15%
8:45:00 PM	0	0	0	0	0	1	1	1	2	1	0	0	0	0	6	0.22%
9:00:00 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	5	0.18%
9:15:00 PM	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4	0.15%
9:30:00 PM	0	0	0	0	0	1	1	1	2	2	0	0	0	0	7	0.26%
9:45:00 PM	0	0	0	0	1	0	0	1	2	0	1	0	0	0	5	0.18%
10:00:00 PM	0	0	0	0	0	1	0	0	3	4	0	0	0	1	9	0.33%
10:15:00 PM	0	0	0	0	0	0	2	1	0	1	0	0	0	0	4	0.15%
10:30:00 PM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.15%
10:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.07%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
PM TOTAL	2	0	0	0	7	26	115	352	504	284	103	29	9	9	1,440	53.08%
PERCENTAGE	0.1%	0.0%	0.0%	0.0%	0.5%	1.8%	8.0%	24.4%	35.0%	19.7%	7.2%	2.0%	0.6%	0.6%		
CUMULATIVE	2	2	2	2	9	35	150	502	1,006	1,290	1,393	1,422	1,431	1,440		
PERCENTAGE	0.1%	0.1%	0.1%	0.1%	0.6%	2.4%	10.4%	34.9%	69.9%	89.6%	96.7%	98.8%	99.4%	100.0%		

15th Percentile	39	Mean Speed Average	48
50th Percentile	48	10 MPH Pace Speed	38-47
85th Percentile	57	Number in Pace	271
95th Percentile	60	Percent in Pace	19%

DAY TOTAL	3	0	1	0	9	48	190	662	945	573	195	50	20	17	2,713	
PERCENTAGE	0.1%	0.0%	0.0%	0.0%	0.3%	1.8%	7.0%	24.4%	34.8%	21.1%	7.2%	1.8%	0.7%	0.6%	2,713	100.00%
	0.1%	0.1%	0.1%	0.1%	0.5%	2.2%	9.3%	33.7%	68.5%	89.6%	96.8%	98.6%	99.4%	100.0%		
85th Percentile	57															

SPEED1 Avenue 40 between Burr and Kevin .08-09. Westbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	0.11%
12:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3	0.11%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0.07%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0.07%
3:45:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
4:00:00 AM	0	0	0	0	0	0	1	1	0	0	1	0	0	0	3	0.11%
4:15:00 AM	0	0	0	0	0	0	0	0	1	0	1	0	1	0	3	0.11%
4:30:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.07%
4:45:00 AM	0	0	0	0	0	0	0	0	0	2	1	2	1	0	6	0.21%
5:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
5:15:00 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	0.14%
5:30:00 AM	0	0	0	0	1	0	1	1	0	2	0	2	0	0	7	0.25%
5:45:00 AM	0	0	0	0	0	0	0	2	1	1	1	2	1	1	9	0.32%
6:00:00 AM	0	0	0	0	0	0	0	1	3	1	0	2	0	1	8	0.28%
6:15:00 AM	0	0	0	0	0	0	0	1	1	4	0	0	0	0	6	0.21%
6:30:00 AM	0	0	0	0	0	0	0	0	1	3	3	0	0	2	9	0.32%
6:45:00 AM	0	0	0	0	0	0	0	0	2	3	0	3	2	0	10	0.35%
7:00:00 AM	0	0	0	0	0	0	0	5	3	4	3	1	1	0	17	0.60%
7:15:00 AM	0	0	0	0	0	0	0	4	9	3	2	0	0	2	20	0.70%
7:30:00 AM	0	1	0	0	0	0	0	3	4	5	1	3	2	1	20	0.70%
7:45:00 AM	1	0	0	0	0	0	0	0	8	10	4	2	3	3	31	1.09%
8:00:00 AM	0	0	0	0	0	3	1	4	10	22	11	3	0	0	54	1.90%
8:15:00 AM	1	0	0	0	0	0	0	5	33	32	12	3	0	0	86	3.03%
8:30:00 AM	0	0	0	0	0	1	2	9	16	46	12	4	0	0	90	3.17%
8:45:00 AM	0	0	0	0	0	4	5	8	19	16	8	1	1	0	62	2.19%
9:00:00 AM	1	0	0	1	0	0	2	5	9	9	11	0	1	0	39	1.37%
9:15:00 AM	2	0	0	0	0	0	0	4	8	7	6	6	1	1	35	1.23%
9:30:00 AM	0	0	0	0	0	0	1	3	1	7	8	6	1	1	28	0.99%
9:45:00 AM	3	1	0	0	0	0	1	5	15	8	13	5	1	0	52	1.83%
10:00:00 AM	1	0	0	0	0	2	0	1	11	25	6	2	2	0	50	1.76%
10:15:00 AM	1	0	0	0	0	0	0	2	3	11	10	4	2	0	33	1.16%
10:30:00 AM	0	0	0	0	0	0	0	5	10	10	10	3	2	0	40	1.41%
10:45:00 AM	0	0	1	0	0	2	3	0	4	13	10	6	2	1	42	1.48%
11:00:00 AM	0	0	0	0	0	5	5	6	16	12	5	3	0	0	52	1.83%
11:15:00 AM	0	0	0	0	0	0	3	3	14	15	7	5	1	0	48	1.69%
11:30:00 AM	0	3	0	0	0	1	1	8	12	14	6	1	1	0	47	1.66%
11:45:00 AM	0	1	0	1	3	5	1	5	9	14	9	1	3	0	52	1.83%
AM TOTAL	10	6	2	3	4	23	27	92	228	305	163	71	32	13	979	34.51%
PERCENTAGE	1.0%	0.6%	0.2%	0.3%	0.4%	2.3%	2.8%	9.4%	23.3%	31.2%	16.6%	7.3%	3.3%	1.3%		
CUMULATIVE	10	16	18	21	25	48	75	167	395	700	863	934	966	979		
PERCENTAGE	1.0%	1.6%	1.8%	2.1%	2.6%	4.9%	7.7%	17.1%	40.3%	71.5%	88.2%	95.4%	98.7%	100.0%		

15th Percentile	43	Mean Speed Average	51
50th Percentile	51	10 MPH Pace Speed	50-59
85th Percentile	60	Number in Pace	280
95th Percentile	66	Percent in Pace	29%

SPEED1 Avenue 40 between Burr and Kevin .08-09. Westbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	1	4	7	10	13	8	2	2	3	50	1.76%
12:15:00 PM	0	0	0	0	0	5	7	7	13	17	11	3	2	2	67	2.36%
12:30:00 PM	0	0	2	0	0	4	1	10	11	15	6	5	1	2	57	2.01%
12:45:00 PM	0	0	1	0	0	0	0	11	6	16	17	7	1	1	60	2.11%
1:00:00 PM	0	0	0	0	0	1	2	14	17	12	3	4	1	1	55	1.94%

1:15:00 PM	0	0	0	0	0	0	1	5	12	15	13	4	3	1	54	1.90%
1:30:00 PM	0	0	0	0	0	1	1	2	5	18	8	5	1	0	41	1.45%
1:45:00 PM	1	0	0	0	2	3	6	8	12	11	4	3	1	1	52	1.83%
2:00:00 PM	0	0	0	0	0	0	5	9	9	12	18	3	3	0	59	2.08%
2:15:00 PM	0	0	0	0	0	1	3	4	5	13	11	2	1	0	40	1.41%
2:30:00 PM	0	0	0	0	0	0	1	11	11	9	14	7	3	4	60	2.11%
2:45:00 PM	0	0	0	0	0	0	0	2	22	13	11	3	1	0	52	1.83%
3:00:00 PM	0	0	0	0	0	1	1	3	15	27	17	6	3	2	75	2.64%
3:15:00 PM	0	0	0	0	0	0	5	4	6	13	11	7	4	0	50	1.76%
3:30:00 PM	0	0	0	0	0	0	0	3	25	38	26	18	0	1	111	3.91%
3:45:00 PM	0	0	0	0	0	2	2	18	38	37	32	7	2	0	138	4.86%
4:00:00 PM	0	0	0	0	1	0	0	5	14	30	20	6	2	0	78	2.75%
4:15:00 PM	0	0	0	0	0	0	2	2	12	19	16	7	1	2	61	2.15%
4:30:00 PM	0	0	0	0	0	0	2	6	9	19	14	8	4	2	64	2.26%
4:45:00 PM	0	0	0	0	1	1	3	6	7	8	12	3	3	2	46	1.62%
5:00:00 PM	0	0	0	0	0	1	2	1	14	22	16	3	0	0	59	2.08%
5:15:00 PM	0	0	0	0	0	1	3	4	5	12	13	4	4	3	49	1.73%
5:30:00 PM	0	0	0	0	0	0	4	3	15	12	8	3	1	0	46	1.62%
5:45:00 PM	0	0	0	0	0	0	1	11	13	14	11	5	1	0	56	1.97%
6:00:00 PM	0	0	0	0	0	0	1	5	13	16	20	3	2	1	61	2.15%
6:15:00 PM	0	0	0	0	0	0	1	3	11	12	5	4	1	2	39	1.37%
6:30:00 PM	0	0	0	0	0	0	0	1	8	14	8	3	1	1	36	1.27%
6:45:00 PM	0	0	0	0	0	0	1	3	9	9	7	6	0	0	35	1.23%
7:00:00 PM	0	0	0	0	0	0	0	5	4	8	6	2	1	2	28	0.99%
7:15:00 PM	0	0	0	0	0	1	0	3	3	6	4	0	0	0	17	0.60%
7:30:00 PM	0	0	0	0	0	0	0	1	7	7	5	0	2	0	22	0.78%
7:45:00 PM	0	0	0	0	0	0	1	1	3	7	2	0	3	0	17	0.60%
8:00:00 PM	0	0	0	0	0	0	0	1	7	3	2	1	1	2	17	0.60%
8:15:00 PM	0	0	0	0	0	0	0	0	4	6	2	3	1	0	16	0.56%
8:30:00 PM	0	0	0	0	0	0	0	1	7	6	1	4	2	2	23	0.81%
8:45:00 PM	0	0	0	0	0	0	0	1	4	3	7	1	0	2	18	0.63%
9:00:00 PM	0	0	0	0	0	0	0	1	4	3	2	1	0	0	11	0.39%
9:15:00 PM	0	0	0	0	0	0	0	0	0	2	2	1	1	0	6	0.21%
9:30:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	3	0.11%
9:45:00 PM	0	0	0	0	0	0	1	0	0	3	3	0	1	0	8	0.28%
10:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
10:15:00 PM	0	0	0	0	0	0	1	1	1	1	0	2	0	1	7	0.25%
10:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0.07%
10:45:00 PM	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4	0.14%
11:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
11:15:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.11%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.04%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0.07%
PM TOTAL	1	0	3	0	4	24	62	185	393	525	399	158	63	41	1,858	65.49%
PERCENTAGE	0.1%	0.0%	0.2%	0.0%	0.2%	1.3%	3.3%	10.0%	21.2%	28.3%	21.5%	8.5%	3.4%	2.2%		
CUMULATIVE	1	1	4	4	8	32	94	279	672	1,197	1,596	1,754	1,817	1,858		
PERCENTAGE	0.1%	0.1%	0.2%	0.2%	0.4%	1.7%	5.1%	15.0%	36.2%	64.4%	85.9%	94.4%	97.8%	100.0%		

15th Percentile	42	Mean Speed Average	52
50th Percentile	52	10 MPH Pace Speed	51-60
85th Percentile	63	Number in Pace	279
95th Percentile	68	Percent in Pace	15%

DAY TOTAL	11	6	5	3	8	47	89	277	621	830	562	229	95	54	2,837	
PERCENTAGE	0.4%	0.2%	0.2%	0.1%	0.3%	1.7%	3.1%	9.8%	21.9%	29.3%	19.8%	8.1%	3.3%	1.90%	2,837	100.00%
	0.4%	0.6%	0.8%	0.9%	1.2%	2.8%	6.0%	15.7%	37.6%	66.9%	86.7%	94.7%	98.1%	100.00%		
85th Percentile	62															

SPEED1 Avenue 40 between Burr and Kevin .08-09. Combined

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	4	0.07%
12:15:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	2	1	5	0.09%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.04%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.02%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
2:15:00 AM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0.05%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0.05%
3:15:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.04%
3:30:00 AM	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0.04%
3:45:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0.04%
4:00:00 AM	0	0	0	0	1	0	1	1	0	0	1	0	0	0	4	0.07%
4:15:00 AM	0	0	0	0	1	0	0	0	1	1	1	0	1	0	5	0.09%
4:30:00 AM	0	0	0	0	0	0	0	1	2	0	1	0	0	0	4	0.07%
4:45:00 AM	0	0	0	0	0	0	0	0	3	3	2	2	1	0	11	0.20%
5:00:00 AM	0	0	0	0	0	0	0	1	1	2	1	0	0	0	5	0.09%
5:15:00 AM	0	0	0	0	0	0	1	0	5	3	0	0	0	0	9	0.16%
5:30:00 AM	0	0	0	0	1	0	1	2	0	3	0	3	0	0	10	0.18%
5:45:00 AM	0	0	0	0	0	0	0	4	3	4	2	2	2	1	18	0.32%
6:00:00 AM	0	0	0	0	0	0	2	2	4	4	1	3	0	1	17	0.31%
6:15:00 AM	0	0	0	0	0	0	0	7	7	8	1	0	0	1	24	0.43%
6:30:00 AM	0	0	0	0	0	0	1	4	6	8	7	0	0	2	28	0.50%
6:45:00 AM	0	0	0	0	0	0	1	2	6	12	3	5	2	0	31	0.56%
7:00:00 AM	0	0	0	0	0	0	1	10	11	10	5	2	2	1	42	0.76%
7:15:00 AM	0	0	0	0	0	0	1	11	21	16	11	4	1	2	67	1.21%
7:30:00 AM	0	1	0	0	0	0	0	11	28	20	4	3	3	3	73	1.32%
7:45:00 AM	1	0	0	0	0	0	4	13	28	26	19	3	3	3	100	1.80%
8:00:00 AM	0	0	0	0	0	7	14	35	47	56	23	5	1	0	188	3.39%
8:15:00 AM	1	0	0	0	0	0	1	45	76	64	14	3	1	1	206	3.71%
8:30:00 AM	1	0	0	0	0	1	5	30	51	64	18	5	0	1	176	3.17%
8:45:00 AM	0	0	0	0	0	6	14	28	47	27	12	1	1	0	136	2.45%
9:00:00 AM	1	0	0	1	0	0	4	18	33	12	13	1	1	0	84	1.51%
9:15:00 AM	2	0	0	0	0	1	2	15	31	13	9	6	1	1	81	1.46%
9:30:00 AM	0	0	0	0	0	1	3	17	21	18	11	7	1	1	80	1.44%
9:45:00 AM	3	1	0	0	0	0	6	16	33	27	13	5	1	0	105	1.89%
10:00:00 AM	1	0	0	0	0	2	2	13	32	31	6	3	2	0	92	1.66%
10:15:00 AM	1	0	0	0	0	1	4	18	14	22	14	4	2	1	81	1.46%
10:30:00 AM	0	0	0	0	0	0	2	20	27	26	12	3	2	0	92	1.66%
10:45:00 AM	0	0	1	0	0	2	5	15	17	25	15	7	3	1	91	1.64%
11:00:00 AM	0	0	0	0	0	8	7	14	30	20	10	5	0	0	94	1.69%
11:15:00 AM	0	0	0	0	0	4	6	9	28	26	8	5	2	0	88	1.59%
11:30:00 AM	0	3	0	0	0	4	8	23	24	18	7	2	2	0	91	1.64%
11:45:00 AM	0	1	0	1	3	8	6	14	27	19	10	1	4	0	94	1.69%
AM TOTAL	11	6	3	3	6	45	102	402	669	594	255	92	43	21	2,252	40.58%
PERCENTAGE	0.5%	0.3%	0.1%	0.1%	0.3%	2.0%	4.5%	17.9%	29.7%	26.4%	11.3%	4.1%	1.9%	0.9%		
CUMULATIVE	11	17	20	23	29	74	176	578	1,247	1,841	2,096	2,188	2,231	2,252		
PERCENTAGE	0.5%	0.8%	0.9%	1.0%	1.3%	3.3%	7.8%	25.7%	55.4%	81.7%	93.1%	97.2%	99.1%	100.0%		

15th Percentile	38	Mean Speed Average	49
50th Percentile	50	10 MPH Pace Speed	50-59
85th Percentile	60	Number in Pace	270
95th Percentile	67	Percent in Pace	12%

SPEED1 Avenue 40 between Burr and Kevin .08-09. Combined

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	3	2	8	13	32	24	10	3	2	3	100	1.80%

12:15:00 PM	0	0	0	0	0	8	17	19	26	23	12	3	3	4	115	2.07%
12:30:00 PM	0	0	2	0	0	4	5	28	27	20	6	5	2	2	101	1.82%
12:45:00 PM	0	0	1	0	0	2	10	23	27	28	19	7	2	1	120	2.16%
1:00:00 PM	0	0	0	0	1	1	5	26	46	21	5	5	1	1	112	2.02%
1:15:00 PM	0	0	0	0	1	1	6	20	29	26	18	4	4	2	111	2.00%
1:30:00 PM	0	0	0	0	0	3	5	17	25	25	12	6	2	0	95	1.71%
1:45:00 PM	1	0	0	0	2	3	10	26	34	15	5	3	2	1	102	1.84%
2:00:00 PM	0	0	0	0	0	0	9	28	11	23	21	5	3	0	100	1.80%
2:15:00 PM	1	0	0	0	0	5	11	16	16	16	16	3	2	0	86	1.55%
2:30:00 PM	0	0	0	0	0	0	3	18	29	29	19	9	4	5	116	2.09%
2:45:00 PM	0	0	0	0	0	0	3	28	37	29	19	3	1	0	120	2.16%
3:00:00 PM	0	0	0	0	0	1	5	10	37	48	21	10	3	2	137	2.47%
3:15:00 PM	0	0	0	0	0	0	9	24	39	28	19	8	4	0	131	2.36%
3:30:00 PM	0	0	0	0	0	0	3	14	60	61	31	18	0	1	188	3.39%
3:45:00 PM	0	0	0	0	1	3	6	36	58	49	39	9	2	0	203	3.66%
4:00:00 PM	0	0	0	0	1	0	8	17	32	43	27	6	2	2	138	2.49%
4:15:00 PM	0	0	0	0	0	4	4	13	28	25	23	8	1	2	108	1.95%
4:30:00 PM	0	0	0	0	0	0	4	12	25	29	15	8	4	2	99	1.78%
4:45:00 PM	0	0	0	0	1	2	5	8	24	15	13	4	3	2	77	1.39%
5:00:00 PM	0	0	0	0	0	2	4	23	26	25	18	3	1	0	102	1.84%
5:15:00 PM	0	0	0	0	0	1	4	10	20	16	17	6	4	3	81	1.46%
5:30:00 PM	0	0	0	0	0	1	6	15	26	18	9	3	1	0	79	1.42%
5:45:00 PM	1	0	0	0	0	1	3	20	24	20	12	8	1	0	90	1.62%
6:00:00 PM	0	0	0	0	0	0	4	15	23	23	24	4	2	1	96	1.73%
6:15:00 PM	0	0	0	0	0	0	4	6	22	16	7	4	1	3	63	1.14%
6:30:00 PM	0	0	0	0	0	0	1	5	13	18	8	4	1	1	51	0.92%
6:45:00 PM	0	0	0	0	0	1	2	7	12	15	7	7	0	0	51	0.92%
7:00:00 PM	0	0	0	0	0	0	0	8	9	9	7	2	1	3	39	0.70%
7:15:00 PM	0	0	0	0	0	1	3	8	7	8	4	0	0	0	31	0.56%
7:30:00 PM	0	0	0	0	0	0	0	3	9	7	7	1	2	0	29	0.52%
7:45:00 PM	0	0	0	0	0	0	2	4	8	11	4	0	3	0	32	0.58%
8:00:00 PM	0	0	0	0	0	0	0	3	12	5	5	1	1	2	29	0.52%
8:15:00 PM	0	0	0	0	0	0	1	0	9	8	2	4	1	0	25	0.45%
8:30:00 PM	0	0	0	0	0	0	1	2	9	6	1	4	2	2	27	0.49%
8:45:00 PM	0	0	0	0	0	1	1	2	6	4	7	1	0	2	24	0.43%
9:00:00 PM	0	0	0	0	0	0	0	2	4	4	4	2	0	0	16	0.29%
9:15:00 PM	0	0	0	0	0	0	0	1	3	2	2	1	1	0	10	0.18%
9:30:00 PM	0	0	0	0	0	2	1	1	2	3	0	0	1	0	10	0.18%
9:45:00 PM	0	0	0	0	1	0	1	1	2	3	4	0	1	0	13	0.23%
10:00:00 PM	0	0	0	0	0	1	0	0	4	4	0	0	0	1	10	0.18%
10:15:00 PM	0	0	0	0	0	0	3	2	1	2	0	2	0	1	11	0.20%
10:30:00 PM	0	0	0	0	0	0	0	1	2	2	0	0	1	0	6	0.11%
10:45:00 PM	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4	0.07%
11:00:00 PM	0	0	0	0	0	0	0	0	2	0	0	1	0	0	3	0.05%
11:15:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.05%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.02%
11:45:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	3	0.05%
PM TOTAL	3	0	3	0	11	50	177	537	897	809	502	187	72	50	3,298	59.42%
PERCENTAGE	0.1%	0.0%	0.1%	0.0%	0.3%	1.5%	5.4%	16.3%	27.2%	24.5%	15.2%	5.7%	2.2%	1.5%		
CUMULATIVE	3	3	6	6	17	67	244	781	1,678	2,487	2,989	3,176	3,248	3,298		
PERCENTAGE	0.1%	0.1%	0.2%	0.2%	0.5%	2.0%	7.4%	23.7%	50.9%	75.4%	90.6%	96.3%	98.5%	100.0%		

15th Percentile	39	Mean Speed Average	51
50th Percentile	51	10 MPH Pace Speed	49-58
85th Percentile	62	Number in Pace	280
95th Percentile	68	Percent in Pace	8%

DAY TOTAL	14	6	6	3	17	95	279	939	1,566	1,403	757	279	115	71	5,550	
PERCENTAGE	0.3%	0.1%	0.1%	0.1%	0.3%	1.7%	5.0%	16.9%	28.2%	25.3%	13.6%	5.0%	2.1%	1.3%	5,550	100.00%
	0.3%	0.4%	0.5%	0.5%	0.8%	2.5%	7.6%	24.5%	52.7%	78.0%	91.6%	96.6%	98.7%	100.0%		
85th Percentile	61															

SPEED1 Avenue 40 between Burr and Kevin .08-09. Eastbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
1:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.07%
1:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.07%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	1	0	0	0	0	1	0	1	0	0	0	3	0.11%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3	0.11%
4:00:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.07%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4	0.15%
4:45:00 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	0.11%
5:00:00 AM	0	0	0	0	0	0	0	1	1	0	2	1	0	0	5	0.18%
5:15:00 AM	0	0	0	0	0	0	0	4	1	1	0	0	0	1	7	0.25%
5:30:00 AM	0	0	0	0	0	0	1	0	3	1	0	0	0	0	5	0.18%
5:45:00 AM	0	0	0	0	0	0	0	2	3	2	2	0	1	0	10	0.36%
6:00:00 AM	0	0	0	1	0	0	2	4	1	3	1	1	0	0	13	0.47%
6:15:00 AM	0	0	0	0	0	0	0	4	3	2	1	3	0	0	13	0.47%
6:30:00 AM	0	0	0	0	0	2	1	3	7	5	4	0	0	0	22	0.80%
6:45:00 AM	0	0	0	0	0	0	1	5	4	5	1	2	1	0	19	0.69%
7:00:00 AM	0	0	0	0	0	0	0	3	6	6	4	0	2	1	22	0.80%
7:15:00 AM	0	0	0	0	1	1	1	8	15	10	7	3	2	0	48	1.75%
7:30:00 AM	0	0	0	0	0	2	3	17	19	11	2	0	1	0	55	2.00%
7:45:00 AM	0	0	0	0	0	2	4	18	19	18	8	4	0	0	73	2.66%
8:00:00 AM	0	0	0	0	0	0	5	55	55	25	7	1	1	0	149	5.42%
8:15:00 AM	0	0	0	0	0	2	13	33	45	15	10	2	1	0	121	4.40%
8:30:00 AM	0	0	0	0	0	3	8	16	30	16	4	3	2	1	83	3.02%
8:45:00 AM	0	0	0	0	0	3	5	13	24	12	0	1	0	1	59	2.15%
9:00:00 AM	0	0	0	0	0	0	1	12	27	6	2	0	0	0	48	1.75%
9:15:00 AM	0	0	0	0	0	2	7	12	24	5	7	1	0	0	58	2.11%
9:30:00 AM	0	0	0	0	0	1	7	14	19	9	4	0	0	0	54	1.97%
9:45:00 AM	0	0	0	0	0	2	10	13	18	8	2	2	1	0	56	2.04%
10:00:00 AM	0	0	0	0	0	0	6	12	14	10	6	0	1	0	49	1.78%
10:15:00 AM	0	0	0	0	0	0	4	7	19	6	3	0	1	0	40	1.46%
10:30:00 AM	0	0	0	0	1	8	11	25	16	1	2	0	0	0	64	2.33%
10:45:00 AM	0	0	0	0	0	3	2	15	22	8	4	0	0	0	54	1.97%
11:00:00 AM	0	0	0	0	0	4	14	10	19	10	0	0	0	0	57	2.07%
11:15:00 AM	0	0	0	0	0	3	9	12	10	7	1	2	0	0	44	1.60%
11:30:00 AM	0	0	0	0	0	3	1	14	16	9	0	2	1	0	46	1.67%
11:45:00 AM	0	0	0	0	0	0	3	6	16	12	4	0	0	0	41	1.49%
AM TOTAL	0	0	0	2	4	41	119	341	465	228	91	29	15	4	1,339	48.74%
PERCENTAGE	0.0%	0.0%	0.0%	0.1%	0.3%	3.1%	8.9%	25.5%	34.7%	17.0%	6.8%	2.2%	1.1%	0.3%		
CUMULATIVE	0	0	0	2	6	47	166	507	972	1,200	1,291	1,320	1,335	1,339		
PERCENTAGE	0.0%	0.0%	0.0%	0.1%	0.4%	3.5%	12.4%	37.9%	72.6%	89.6%	96.4%	98.6%	99.7%	100.0%		

15th Percentile	38	Mean Speed Average	48
50th Percentile	47	10 MPH Pace Speed	37-46
85th Percentile	56	Number in Pace	270
95th Percentile	62	Percent in Pace	20%

SPEED1 Avenue 40 between Burr and Kevin .08-09. Eastbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	0	12	11	22	8	2	0	0	0	55	2.00%

12:15:00 PM	0	0	0	0	0	1	6	8	23	5	3	0	0	0	46	1.67%
12:30:00 PM	0	0	0	0	0	0	4	19	14	15	4	0	0	0	56	2.04%
12:45:00 PM	0	0	0	0	0	0	1	18	20	5	5	0	3	1	53	1.93%
1:00:00 PM	0	0	0	0	0	0	1	13	21	8	5	0	0	0	48	1.75%
1:15:00 PM	0	1	0	0	0	1	3	10	26	6	6	0	1	0	54	1.97%
1:30:00 PM	0	0	0	0	1	2	4	16	23	7	2	1	0	0	56	2.04%
1:45:00 PM	0	0	0	0	0	1	2	9	9	9	3	1	1	0	35	1.27%
2:00:00 PM	0	0	0	0	0	0	2	14	14	5	4	1	1	0	41	1.49%
2:15:00 PM	0	0	0	0	1	0	6	10	15	8	5	0	1	0	46	1.67%
2:30:00 PM	0	0	0	0	0	3	6	9	22	9	5	0	1	0	55	2.00%
2:45:00 PM	0	0	0	0	0	0	1	4	23	10	0	0	1	0	39	1.42%
3:00:00 PM	0	0	0	0	0	0	7	7	21	16	2	3	0	0	56	2.04%
3:15:00 PM	0	0	0	0	1	0	3	20	33	21	6	1	0	0	85	3.09%
3:30:00 PM	0	0	0	0	0	0	3	19	29	16	10	0	0	0	77	2.80%
3:45:00 PM	0	0	0	0	0	0	2	15	28	9	7	0	0	0	61	2.22%
4:00:00 PM	0	0	0	0	0	0	1	7	16	13	6	2	0	1	46	1.67%
4:15:00 PM	0	0	0	1	0	4	2	8	14	10	4	2	2	1	48	1.75%
4:30:00 PM	0	0	0	0	0	0	1	6	13	9	6	0	0	0	35	1.27%
4:45:00 PM	0	0	0	0	0	1	1	12	5	10	4	2	0	0	35	1.27%
5:00:00 PM	0	0	0	0	0	1	1	2	18	9	1	1	0	1	34	1.24%
5:15:00 PM	0	0	0	0	0	2	1	20	11	5	6	2	0	0	47	1.71%
5:30:00 PM	0	0	0	0	0	0	2	10	19	12	6	0	0	0	49	1.78%
5:45:00 PM	0	0	0	0	0	0	1	2	22	10	4	0	1	0	40	1.46%
6:00:00 PM	0	0	0	0	0	0	2	6	18	10	3	0	0	0	39	1.42%
6:15:00 PM	0	0	0	0	0	0	5	4	12	8	2	0	1	0	32	1.16%
6:30:00 PM	0	0	0	0	1	1	1	2	6	8	1	0	0	0	20	0.73%
6:45:00 PM	0	0	0	0	0	1	2	4	4	4	1	0	1	0	17	0.62%
7:00:00 PM	0	0	0	0	0	1	0	3	7	4	0	1	0	0	16	0.58%
7:15:00 PM	0	0	0	0	0	0	2	1	6	1	2	0	0	0	12	0.44%
7:30:00 PM	0	0	0	0	0	0	1	1	2	1	0	0	0	0	5	0.18%
7:45:00 PM	0	0	0	0	0	0	0	2	3	3	1	0	0	0	9	0.33%
8:00:00 PM	0	0	0	0	0	0	2	2	3	4	3	0	0	0	14	0.51%
8:15:00 PM	0	0	0	0	0	0	0	1	2	3	0	0	0	0	6	0.22%
8:30:00 PM	0	0	0	0	0	0	0	1	1	1	1	0	1	0	5	0.18%
8:45:00 PM	0	0	0	0	0	0	1	2	2	2	2	0	0	0	9	0.33%
9:00:00 PM	0	0	0	0	0	0	1	0	1	2	1	0	0	0	5	0.18%
9:15:00 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0.11%
9:30:00 PM	0	0	0	0	0	1	2	0	2	1	0	0	0	0	6	0.22%
9:45:00 PM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.11%
10:00:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	1	5	0.18%
10:15:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.07%
10:30:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.07%
10:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
11:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
PM TOTAL	0	1	0	1	4	20	95	302	533	289	125	18	15	5	1,408	51.26%
PERCENTAGE	0.0%	0.1%	0.0%	0.1%	0.3%	1.4%	6.7%	21.4%	37.9%	20.5%	8.9%	1.3%	1.1%	0		
CUMULATIVE	0	1	1	2	6	26	121	423	956	1,245	1,370	1,388	1,403	1,408		
PERCENTAGE	0.0%	0.1%	0.1%	0.1%	0.4%	1.8%	8.6%	30.0%	67.9%	88.4%	97.3%	98.6%	99.6%	100.0%		

15th Percentile	41	Mean Speed Average	49
50th Percentile	49	10 MPH Pace Speed	49-58
85th Percentile	57	Number in Pace	270
95th Percentile	60	Percent in Pace	19%

DAY TOTAL	0	1	0	3	8	61	214	643	998	517	216	47	30	9	2,747	
PERCENTAGE	0.0%	0.0%	0.0%	0.1%	0.3%	2.2%	7.8%	23.4%	36.3%	18.8%	7.9%	1.7%	1.1%	0.33%	2,747	100.00%
	0.0%	0.0%	0.0%	0.1%	0.4%	2.7%	10.4%	33.9%	70.2%	89.0%	96.9%	98.6%	99.7%	100.00%		
85th Percentile	57															

#N/A
Westbound

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.07%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	1	0	0	0	0	2	0	0	0	1	4	0.14%
4:00:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	3	0.11%
4:15:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.07%
4:30:00 AM	0	0	0	0	0	0	0	1	0	0	1	1	0	0	3	0.11%
4:45:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	0.11%
5:00:00 AM	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	0.11%
5:15:00 AM	0	0	0	0	0	0	0	2	0	1	1	0	2	0	6	0.21%
5:30:00 AM	0	0	0	0	0	0	0	1	0	5	0	1	0	0	7	0.25%
5:45:00 AM	0	0	0	0	0	0	0	1	1	1	1	0	2	0	6	0.21%
6:00:00 AM	0	0	0	0	0	0	0	1	1	1	2	0	0	0	5	0.18%
6:15:00 AM	0	0	0	0	0	2	0	0	0	1	3	3	0	0	9	0.32%
6:30:00 AM	0	0	0	0	0	0	0	0	1	3	1	2	1	0	8	0.28%
6:45:00 AM	0	0	0	2	0	1	2	1	6	4	4	0	2	0	22	0.78%
7:00:00 AM	0	0	0	0	0	2	4	8	2	1	4	2	0	1	24	0.85%
7:15:00 AM	2	0	0	0	0	0	0	3	4	7	1	0	0	0	17	0.60%
7:30:00 AM	0	0	0	0	1	2	2	8	8	7	8	4	1	0	41	1.45%
7:45:00 AM	0	0	0	0	1	0	3	10	6	7	3	3	2	0	35	1.24%
8:00:00 AM	0	1	0	0	0	3	3	7	6	11	4	1	1	1	38	1.35%
8:15:00 AM	14	0	0	0	0	5	16	12	8	23	30	6	1	1	116	4.11%
8:30:00 AM	0	0	0	0	0	0	0	5	27	19	16	11	1	0	79	2.80%
8:45:00 AM	0	0	0	0	0	1	3	3	19	17	15	9	2	3	72	2.55%
9:00:00 AM	0	0	0	0	0	5	4	3	3	6	8	5	3	0	37	1.31%
9:15:00 AM	0	0	0	0	0	6	2	7	4	2	5	2	3	0	31	1.10%
9:30:00 AM	0	0	0	0	0	0	2	3	5	6	5	9	1	3	34	1.21%
9:45:00 AM	0	1	0	0	0	0	3	5	5	15	9	1	0	0	39	1.38%
10:00:00 AM	0	0	0	0	3	6	2	5	8	10	5	3	2	1	45	1.60%
10:15:00 AM	0	0	0	0	0	0	3	4	9	9	8	3	1	1	38	1.35%
10:30:00 AM	0	0	0	0	0	0	4	3	0	10	9	3	0	1	30	1.06%
10:45:00 AM	0	2	0	0	0	2	3	7	12	6	5	2	1	1	41	1.45%
11:00:00 AM	0	0	1	0	0	1	4	4	8	11	6	6	2	0	43	1.52%
11:15:00 AM	0	0	0	0	0	0	4	6	15	13	3	2	2	0	45	1.60%
11:30:00 AM	0	0	0	0	0	0	2	1	9	14	8	3	2	1	40	1.42%
11:45:00 AM	1	1	1	0	0	1	2	4	16	18	10	3	0	2	59	2.09%
AM TOTAL	17	5	2	2	6	37	69	120	184	234	178	87	33	17	991	35.14%
PERCENTAGE	1.7%	0.5%	0.2%	0.2%	0.6%	3.7%	7.0%	12.1%	18.6%	23.6%	18.0%	8.8%	3.3%	42.5%		
CUMULATIVE	17	22	24	26	32	69	138	258	442	676	854	941	974	991		
PERCENTAGE	1.7%	2.2%	2.4%	2.6%	3.2%	7.0%	13.9%	26.0%	44.6%	68.2%	86.2%	95.0%	98.3%	100.0%		

15th Percentile	40	Mean Speed Average	49
50th Percentile	50	10 MPH Pace Speed	49-58
85th Percentile	60	Number in Pace	272
95th Percentile	64	Percent in Pace	27%

#N/A
Westbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	4	0	0	0	0	0	5	5	8	9	15	5	2	0	53	1.88%

12:15:00 PM	0	0	0	0	0	2	2	3	20	12	17	2	0	1	59	2.09%
12:30:00 PM	0	0	0	0	0	0	0	10	10	22	15	3	2	0	62	2.20%
12:45:00 PM	0	0	0	0	0	2	2	4	18	10	14	3	3	2	58	2.06%
1:00:00 PM	0	0	0	0	0	0	2	4	17	10	2	4	1	1	41	1.45%
1:15:00 PM	0	0	0	0	0	0	0	1	7	12	13	5	3	3	44	1.56%
1:30:00 PM	0	0	1	0	0	0	2	3	9	21	11	3	2	1	53	1.88%
1:45:00 PM	0	0	0	0	0	0	0	3	16	24	11	3	1	0	58	2.06%
2:00:00 PM	0	1	0	0	0	1	1	1	7	12	12	7	0	0	42	1.49%
2:15:00 PM	0	0	0	0	0	0	2	2	7	14	16	5	1	0	47	1.67%
2:30:00 PM	0	0	0	0	0	0	1	0	13	16	13	3	1	1	48	1.70%
2:45:00 PM	2	0	1	0	0	0	1	10	22	16	11	4	1	1	69	2.45%
3:00:00 PM	0	0	0	0	0	1	0	3	11	24	9	2	0	1	51	1.81%
3:15:00 PM	0	0	0	0	0	0	0	2	5	22	11	5	4	0	49	1.74%
3:30:00 PM	0	4	0	0	0	0	0	5	22	43	28	10	6	2	120	4.26%
3:45:00 PM	0	0	0	0	0	0	8	19	37	48	24	3	2	2	143	5.07%
4:00:00 PM	0	0	0	0	0	0	0	2	20	28	28	11	2	0	91	3.23%
4:15:00 PM	0	0	0	0	0	0	1	2	11	22	14	9	2	1	62	2.20%
4:30:00 PM	0	0	0	0	0	0	1	3	8	14	12	7	1	2	48	1.70%
4:45:00 PM	0	0	0	0	0	0	1	3	8	14	19	3	2	1	51	1.81%
5:00:00 PM	0	0	0	0	0	0	0	6	5	10	11	9	1	1	43	1.52%
5:15:00 PM	0	0	0	0	0	0	0	3	6	13	17	11	3	0	53	1.88%
5:30:00 PM	0	0	0	0	0	0	0	0	8	17	12	5	5	3	50	1.77%
5:45:00 PM	0	0	0	0	0	0	0	12	19	16	8	1	0	0	56	1.99%
6:00:00 PM	0	0	0	0	0	1	0	2	13	19	7	5	4	1	52	1.84%
6:15:00 PM	0	0	0	0	0	1	3	4	8	10	8	4	0	0	38	1.35%
6:30:00 PM	0	0	0	0	0	0	0	0	6	9	12	4	2	0	33	1.17%
6:45:00 PM	0	0	0	0	0	0	0	2	6	11	5	1	1	3	29	1.03%
7:00:00 PM	0	0	0	0	0	0	0	1	5	9	5	1	1	1	23	0.82%
7:15:00 PM	0	0	0	0	1	1	0	0	5	5	6	2	0	0	20	0.71%
7:30:00 PM	0	0	0	0	0	0	0	0	6	5	1	0	0	0	12	0.43%
7:45:00 PM	0	0	0	0	1	0	0	0	0	7	2	2	2	0	14	0.50%
8:00:00 PM	0	0	0	0	0	0	0	1	8	10	8	4	0	1	32	1.13%
8:15:00 PM	0	0	0	0	0	0	0	0	1	4	2	4	1	0	12	0.43%
8:30:00 PM	0	0	0	0	0	0	0	1	7	6	3	2	0	0	19	0.67%
8:45:00 PM	0	0	0	0	0	0	0	1	3	3	1	2	1	0	11	0.39%
9:00:00 PM	0	0	0	0	0	0	0	0	7	4	7	2	0	0	20	0.71%
9:15:00 PM	0	0	0	0	1	0	0	0	2	5	2	0	2	0	12	0.43%
9:30:00 PM	0	0	0	0	0	0	1	2	0	5	3	0	1	0	12	0.43%
9:45:00 PM	0	0	0	0	0	0	1	1	0	1	4	6	0	1	14	0.50%
10:00:00 PM	0	0	0	0	0	0	0	0	2	1	1	0	1	1	6	0.21%
10:15:00 PM	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4	0.14%
10:30:00 PM	0	0	0	0	0	0	1	0	2	0	1	0	0	0	4	0.14%
10:45:00 PM	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4	0.14%
11:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.07%
11:30:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	3	0.11%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.04%
PM TOTAL	6	5	2	0	3	9	36	121	400	565	426	162	63	31	1,829	64.86%
PERCENTAGE	0.3%	0.3%	0.1%	0.0%	0.2%	0.5%	2.0%	6.6%	21.9%	30.9%	23.3%	8.9%	3.4%	0		
CUMULATIVE	6	11	13	13	16	25	61	182	582	1,147	1,573	1,735	1,798	1,829		
PERCENTAGE	0.3%	0.6%	0.7%	0.7%	0.9%	1.4%	3.3%	10.0%	31.8%	62.7%	86.0%	94.9%	98.3%	100.0%		

15th Percentile	43	Mean Speed Average	53
50th Percentile	53	10 MPH Pace Speed	51-60
85th Percentile	63	Number in Pace	283
95th Percentile	68	Percent in Pace	15%

DAY TOTAL	23	10	4	2	9	46	105	241	584	799	604	249	96	48	2,820	
PERCENTAGE	0.8%	0.4%	0.1%	0.1%	0.3%	1.6%	3.7%	8.5%	20.7%	28.3%	21.4%	8.8%	3.4%	1.70%	2,820	100.00%
	0.8%	1.2%	1.3%	1.4%	1.7%	3.3%	7.1%	15.6%	36.3%	64.6%	86.1%	94.9%	98.3%	100.00%		
85th Percentile	61															

SPEED1 Avenue 40 between Burr and Kevin .08-09. Combined

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.04%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
1:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.04%
1:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.04%
1:30:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.04%
1:45:00 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.04%
2:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
2:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
2:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
3:00:00 AM	0	0	0	1	0	0	0	0	1	0	1	0	0	0	3	0.05%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	2	0	0	0	2	2	0	0	0	1	7	0.13%
4:00:00 AM	0	0	0	0	0	0	1	2	1	1	0	0	0	0	5	0.09%
4:15:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.04%
4:30:00 AM	0	0	0	0	0	0	0	1	2	1	2	1	0	0	7	0.13%
4:45:00 AM	0	0	0	0	0	0	0	0	0	3	1	1	1	0	6	0.11%
5:00:00 AM	0	0	0	0	0	0	0	1	1	1	3	2	0	0	8	0.14%
5:15:00 AM	0	0	0	0	0	0	0	6	1	2	1	0	2	1	13	0.23%
5:30:00 AM	0	0	0	0	0	0	1	1	3	6	0	1	0	0	12	0.22%
5:45:00 AM	0	0	0	0	0	0	0	3	4	3	3	0	3	0	16	0.29%
6:00:00 AM	0	0	0	1	0	0	2	5	2	4	3	1	0	0	18	0.32%
6:15:00 AM	0	0	0	0	0	2	0	4	3	3	4	6	0	0	22	0.40%
6:30:00 AM	0	0	0	0	0	2	1	3	8	8	5	2	1	0	30	0.54%
6:45:00 AM	0	0	0	2	0	1	3	6	10	9	5	2	3	0	41	0.74%
7:00:00 AM	0	0	0	0	0	2	4	11	8	7	8	2	2	2	46	0.83%
7:15:00 AM	2	0	0	0	1	1	1	11	19	17	8	3	2	0	65	1.17%
7:30:00 AM	0	0	0	0	1	4	5	25	27	18	10	4	2	0	96	1.72%
7:45:00 AM	0	0	0	0	1	2	7	28	25	25	11	7	2	0	108	1.94%
8:00:00 AM	0	1	0	0	0	3	8	62	61	36	11	2	2	1	187	3.36%
8:15:00 AM	14	0	0	0	0	7	29	45	53	38	40	8	2	1	237	4.26%
8:30:00 AM	0	0	0	0	0	3	8	21	57	35	20	14	3	1	162	2.91%
8:45:00 AM	0	0	0	0	0	4	8	16	43	29	15	10	2	4	131	2.35%
9:00:00 AM	0	0	0	0	0	5	5	15	30	12	10	5	3	0	85	1.53%
9:15:00 AM	0	0	0	0	0	8	9	19	28	7	12	3	3	0	89	1.60%
9:30:00 AM	0	0	0	0	0	1	9	17	24	15	9	9	1	3	88	1.58%
9:45:00 AM	0	1	0	0	0	2	13	18	23	23	11	3	1	0	95	1.71%
10:00:00 AM	0	0	0	0	3	6	8	17	22	20	11	3	3	1	94	1.69%
10:15:00 AM	0	0	0	0	0	0	7	11	28	15	11	3	2	1	78	1.40%
10:30:00 AM	0	0	0	0	1	8	15	28	16	11	11	3	0	1	94	1.69%
10:45:00 AM	0	2	0	0	0	5	5	22	34	14	9	2	1	1	95	1.71%
11:00:00 AM	0	0	1	0	0	5	18	14	27	21	6	6	2	0	100	1.80%
11:15:00 AM	0	0	0	0	0	3	13	18	25	20	4	4	2	0	89	1.60%
11:30:00 AM	0	0	0	0	0	3	3	15	25	23	8	5	3	1	86	1.54%
11:45:00 AM	1	1	1	0	0	1	5	10	32	30	14	3	0	2	100	1.80%
AM TOTAL	17	5	2	4	10	78	188	461	649	462	269	116	48	21	2,330	41.85%
PERCENTAGE	0.7%	0.2%	0.1%	0.2%	0.4%	3.3%	8.1%	19.8%	27.9%	19.8%	11.5%	5.0%	2.1%	0.9%		
CUMULATIVE	17	22	24	28	38	116	304	765	1,414	1,876	2,145	2,261	2,309	2,330		
PERCENTAGE	0.7%	0.9%	1.0%	1.2%	1.6%	5.0%	13.0%	32.8%	60.7%	80.5%	92.1%	97.0%	99.1%	100.0%		

15th Percentile	37	Mean Speed Average	48
50th Percentile	49	10 MPH Pace Speed	39-48
85th Percentile	61	Number in Pace	277
95th Percentile	67	Percent in Pace	12%

SPEED1 Avenue 40 between Burr and Kevin .08-09. Combined

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES

12:00:00 PM	4	0	0	0	0	0	17	16	30	17	17	5	2	0	108	1.94%
12:15:00 PM	0	0	0	0	0	3	8	11	43	17	20	2	0	1	105	1.89%
12:30:00 PM	0	0	0	0	0	0	4	29	24	37	19	3	2	0	118	2.12%
12:45:00 PM	0	0	0	0	0	2	3	22	38	15	19	3	6	3	111	1.99%
1:00:00 PM	0	0	0	0	0	0	3	17	38	18	7	4	1	1	89	1.60%
1:15:00 PM	0	1	0	0	0	1	3	11	33	18	19	5	4	3	98	1.76%
1:30:00 PM	0	0	1	0	1	2	6	19	32	28	13	4	2	1	109	1.96%
1:45:00 PM	0	0	0	0	0	1	2	12	25	33	14	4	2	0	93	1.67%
2:00:00 PM	0	1	0	0	0	1	3	15	21	17	16	8	1	0	83	1.49%
2:15:00 PM	0	0	0	0	1	0	8	12	22	22	21	5	2	0	93	1.67%
2:30:00 PM	0	0	0	0	0	3	7	9	35	25	18	3	2	1	103	1.85%
2:45:00 PM	2	0	1	0	0	0	2	14	45	26	11	4	2	1	108	1.94%
3:00:00 PM	0	0	0	0	0	1	7	10	32	40	11	5	0	1	107	1.92%
3:15:00 PM	0	0	0	0	1	0	3	22	38	43	17	6	4	0	134	2.41%
3:30:00 PM	0	4	0	0	0	0	3	24	51	59	38	10	6	2	197	3.54%
3:45:00 PM	0	0	0	0	0	0	10	34	65	57	31	3	2	2	204	3.66%
4:00:00 PM	0	0	0	0	0	0	1	9	36	41	34	13	2	1	137	2.46%
4:15:00 PM	0	0	0	1	0	4	3	10	25	32	18	11	4	2	110	1.98%
4:30:00 PM	0	0	0	0	0	0	2	9	21	23	18	7	1	2	83	1.49%
4:45:00 PM	0	0	0	0	0	1	2	15	13	24	23	5	2	1	86	1.54%
5:00:00 PM	0	0	0	0	0	1	1	8	23	19	12	10	1	2	77	1.38%
5:15:00 PM	0	0	0	0	0	2	1	23	17	18	23	13	3	0	100	1.80%
5:30:00 PM	0	0	0	0	0	0	2	10	27	29	18	5	5	3	99	1.78%
5:45:00 PM	0	0	0	0	0	0	1	14	41	26	12	1	1	0	96	1.72%
6:00:00 PM	0	0	0	0	0	1	2	8	31	29	10	5	4	1	91	1.63%
6:15:00 PM	0	0	0	0	0	1	8	8	20	18	10	4	1	0	70	1.26%
6:30:00 PM	0	0	0	0	1	1	1	2	12	17	13	4	2	0	53	0.95%
6:45:00 PM	0	0	0	0	0	1	2	6	10	15	6	1	2	3	46	0.83%
7:00:00 PM	0	0	0	0	0	1	0	4	12	13	5	2	1	1	39	0.70%
7:15:00 PM	0	0	0	0	1	1	2	1	11	6	8	2	0	0	32	0.57%
7:30:00 PM	0	0	0	0	0	0	1	1	8	6	1	0	0	0	17	0.31%
7:45:00 PM	0	0	0	0	1	0	0	2	3	10	3	2	2	0	23	0.41%
8:00:00 PM	0	0	0	0	0	0	2	3	11	14	11	4	0	1	46	0.83%
8:15:00 PM	0	0	0	0	0	0	0	1	3	7	2	4	1	0	18	0.32%
8:30:00 PM	0	0	0	0	0	0	0	2	8	7	4	2	1	0	24	0.43%
8:45:00 PM	0	0	0	0	0	0	1	3	5	5	3	2	1	0	20	0.36%
9:00:00 PM	0	0	0	0	0	0	1	0	8	6	8	2	0	0	25	0.45%
9:15:00 PM	0	0	0	0	1	0	0	0	4	6	2	0	2	0	15	0.27%
9:30:00 PM	0	0	0	0	0	1	3	2	2	6	3	0	1	0	18	0.32%
9:45:00 PM	0	0	0	0	0	0	2	2	1	1	4	6	0	1	17	0.31%
10:00:00 PM	0	0	0	0	0	0	1	1	2	2	1	1	1	2	11	0.20%
10:15:00 PM	0	0	0	0	0	0	1	1	2	1	1	0	0	0	6	0.11%
10:30:00 PM	0	0	0	0	0	0	1	0	2	0	3	0	0	0	6	0.11%
10:45:00 PM	0	0	0	0	0	0	0	1	3	0	1	0	0	0	5	0.09%
11:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.02%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.04%
11:30:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	3	0.05%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.02%
PM TOTAL	6	6	2	1	7	29	131	423	933	854	551	180	78	36	3,237	58.15%
PERCENTAGE	0.2%	0.2%	0.1%	0.0%	0.2%	0.9%	4.0%	13.1%	28.8%	26.4%	17.0%	5.6%	2.4%	1.1%		
CUMULATIVE	6	12	14	15	22	51	182	605	1,538	2,392	2,943	3,123	3,201	3,237		
PERCENTAGE	0.2%	0.4%	0.4%	0.5%	0.7%	1.6%	5.6%	18.7%	47.5%	73.9%	90.9%	96.5%	98.9%	100.0%		

15th Percentile	40	Mean Speed Average	51
50th Percentile	51	10 MPH Pace Speed	39-48
85th Percentile	62	Number in Pace	273
95th Percentile	70	Percent in Pace	8%

DAY TOTAL	23	11	4	5	17	107	319	884	1,582	1,316	820	296	126	57	5,567	100.00%
PERCENTAGE	0.4%	0.2%	0.1%	0.1%	0.3%	1.9%	5.7%	15.9%	28.4%	23.6%	14.7%	5.3%	2.3%	1.0%	5,567	100.00%
	0.4%	0.6%	0.7%	0.8%	1.1%	3.0%	8.7%	24.6%	53.0%	76.7%	91.4%	96.7%	99.0%	100.0%		
85th Percentile	62															

SPEED2 Madison between Sun City and Avenue 40 .07. Northbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:30:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.15%
12:45:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0.23%
1:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.08%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.15%
2:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08%
2:15:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0.15%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.08%
3:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
3:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
3:45:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
4:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.08%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:45:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0.15%
5:00:00 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3	0.23%
5:15:00 AM	0	0	0	1	0	0	1	2	0	0	0	0	0	0	4	0.30%
5:30:00 AM	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4	0.30%
5:45:00 AM	0	0	0	0	0	1	3	4	1	0	0	0	0	0	9	0.69%
6:00:00 AM	0	0	0	1	3	1	2	1	1	1	0	0	0	0	10	0.76%
6:15:00 AM	0	0	0	0	0	2	4	2	0	1	1	0	0	0	10	0.76%
6:30:00 AM	0	0	0	0	1	3	2	2	1	0	0	0	0	0	9	0.69%
6:45:00 AM	0	0	0	0	0	1	1	2	1	1	0	0	0	0	6	0.46%
7:00:00 AM	0	0	0	0	0	0	3	2	0	0	0	0	0	0	5	0.38%
7:15:00 AM	0	0	1	0	2	2	3	3	1	1	0	0	0	0	13	0.99%
7:30:00 AM	0	0	0	0	0	3	1	2	4	0	1	1	1	0	13	0.99%
7:45:00 AM	0	0	0	2	0	2	4	4	3	2	1	0	0	0	18	1.37%
8:00:00 AM	0	0	0	0	1	0	9	12	13	6	2	2	1	0	46	3.50%
8:15:00 AM	0	2	0	0	2	1	11	28	15	7	2	0	0	0	68	5.18%
8:30:00 AM	0	0	0	0	2	6	3	11	7	0	0	0	2	0	31	2.36%
8:45:00 AM	0	0	0	0	2	3	9	2	2	1	0	0	0	0	19	1.45%
9:00:00 AM	0	0	0	0	0	0	1	8	7	1	0	0	0	0	17	1.29%
9:15:00 AM	0	0	0	0	0	2	2	3	5	2	0	0	0	0	14	1.07%
9:30:00 AM	0	0	0	0	0	5	4	4	2	2	0	0	0	0	17	1.29%
9:45:00 AM	0	0	0	0	0	7	6	1	2	0	0	0	0	0	16	1.22%
10:00:00 AM	0	0	0	1	4	1	5	5	0	0	0	0	0	0	16	1.22%
10:15:00 AM	0	0	0	0	2	1	5	4	2	1	0	0	0	0	15	1.14%
10:30:00 AM	0	0	0	0	2	6	1	5	1	2	0	0	0	0	17	1.29%
10:45:00 AM	0	0	0	0	0	10	9	1	1	0	0	0	0	0	21	1.60%
11:00:00 AM	0	0	0	0	3	4	5	6	1	2	0	0	0	0	21	1.60%
11:15:00 AM	1	0	0	0	1	8	6	4	3	0	0	0	0	0	23	1.75%
11:30:00 AM	0	1	0	0	0	2	6	5	2	2	0	0	0	0	18	1.37%
11:45:00 AM	2	1	0	0	1	1	8	1	4	2	0	0	0	0	20	1.52%
AM TOTAL	3	4	1	6	29	77	118	134	82	34	7	3	4	0	502	38.23%
PERCENTAGE	0.6%	0.8%	0.2%	1.2%	5.8%	15.3%	23.5%	26.7%	16.3%	6.8%	1.4%	0.6%	0.8%	0.0%		
CUMULATIVE	3	7	8	14	43	120	238	372	454	488	495	498	502	502		
PERCENTAGE	0.6%	1.4%	1.6%	2.8%	8.6%	23.9%	47.4%	74.1%	90.4%	97.2%	98.6%	99.2%	100.0%	100.0%		

15th Percentile	34	Mean Speed Average	41
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	49	Number in Pace	260
95th Percentile	53	Percent in Pace	52%

SPEED2 Madison between Sun City and Avenue 40 .07. Northbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	1	9	8	1	1	1	0	0	0	23	1.75%
12:15:00 PM	0	2	0	0	0	6	10	5	4	0	0	0	0	0	27	2.06%
12:30:00 PM	0	0	0	1	0	3	6	3	2	0	0	0	0	0	15	1.14%

12:45:00 PM	0	0	0	0	0	9	4	3	0	0	1	0	0	0	17	1.29%
1:00:00 PM	0	1	1	0	1	8	8	6	2	0	0	0	0	1	28	2.13%
1:15:00 PM	0	1	0	0	1	3	10	1	3	1	0	0	0	0	20	1.52%
1:30:00 PM	0	1	0	0	2	8	13	4	3	1	0	0	0	0	32	2.44%
1:45:00 PM	0	0	0	1	0	4	9	5	2	2	0	0	0	0	23	1.75%
2:00:00 PM	1	0	0	0	1	4	4	1	2	1	2	0	0	0	16	1.22%
2:15:00 PM	0	1	2	1	1	0	8	3	4	1	1	0	0	0	22	1.68%
2:30:00 PM	0	0	3	0	7	6	8	7	3	3	0	0	0	0	37	2.82%
2:45:00 PM	0	0	0	0	0	9	11	5	7	1	0	0	1	0	34	2.59%
3:00:00 PM	0	0	0	0	0	5	5	6	7	3	0	0	0	0	26	1.98%
3:15:00 PM	1	0	0	0	1	10	17	15	11	3	3	0	0	0	61	4.65%
3:30:00 PM	0	0	0	0	1	3	9	15	12	6	4	0	0	0	50	3.81%
3:45:00 PM	0	0	0	1	1	4	7	13	8	2	1	0	0	0	37	2.82%
4:00:00 PM	0	0	0	1	1	3	8	4	4	0	1	1	0	0	23	1.75%
4:15:00 PM	0	1	1	0	1	5	8	5	3	0	0	0	0	0	24	1.83%
4:30:00 PM	0	0	0	0	1	6	2	3	5	3	0	1	0	0	21	1.60%
4:45:00 PM	0	0	0	0	0	2	3	5	2	1	0	0	0	0	13	0.99%
5:00:00 PM	0	0	2	0	1	6	12	7	4	0	0	0	0	0	32	2.44%
5:15:00 PM	0	0	0	0	0	5	5	3	3	1	1	1	0	0	19	1.45%
5:30:00 PM	0	0	0	0	0	4	8	6	6	1	2	0	0	0	27	2.06%
5:45:00 PM	0	0	0	0	0	8	6	2	4	0	0	0	0	0	20	1.52%
6:00:00 PM	0	0	0	0	1	5	5	6	1	0	0	0	0	0	18	1.37%
6:15:00 PM	0	0	0	0	2	9	3	1	1	1	1	0	0	0	18	1.37%
6:30:00 PM	0	0	0	0	0	2	4	3	1	0	0	0	0	0	10	0.76%
6:45:00 PM	0	0	0	0	1	4	1	4	2	1	0	0	0	0	13	0.99%
7:00:00 PM	0	0	0	0	1	4	4	4	2	0	0	0	0	0	15	1.14%
7:15:00 PM	0	0	0	0	0	1	2	4	1	0	0	0	0	0	8	0.61%
7:30:00 PM	0	0	1	0	0	5	2	1	1	0	1	0	0	0	11	0.84%
7:45:00 PM	0	0	0	0	0	4	4	1	1	0	0	0	0	0	10	0.76%
8:00:00 PM	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5	0.38%
8:15:00 PM	0	0	0	0	1	2	5	1	0	0	0	0	0	0	9	0.69%
8:30:00 PM	0	0	0	0	0	2	1	2	0	0	0	0	0	0	5	0.38%
8:45:00 PM	0	0	0	0	0	2	2	1	3	0	0	0	0	0	8	0.61%
9:00:00 PM	0	0	0	0	1	2	1	1	1	0	0	0	0	0	6	0.46%
9:15:00 PM	0	0	0	0	0	1	0	2	1	0	0	0	0	0	4	0.30%
9:30:00 PM	0	0	0	0	0	2	3	0	1	0	0	0	0	0	6	0.46%
9:45:00 PM	0	0	0	0	2	1	0	1	0	0	0	0	0	0	4	0.30%
10:00:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.15%
10:15:00 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3	0.23%
10:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.08%
10:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:00:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.15%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
11:30:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
11:45:00 PM	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4	0.30%
PM TOTAL	2	7	10	6	30	172	233	173	121	33	19	3	1	1	811	61.77%
PERCENTAGE	0.2%	0.9%	1.2%	0.7%	3.7%	21.2%	28.7%	21.3%	14.9%	4.1%	2.3%	0.4%	0.1%	0.1%		
CUMULATIVE	2	9	19	25	55	227	460	633	754	787	806	809	810	811		
PERCENTAGE	0.2%	1.1%	2.3%	3.1%	6.8%	28.0%	56.7%	78.1%	93.0%	97.0%	99.4%	99.8%	99.9%	100.0%		

15th Percentile	33	Mean Speed Average	40
50th Percentile	40	10 MPH Pace Speed	36-45
85th Percentile	48	Number in Pace	287
95th Percentile	53	Percent in Pace	35%

DAY TOTAL	5	11	11	12	59	249	351	307	203	67	26	6	5	1	1,313	
PERCENTAGE	0.4%	0.8%	0.8%	0.9%	4.5%	19.0%	26.7%	23.4%	15.5%	5.1%	2.0%	0.5%	0.4%	0.1%	1,313	100.00%
	0.4%	1.2%	2.1%	3.0%	7.5%	26.4%	53.2%	76.5%	92.0%	97.1%	99.1%	99.5%	99.9%	100.0%		
85th Percentile	48															

SPEED2 Madison between Sun City and Avenue 40 .07. Southbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.15%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.08%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08%
1:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0.15%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
3:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.15%
3:30:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.15%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.15%
4:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.15%
4:30:00 AM	0	0	1	0	0	0	1	0	1	0	0	0	0	0	3	0.23%
4:45:00 AM	0	0	0	0	1	0	0	1	0	1	1	0	0	0	4	0.30%
5:00:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.15%
5:15:00 AM	0	0	0	0	0	3	0	0	0	0	0	2	0	0	5	0.38%
5:30:00 AM	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4	0.30%
5:45:00 AM	0	0	0	0	0	1	1	0	0	1	0	0	0	0	3	0.23%
6:00:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.15%
6:15:00 AM	0	0	0	0	0	0	0	1	1	3	2	0	0	0	7	0.53%
6:30:00 AM	0	0	0	0	1	2	0	5	1	1	1	0	0	0	11	0.84%
6:45:00 AM	0	0	0	0	0	1	1	4	2	0	0	0	1	1	10	0.76%
7:00:00 AM	0	1	0	1	0	0	0	5	3	0	2	2	0	0	14	1.07%
7:15:00 AM	0	0	0	0	0	3	7	8	4	3	4	0	3	0	32	2.44%
7:30:00 AM	0	0	0	0	0	1	1	3	4	5	4	1	1	0	20	1.52%
7:45:00 AM	0	0	0	0	0	1	2	4	9	9	5	0	0	0	30	2.29%
8:00:00 AM	0	0	0	0	0	1	5	8	10	7	4	1	0	0	36	2.74%
8:15:00 AM	0	0	0	0	0	0	6	10	15	7	3	4	1	0	46	3.51%
8:30:00 AM	0	0	0	0	0	6	3	7	6	6	0	1	2	0	31	2.36%
8:45:00 AM	0	0	0	0	2	0	7	7	6	3	1	0	0	0	26	1.98%
9:00:00 AM	0	0	0	0	0	5	6	3	3	0	0	0	0	0	17	1.30%
9:15:00 AM	0	0	0	0	0	0	1	10	3	6	3	0	0	0	23	1.75%
9:30:00 AM	0	0	0	0	0	5	0	7	5	2	3	0	0	0	22	1.68%
9:45:00 AM	0	0	0	0	0	1	1	4	4	3	0	1	0	0	14	1.07%
10:00:00 AM	0	0	0	0	0	1	6	11	0	4	0	0	0	0	22	1.68%
10:15:00 AM	0	0	0	0	0	3	3	9	5	3	1	0	0	0	24	1.83%
10:30:00 AM	0	0	0	0	1	3	5	5	3	5	0	0	2	0	24	1.83%
10:45:00 AM	0	0	0	0	0	0	3	7	7	3	4	2	0	0	26	1.98%
11:00:00 AM	0	0	0	2	0	2	2	6	1	4	1	0	0	0	18	1.37%
11:15:00 AM	0	0	0	1	2	3	7	5	6	1	1	0	1	0	27	2.06%
11:30:00 AM	0	0	0	0	1	1	3	6	2	4	1	0	0	1	19	1.45%
11:45:00 AM	0	0	0	0	0	3	3	8	4	3	0	0	0	1	22	1.68%
AM TOTAL	0	1	1	4	8	49	79	146	109	89	44	15	11	4	560	42.68%
PERCENTAGE	0.0%	0.2%	0.2%	0.7%	1.4%	8.8%	14.1%	26.1%	19.5%	15.9%	7.9%	2.7%	2.0%	0.7%		
CUMULATIVE	0	1	2	6	14	63	142	288	397	486	530	545	556	560		
PERCENTAGE	0.0%	0.2%	0.4%	1.1%	2.5%	11.3%	25.4%	51.4%	70.9%	86.8%	94.6%	97.3%	99.3%	100.0%		

15th Percentile	37	Mean Speed Average	46
50th Percentile	46	10 MPH Pace Speed	39-48
85th Percentile	54	Number in Pace	228
95th Percentile	59	Percent in Pace	41%

SPEED2 Madison between Sun City and Avenue 40 .07. Southbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	2	6	6	3	3	4	0	1	0	25	1.91%
12:15:00 PM	0	0	0	0	0	2	10	7	7	2	2	0	0	0	30	2.29%
12:30:00 PM	0	0	0	0	0	1	3	6	3	1	0	0	0	1	15	1.14%
12:45:00 PM	0	0	0	0	0	7	6	3	4	0	0	1	0	0	21	1.60%
1:00:00 PM	0	0	0	0	0	1	2	5	6	3	0	0	0	0	17	1.30%

1:15:00 PM	0	1	0	0	0	2	4	6	6	3	1	0	0	0	23	1.75%
1:30:00 PM	0	0	0	0	1	1	3	4	8	2	2	0	0	0	21	1.60%
1:45:00 PM	0	0	0	0	1	4	1	6	3	3	4	1	0	0	23	1.75%
2:00:00 PM	0	0	0	0	0	0	3	9	8	3	0	0	1	0	24	1.83%
2:15:00 PM	0	0	1	0	0	1	4	7	4	2	1	0	0	0	20	1.52%
2:30:00 PM	0	0	0	1	0	0	7	5	4	4	0	0	0	0	21	1.60%
2:45:00 PM	0	0	0	0	0	1	9	6	8	3	2	2	0	1	32	2.44%
3:00:00 PM	0	0	0	0	0	1	3	9	3	3	2	2	0	0	23	1.75%
3:15:00 PM	0	0	0	0	0	2	3	4	8	3	2	1	0	0	23	1.75%
3:30:00 PM	0	0	0	0	0	2	2	5	11	28	14	2	1	1	66	5.03%
3:45:00 PM	0	0	0	0	0	0	10	24	29	23	11	3	0	0	100	7.62%
4:00:00 PM	0	0	0	0	0	1	1	10	5	6	4	0	1	0	28	2.13%
4:15:00 PM	0	0	0	0	0	0	4	8	8	4	3	2	0	0	29	2.21%
4:30:00 PM	0	0	0	0	0	3	1	3	5	3	1	2	1	1	20	1.52%
4:45:00 PM	0	0	0	0	1	2	4	4	1	4	1	1	0	0	18	1.37%
5:00:00 PM	0	0	0	0	0	1	3	5	9	4	2	0	0	0	24	1.83%
5:15:00 PM	0	0	0	0	0	1	2	4	1	2	1	0	0	2	13	0.99%
5:30:00 PM	0	0	0	0	0	2	1	7	1	3	1	1	0	0	16	1.22%
5:45:00 PM	0	0	0	0	0	0	1	1	4	1	1	2	0	0	10	0.76%
6:00:00 PM	0	0	0	0	0	2	3	1	2	2	3	0	0	0	13	0.99%
6:15:00 PM	0	0	0	0	0	0	1	2	4	0	3	0	0	0	10	0.76%
6:30:00 PM	0	0	0	0	0	1	1	4	1	1	1	0	1	1	11	0.84%
6:45:00 PM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.23%
7:00:00 PM	0	0	0	0	1	1	1	1	4	0	2	0	0	0	10	0.76%
7:15:00 PM	0	0	0	0	0	1	1	1	2	2	0	0	0	0	7	0.53%
7:30:00 PM	0	0	0	0	0	0	1	0	2	3	0	0	1	0	7	0.53%
7:45:00 PM	0	0	0	0	0	0	0	0	1	1	0	1	0	1	4	0.30%
8:00:00 PM	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3	0.23%
8:15:00 PM	0	0	0	0	0	1	1	1	0	2	0	0	0	0	5	0.38%
8:30:00 PM	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4	0.30%
8:45:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.15%
9:00:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.15%
9:15:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.08%
9:30:00 PM	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	0.23%
9:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.08%
10:00:00 PM	0	0	0	0	0	1	0	1	1	0	2	0	0	0	5	0.38%
10:15:00 PM	0	0	0	0	0	0	1	2	1	0	2	0	0	0	6	0.46%
10:30:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0.15%
10:45:00 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	1	4	0.30%
11:00:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.15%
11:15:00 PM	0	0	0	0	0	0	0	1	1	2	0	0	0	0	4	0.30%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.08%
PM TOTAL	0	1	1	1	5	44	106	172	175	133	75	22	7	10	752	57.32%
PERCENTAGE	0.0%	0.1%	0.1%	0.1%	0.7%	5.9%	14.1%	22.9%	23.3%	17.7%	10.0%	2.9%	0.9%	1.3%		
CUMULATIVE	0	1	2	3	8	52	158	330	505	638	713	735	742	752		
PERCENTAGE	0.0%	0.1%	0.3%	0.4%	1.1%	6.9%	21.0%	43.9%	67.2%	84.8%	94.8%	97.7%	98.7%	100.0%		

15th Percentile	38	Mean Speed Average	47
50th Percentile	47	10 MPH Pace Speed	39-48
85th Percentile	56	Number in Pace	262
95th Percentile	60	Percent in Pace	35%

DAY TOTAL	0	2	2	5	13	93	185	318	284	222	119	37	18	14	1,312	
PERCENTAGE	0.0%	0.2%	0.2%	0.4%	1.0%	7.1%	14.1%	24.2%	21.6%	16.9%	9.1%	2.8%	1.4%	1.07%	1,312	100.00%
	0.0%	0.2%	0.3%	0.7%	1.7%	8.8%	22.9%	47.1%	68.8%	85.7%	94.7%	97.6%	98.9%	100.00%		
85th Percentile	55															

SPEED2 Madison between Sun City and Avenue 40 .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.08%
12:30:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	3	0.11%
12:45:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0.11%
1:00:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.08%
1:15:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.08%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.08%
2:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0.08%
2:30:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0.08%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.08%
3:15:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.11%
3:30:00 AM	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	0.11%
3:45:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
4:00:00 AM	0	0	0	0	1	0	0	1	0	1	0	0	0	0	3	0.11%
4:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.08%
4:30:00 AM	0	0	1	0	0	0	1	0	1	0	0	0	0	0	3	0.11%
4:45:00 AM	0	0	0	1	2	0	0	1	0	1	1	0	0	0	6	0.23%
5:00:00 AM	0	0	0	0	0	2	2	0	1	0	0	0	0	0	5	0.19%
5:15:00 AM	0	0	0	1	0	3	1	2	0	0	0	2	0	0	9	0.34%
5:30:00 AM	0	0	0	0	0	0	0	2	3	2	1	0	0	0	8	0.30%
5:45:00 AM	0	0	0	0	0	2	4	4	1	1	0	0	0	0	12	0.46%
6:00:00 AM	0	0	0	1	3	1	3	1	1	1	1	0	0	0	12	0.46%
6:15:00 AM	0	0	0	0	0	2	4	3	1	4	3	0	0	0	17	0.65%
6:30:00 AM	0	0	0	0	2	5	2	7	2	1	1	0	0	0	20	0.76%
6:45:00 AM	0	0	0	0	0	2	2	6	3	1	0	0	1	1	16	0.61%
7:00:00 AM	0	1	0	1	0	0	3	7	3	0	2	2	0	0	19	0.72%
7:15:00 AM	0	0	1	0	2	5	10	11	5	4	4	0	3	0	45	1.71%
7:30:00 AM	0	0	0	0	0	4	2	5	8	5	5	2	2	0	33	1.26%
7:45:00 AM	0	0	0	2	0	3	6	8	12	11	6	0	0	0	48	1.83%
8:00:00 AM	0	0	0	0	1	1	14	20	23	13	6	3	1	0	82	3.12%
8:15:00 AM	0	2	0	0	2	1	17	38	30	14	5	4	1	0	114	4.34%
8:30:00 AM	0	0	0	0	2	12	6	18	13	6	0	1	4	0	62	2.36%
8:45:00 AM	0	0	0	0	4	3	16	9	8	4	1	0	0	0	45	1.71%
9:00:00 AM	0	0	0	0	0	5	7	11	10	1	0	0	0	0	34	1.30%
9:15:00 AM	0	0	0	0	0	2	3	13	8	8	3	0	0	0	37	1.41%
9:30:00 AM	0	0	0	0	0	10	4	11	7	4	3	0	0	0	39	1.49%
9:45:00 AM	0	0	0	0	0	8	7	5	6	3	0	1	0	0	30	1.14%
10:00:00 AM	0	0	0	1	4	2	11	16	0	4	0	0	0	0	38	1.45%
10:15:00 AM	0	0	0	0	2	4	8	13	7	4	1	0	0	0	39	1.49%
10:30:00 AM	0	0	0	0	3	9	6	10	4	7	0	0	2	0	41	1.56%
10:45:00 AM	0	0	0	0	0	10	12	8	8	3	4	2	0	0	47	1.79%
11:00:00 AM	0	0	0	2	3	6	7	12	2	6	1	0	0	0	39	1.49%
11:15:00 AM	1	0	0	1	3	11	13	9	9	1	1	0	1	0	50	1.90%
11:30:00 AM	0	1	0	0	1	3	9	11	4	6	1	0	0	1	37	1.41%
11:45:00 AM	2	1	0	0	1	4	11	9	8	5	0	0	0	1	42	1.60%
AM TOTAL	3	5	2	10	37	126	197	280	191	123	51	18	15	4	1,062	40.46%
PERCENTAGE	0.3%	0.5%	0.2%	0.9%	3.5%	11.9%	18.5%	26.4%	18.0%	11.6%	4.8%	1.7%	1.4%	0.4%		
CUMULATIVE	3	8	10	20	57	183	380	660	851	974	1,025	1,043	1,058	1,062		
PERCENTAGE	0.3%	0.8%	0.9%	1.9%	5.4%	17.2%	35.8%	62.1%	80.1%	91.7%	96.5%	98.2%	99.6%	100.0%		

15th Percentile	34	Mean Speed Average	44
50th Percentile	43	10 MPH Pace Speed	36-45
85th Percentile	54	Number in Pace	285
95th Percentile	59	Percent in Pace	27%

SPEED2 Madison between Sun City and Avenue 40 .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	3	15	14	4	4	5	0	1	0	48	1.83%

12:15:00 PM	0	2	0	0	0	8	20	12	11	2	2	0	0	0	57	2.17%
12:30:00 PM	0	0	0	1	0	4	9	9	5	1	0	0	0	1	30	1.14%
12:45:00 PM	0	0	0	0	0	16	10	6	4	0	1	1	0	0	38	1.45%
1:00:00 PM	0	1	1	0	1	9	10	11	8	3	0	0	0	1	45	1.71%
1:15:00 PM	0	2	0	0	1	5	14	7	9	4	1	0	0	0	43	1.64%
1:30:00 PM	0	1	0	0	3	9	16	8	11	3	2	0	0	0	53	2.02%
1:45:00 PM	0	0	0	1	1	8	10	11	5	5	4	1	0	0	46	1.75%
2:00:00 PM	1	0	0	0	1	4	7	10	10	4	2	0	1	0	40	1.52%
2:15:00 PM	0	1	3	1	1	1	12	10	8	3	2	0	0	0	42	1.60%
2:30:00 PM	0	0	3	1	7	6	15	12	7	7	0	0	0	0	58	2.21%
2:45:00 PM	0	0	0	0	0	10	20	11	15	4	2	2	1	1	66	2.51%
3:00:00 PM	0	0	0	0	0	6	8	15	10	6	2	2	0	0	49	1.87%
3:15:00 PM	1	0	0	0	1	12	20	19	19	6	5	1	0	0	84	3.20%
3:30:00 PM	0	0	0	0	1	5	11	20	23	34	18	2	1	1	116	4.42%
3:45:00 PM	0	0	0	1	1	4	17	37	37	25	12	3	0	0	137	5.22%
4:00:00 PM	0	0	0	1	1	4	9	14	9	6	5	1	1	0	51	1.94%
4:15:00 PM	0	1	1	0	1	5	12	13	11	4	3	2	0	0	53	2.02%
4:30:00 PM	0	0	0	0	1	9	3	6	10	6	1	3	1	1	41	1.56%
4:45:00 PM	0	0	0	0	1	4	7	9	3	5	1	1	0	0	31	1.18%
5:00:00 PM	0	0	2	0	1	7	15	12	13	4	2	0	0	0	56	2.13%
5:15:00 PM	0	0	0	0	0	6	7	7	4	3	2	1	0	2	32	1.22%
5:30:00 PM	0	0	0	0	0	6	9	13	7	4	3	1	0	0	43	1.64%
5:45:00 PM	0	0	0	0	0	8	7	3	8	1	1	2	0	0	30	1.14%
6:00:00 PM	0	0	0	0	1	7	8	7	3	2	3	0	0	0	31	1.18%
6:15:00 PM	0	0	0	0	2	9	4	3	5	1	4	0	0	0	28	1.07%
6:30:00 PM	0	0	0	0	0	3	5	7	2	1	1	0	1	1	21	0.80%
6:45:00 PM	0	0	0	0	1	4	2	4	3	2	0	0	0	0	16	0.61%
7:00:00 PM	0	0	0	0	2	5	5	5	6	0	2	0	0	0	25	0.95%
7:15:00 PM	0	0	0	0	0	2	3	5	3	2	0	0	0	0	15	0.57%
7:30:00 PM	0	0	1	0	0	5	3	1	3	3	1	0	1	0	18	0.69%
7:45:00 PM	0	0	0	0	0	4	4	1	2	1	0	1	0	1	14	0.53%
8:00:00 PM	0	0	0	0	0	1	2	3	1	1	0	0	0	0	8	0.30%
8:15:00 PM	0	0	0	0	1	3	6	2	0	2	0	0	0	0	14	0.53%
8:30:00 PM	0	0	0	0	0	2	1	2	1	2	1	0	0	0	9	0.34%
8:45:00 PM	0	0	0	0	0	2	2	1	5	0	0	0	0	0	10	0.38%
9:00:00 PM	0	0	0	0	1	2	1	2	2	0	0	0	0	0	8	0.30%
9:15:00 PM	0	0	0	0	0	1	0	2	1	1	0	0	0	0	5	0.19%
9:30:00 PM	0	0	0	0	1	2	3	1	1	0	0	1	0	0	9	0.34%
9:45:00 PM	0	0	0	0	2	1	0	1	0	0	1	0	0	0	5	0.19%
10:00:00 PM	0	0	0	0	0	1	1	1	2	0	2	0	0	0	7	0.27%
10:15:00 PM	0	0	0	0	0	1	1	3	2	0	2	0	0	0	9	0.34%
10:30:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	3	0.11%
10:45:00 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	1	4	0.15%
11:00:00 PM	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4	0.15%
11:15:00 PM	0	0	0	0	0	0	1	1	1	2	0	0	0	0	5	0.19%
11:30:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
11:45:00 PM	0	0	0	0	0	0	0	3	1	0	1	0	0	0	5	0.19%
PM TOTAL	2	8	11	7	35	216	339	345	296	166	94	25	8	11	1,563	59.54%
PERCENTAGE	0.1%	0.5%	0.7%	0.4%	2.2%	13.8%	21.7%	22.1%	18.9%	10.6%	6.0%	1.6%	0.5%	0.7%		
CUMULATIVE	2	10	21	28	63	279	618	963	1,259	1,425	1,519	1,544	1,552	1,563		
PERCENTAGE	0.1%	0.6%	1.3%	1.8%	4.0%	17.9%	39.5%	61.6%	80.6%	91.2%	97.2%	98.8%	99.3%	100.0%		

15th Percentile	34	Mean Speed Average	44
50th Percentile	45	10 MPH Pace Speed	36-45
85th Percentile	55	Number in Pace	277
95th Percentile	59	Percent in Pace	18%

DAY TOTAL	5	13	13	17	72	342	536	625	487	289	145	43	23	15	2,625	
PERCENTAGE	0.2%	0.5%	0.5%	0.6%	2.7%	13.0%	20.4%	23.8%	18.6%	11.0%	5.5%	1.6%	0.9%	0.6%	2,625	100.00%
	0.2%	0.7%	1.2%	1.8%	4.6%	17.6%	38.0%	61.8%	80.4%	91.4%	96.9%	98.6%	99.4%	100.0%		
85th Percentile	55															

SPEED2 Madison between Sun City and Avenue 40 .08-09. Northbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	1	0	1	0	1	0	0	0	0	0	0	3	0.22%
12:15:00 AM	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	0.22%
12:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.07%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.07%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.07%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.07%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.07%
3:30:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.07%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0.15%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.07%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
5:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
5:15:00 AM	0	0	0	1	0	1	0	1	0	0	0	0	0	0	3	0.22%
5:30:00 AM	0	0	1	0	0	0	1	1	1	0	2	0	0	0	6	0.44%
5:45:00 AM	0	0	0	0	0	1	4	2	2	1	0	0	0	0	10	0.73%
6:00:00 AM	0	0	0	0	1	4	4	1	1	0	0	0	1	0	12	0.87%
6:15:00 AM	0	0	0	0	0	1	1	1	2	0	0	0	0	0	5	0.36%
6:30:00 AM	0	0	0	0	0	1	1	1	1	0	0	0	0	0	4	0.29%
6:45:00 AM	0	0	0	1	2	0	3	1	2	2	0	0	0	0	11	0.80%
7:00:00 AM	0	0	0	0	1	2	2	5	0	0	0	0	0	0	10	0.73%
7:15:00 AM	0	0	0	1	0	1	4	4	1	0	1	0	0	0	12	0.87%
7:30:00 AM	0	0	0	0	0	1	0	5	3	2	0	0	0	0	11	0.80%
7:45:00 AM	0	0	0	1	2	1	8	16	5	0	1	0	0	0	34	2.48%
8:00:00 AM	0	0	0	0	2	2	17	18	16	12	1	1	1	0	70	5.10%
8:15:00 AM	0	2	0	0	2	1	13	30	20	5	2	0	0	1	76	5.54%
8:30:00 AM	0	0	0	0	1	5	4	9	8	0	0	0	1	0	28	2.04%
8:45:00 AM	0	0	0	0	1	5	6	3	1	1	0	0	0	0	17	1.24%
9:00:00 AM	0	0	0	0	0	0	2	7	0	1	0	0	0	0	10	0.73%
9:15:00 AM	0	0	0	0	0	3	3	3	3	1	0	0	0	0	13	0.95%
9:30:00 AM	0	0	0	0	0	3	4	4	1	0	0	0	0	0	12	0.87%
9:45:00 AM	0	0	0	0	0	6	5	2	3	0	0	0	0	0	16	1.17%
10:00:00 AM	0	0	0	1	4	3	7	6	0	0	0	0	0	0	21	1.53%
10:15:00 AM	0	0	0	0	1	2	6	3	0	0	0	0	0	0	12	0.87%
10:30:00 AM	0	0	0	0	3	7	2	3	1	1	0	0	0	0	17	1.24%
10:45:00 AM	0	0	0	0	0	10	10	3	1	0	0	0	0	0	24	1.75%
11:00:00 AM	0	0	0	0	2	4	4	6	2	1	0	0	0	0	19	1.38%
11:15:00 AM	0	0	0	0	1	0	9	7	2	0	1	0	0	0	20	1.46%
11:30:00 AM	1	0	0	2	1	9	4	5	3	0	0	0	0	0	25	1.82%
11:45:00 AM	0	0	2	0	2	5	4	3	3	1	0	0	1	0	21	1.53%
AM TOTAL	1	2	4	9	28	81	132	153	82	28	8	1	5	1	535	38.97%
PERCENTAGE	0.2%	0.4%	0.7%	1.7%	5.2%	15.1%	24.7%	28.6%	15.3%	5.2%	1.5%	0.2%	0.9%	0.2%		
CUMULATIVE	1	3	7	16	44	125	257	410	492	520	528	529	534	535		
PERCENTAGE	0.2%	0.6%	1.3%	3.0%	8.2%	23.4%	48.0%	76.6%	92.0%	97.2%	98.7%	98.9%	99.8%	100.0%		

15th Percentile	33	Mean Speed Average	40
50th Percentile	40	10 MPH Pace Speed	36-45
85th Percentile	48	Number in Pace	277
95th Percentile	52	Percent in Pace	52%

SPEED2 Madison between Sun City and Avenue 40 .08-09. Northbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	1	0	0	0	2	6	4	3	0	0	0	0	0	16	1.17%
12:15:00 PM	0	2	1	0	1	2	10	5	1	1	0	0	0	0	23	1.68%
12:30:00 PM	0	0	0	0	2	4	4	4	3	0	0	0	0	0	17	1.24%

12:45:00 PM	0	2	0	1	6	7	7	2	3	0	0	1	0	0	29	2.11%
1:00:00 PM	0	2	0	0	2	8	9	4	0	0	1	0	0	0	26	1.89%
1:15:00 PM	0	0	0	1	0	4	6	5	2	1	0	0	0	0	19	1.38%
1:30:00 PM	0	0	3	2	0	3	6	3	2	1	1	0	0	0	21	1.53%
1:45:00 PM	0	0	0	0	2	13	8	2	2	2	0	0	0	0	29	2.11%
2:00:00 PM	0	1	3	0	1	8	6	6	5	1	0	0	0	0	31	2.26%
2:15:00 PM	0	0	0	0	2	5	4	5	2	2	0	0	0	0	20	1.46%
2:30:00 PM	1	0	0	0	0	6	5	1	1	3	2	0	0	0	19	1.38%
2:45:00 PM	0	0	0	0	2	2	7	9	0	2	0	0	0	0	22	1.60%
3:00:00 PM	0	0	0	0	2	11	10	7	7	1	1	0	0	0	39	2.84%
3:15:00 PM	0	1	0	1	4	6	15	20	8	5	1	1	0	0	62	4.52%
3:30:00 PM	0	0	1	0	2	10	19	9	5	2	3	0	0	0	51	3.71%
3:45:00 PM	0	0	0	0	0	8	5	11	4	1	0	0	0	0	29	2.11%
4:00:00 PM	0	0	0	0	0	5	8	5	1	2	1	0	0	0	22	1.60%
4:15:00 PM	0	0	0	0	0	8	5	2	2	1	1	0	0	0	19	1.38%
4:30:00 PM	0	0	0	0	0	7	6	10	2	4	0	0	0	0	29	2.11%
4:45:00 PM	0	0	0	1	3	4	7	4	2	3	0	0	1	0	25	1.82%
5:00:00 PM	0	0	0	0	2	8	9	4	3	2	0	0	0	0	28	2.04%
5:15:00 PM	0	0	0	0	0	4	7	5	0	0	0	0	0	0	16	1.17%
5:30:00 PM	0	0	0	0	0	2	7	2	0	1	0	0	0	0	12	0.87%
5:45:00 PM	0	0	0	1	3	5	8	5	4	1	0	0	0	0	27	1.97%
6:00:00 PM	0	1	0	0	3	10	11	3	2	1	1	0	0	0	32	2.33%
6:15:00 PM	0	0	1	1	1	3	7	5	1	1	0	0	0	0	20	1.46%
6:30:00 PM	0	0	0	0	0	6	5	1	2	0	1	0	0	0	15	1.09%
6:45:00 PM	0	0	0	0	1	1	7	2	2	0	0	0	0	1	14	1.02%
7:00:00 PM	0	0	0	0	0	2	3	1	1	1	0	1	0	0	9	0.66%
7:15:00 PM	0	0	0	2	1	3	1	1	1	0	0	0	0	0	9	0.66%
7:30:00 PM	0	0	0	0	1	4	4	2	0	2	0	0	0	0	13	0.95%
7:45:00 PM	0	0	0	0	3	1	2	2	1	0	0	0	0	0	9	0.66%
8:00:00 PM	0	0	0	0	0	2	5	4	1	1	1	0	0	0	14	1.02%
8:15:00 PM	0	0	0	0	1	2	0	3	2	2	0	0	0	0	10	0.73%
8:30:00 PM	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5	0.36%
8:45:00 PM	0	0	0	0	0	2	3	3	2	0	0	0	0	0	10	0.73%
9:00:00 PM	0	0	0	0	0	2	0	2	2	0	0	0	0	0	6	0.44%
9:15:00 PM	0	0	0	1	2	0	0	7	1	0	0	0	0	0	11	0.80%
9:30:00 PM	0	0	0	0	0	1	0	2	0	0	1	0	1	0	5	0.36%
9:45:00 PM	0	0	0	1	2	2	0	0	0	1	0	0	0	0	6	0.44%
10:00:00 PM	0	0	0	1	0	1	1	0	0	0	0	0	0	1	4	0.29%
10:15:00 PM	0	0	0	0	0	1	1	2	2	0	0	0	0	0	6	0.44%
10:30:00 PM	0	0	0	1	0	0	2	0	0	0	0	0	0	0	3	0.22%
10:45:00 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.22%
11:00:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.15%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
PM TOTAL	1	10	9	14	50	186	242	175	83	46	15	3	2	2	838	61.03%
PERCENTAGE	0.1%	1.2%	1.1%	1.7%	6.0%	22.2%	28.9%	20.9%	9.9%	5.5%	1.8%	0.4%	0.2%	0.2%		
CUMULATIVE	1	11	20	34	84	270	512	687	770	816	831	834	836	838		
PERCENTAGE	0.1%	1.3%	2.4%	4.1%	10.0%	32.2%	61.1%	82.0%	91.9%	97.4%	99.2%	99.5%	99.8%	100.0%		

15th Percentile	32	Mean Speed Average	39
50th Percentile	39	10 MPH Pace Speed	35-44
85th Percentile	48	Number in Pace	285
95th Percentile	54	Percent in Pace	34%

DAY TOTAL	2	12	13	23	78	267	374	328	165	74	23	4	7	3	1,373	
PERCENTAGE	0.1%	0.9%	0.9%	1.7%	5.7%	19.4%	27.2%	23.9%	12.0%	5.4%	1.7%	0.3%	0.5%	0.2%	1,373	100.00%
	0.1%	1.0%	2.0%	3.6%	9.3%	28.8%	56.0%	79.9%	91.9%	97.3%	99.0%	99.3%	99.8%	100.0%		
85th Percentile	48															

SPEED2 Madison between Sun City and Avenue 40 .08-09. Southbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.08%
12:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
12:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.08%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.08%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.08%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.08%
3:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08%
3:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.15%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.08%
4:15:00 AM	0	0	0	0	0	2	1	0	1	0	0	0	0	0	4	0.30%
4:30:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.15%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.08%
5:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.08%
5:15:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.15%
5:30:00 AM	0	0	0	0	0	0	0	2	1	1	1	0	0	0	5	0.38%
5:45:00 AM	0	0	0	0	0	1	1	1	0	0	0	2	0	0	5	0.38%
6:00:00 AM	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4	0.30%
6:15:00 AM	0	0	0	0	1	1	3	2	1	2	2	1	0	0	13	0.98%
6:30:00 AM	0	0	0	0	0	2	4	2	2	1	0	1	1	0	13	0.98%
6:45:00 AM	0	0	0	0	0	1	3	3	6	0	1	1	1	1	17	1.28%
7:00:00 AM	0	0	0	0	0	1	3	1	3	4	2	3	0	1	18	1.35%
7:15:00 AM	0	0	0	0	0	0	1	5	7	6	1	2	1	1	24	1.80%
7:30:00 AM	0	0	0	0	0	1	4	2	3	4	2	0	1	2	19	1.43%
7:45:00 AM	0	0	1	0	0	1	3	6	5	7	4	0	0	0	27	2.03%
8:00:00 AM	0	0	0	0	0	0	3	5	7	6	4	1	1	1	28	2.10%
8:15:00 AM	0	0	0	0	0	0	4	7	14	7	5	3	2	0	42	3.15%
8:30:00 AM	0	0	0	0	0	4	4	12	11	11	2	1	1	0	46	3.45%
8:45:00 AM	0	0	0	0	1	0	7	7	5	7	1	0	0	0	28	2.10%
9:00:00 AM	0	0	0	0	0	4	5	5	2	1	0	0	0	0	17	1.28%
9:15:00 AM	0	0	0	0	0	2	2	7	4	4	2	0	0	0	21	1.58%
9:30:00 AM	0	0	0	0	0	3	2	6	3	2	2	0	0	0	18	1.35%
9:45:00 AM	0	0	0	0	0	1	3	6	6	3	0	1	0	1	21	1.58%
10:00:00 AM	0	0	0	0	0	3	5	8	0	6	0	1	0	0	23	1.73%
10:15:00 AM	0	0	0	0	0	4	5	9	5	2	1	0	0	0	26	1.95%
10:30:00 AM	0	0	0	0	1	4	5	6	6	3	1	0	1	0	27	2.03%
10:45:00 AM	0	0	0	0	0	0	4	6	5	2	3	1	0	0	21	1.58%
11:00:00 AM	0	0	0	1	0	1	3	5	2	4	1	0	0	0	17	1.28%
11:15:00 AM	0	0	0	0	1	0	6	7	4	3	0	0	1	0	22	1.65%
11:30:00 AM	0	0	0	0	1	2	7	2	3	2	2	1	0	0	20	1.50%
11:45:00 AM	0	0	0	0	0	2	6	9	8	3	0	0	0	1	29	2.18%
AM TOTAL	0	0	2	1	6	41	96	135	118	96	37	19	13	8	572	42.94%
PERCENTAGE	0.0%	0.0%	0.3%	0.2%	1.0%	7.2%	16.8%	23.6%	20.6%	16.8%	6.5%	3.3%	2.3%	1.4%		
CUMULATIVE	0	0	2	3	9	50	146	281	399	495	532	551	564	572		
PERCENTAGE	0.0%	0.0%	0.3%	0.5%	1.6%	8.7%	25.5%	49.1%	69.8%	86.5%	93.0%	96.3%	98.6%	100.0%		

15th Percentile	38	Mean Speed Average	46
50th Percentile	46	10 MPH Pace Speed	38-47
85th Percentile	54	Number in Pace	241
95th Percentile	61	Percent in Pace	42%

SPEED2 Madison between Sun City and Avenue 40 .08-09. Southbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	0	0	3	5	2	1	3	0	0	0	15	1.13%
12:15:00 PM	0	0	0	0	0	2	10	3	5	4	3	0	0	0	27	2.03%
12:30:00 PM	0	0	0	0	0	2	2	6	8	1	2	0	0	0	21	1.58%
12:45:00 PM	0	0	0	0	0	2	5	10	6	1	2	1	1	0	28	2.10%
1:00:00 PM	0	0	0	0	1	2	6	6	6	1	2	0	0	0	24	1.80%

1:15:00 PM	0	0	0	1	0	3	6	5	5	3	1	0	0	0	24	1.80%
1:30:00 PM	0	0	0	0	0	1	4	7	4	0	0	1	0	0	17	1.28%
1:45:00 PM	0	0	0	0	0	1	6	2	5	1	3	0	0	0	18	1.35%
2:00:00 PM	0	0	0	0	1	1	2	5	5	4	1	0	1	0	20	1.50%
2:15:00 PM	0	0	0	0	1	0	4	5	3	3	2	1	0	0	19	1.43%
2:30:00 PM	0	0	0	0	0	0	6	6	5	4	0	1	0	0	22	1.65%
2:45:00 PM	0	0	0	0	1	2	8	8	11	3	2	0	0	0	35	2.63%
3:00:00 PM	0	0	0	0	2	1	4	1	4	6	1	0	0	0	19	1.43%
3:15:00 PM	0	0	0	1	1	1	4	3	5	4	1	0	0	0	20	1.50%
3:30:00 PM	0	0	0	0	0	0	5	16	33	18	6	0	0	0	78	5.86%
3:45:00 PM	0	0	0	2	0	6	25	25	36	13	3	2	0	0	112	8.41%
4:00:00 PM	0	0	0	0	0	3	5	9	6	7	3	0	2	0	35	2.63%
4:15:00 PM	0	0	0	0	0	1	2	7	11	3	2	0	0	0	26	1.95%
4:30:00 PM	0	0	0	0	0	0	2	9	5	3	4	0	0	0	23	1.73%
4:45:00 PM	0	0	0	2	0	4	4	5	1	0	2	0	1	1	20	1.50%
5:00:00 PM	0	0	0	0	0	2	4	2	3	0	1	0	0	0	12	0.90%
5:15:00 PM	0	0	0	0	0	0	4	4	1	1	0	1	1	0	12	0.90%
5:30:00 PM	0	0	1	0	0	1	0	2	4	8	0	0	0	0	16	1.20%
5:45:00 PM	0	0	0	0	0	1	0	2	4	0	0	0	0	0	7	0.53%
6:00:00 PM	0	0	0	0	1	1	0	2	3	1	2	1	0	0	11	0.83%
6:15:00 PM	0	0	0	0	0	1	2	2	4	0	1	0	0	0	10	0.75%
6:30:00 PM	0	0	0	0	0	1	1	2	3	2	1	0	0	0	10	0.75%
6:45:00 PM	0	0	0	0	0	0	1	0	3	1	1	0	1	0	7	0.53%
7:00:00 PM	0	0	0	0	0	0	0	6	1	1	2	0	0	0	10	0.75%
7:15:00 PM	0	0	0	0	0	1	0	2	3	3	1	0	0	0	10	0.75%
7:30:00 PM	0	0	0	0	0	0	0	2	1	1	0	0	0	0	4	0.30%
7:45:00 PM	0	0	0	0	0	1	1	2	0	0	0	1	0	0	5	0.38%
8:00:00 PM	0	0	0	0	1	0	1	1	4	1	0	0	0	0	8	0.60%
8:15:00 PM	0	0	0	0	0	0	0	2	1	2	0	0	0	0	5	0.38%
8:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
8:45:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	6	0.45%
9:00:00 PM	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0.23%
9:15:00 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.23%
9:30:00 PM	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3	0.23%
9:45:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.15%
10:00:00 PM	0	0	0	0	1	2	0	1	0	2	1	0	0	0	7	0.53%
10:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
10:30:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08%
10:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.15%
11:15:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0.15%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.08%
PM TOTAL	0	0	1	7	10	46	127	178	209	109	54	11	7	1	760	57.06%
PERCENTAGE	0.0%	0.0%	0.1%	0.9%	1.3%	6.1%	16.7%	23.4%	27.5%	14.3%	7.1%	1.4%	0.9%	0.1%		
CUMULATIVE	0	0	1	8	18	64	191	369	578	687	741	752	759	760		
PERCENTAGE	0.0%	0.0%	0.1%	1.1%	2.4%	8.4%	25.1%	48.6%	76.1%	90.4%	97.5%	98.9%	99.9%	100.0%		

15th Percentile	37	Mean Speed Average	45
50th Percentile	45	10 MPH Pace Speed	39-48
85th Percentile	54	Number in Pace	278
95th Percentile	57	Percent in Pace	37%

DAY TOTAL	0	0	3	8	16	87	223	313	327	205	91	30	20	9	1,332	
PERCENTAGE	0.0%	0.0%	0.2%	0.6%	1.2%	6.5%	16.7%	23.5%	24.5%	15.4%	6.8%	2.3%	1.5%	0.68%	1,332	100.00%
	0.0%	0.0%	0.2%	0.8%	2.0%	8.6%	25.3%	48.8%	73.3%	88.7%	95.6%	97.8%	99.3%	100.00%		
85th Percentile	54															

SPEED2 Madison between Sun City and Avenue 40 .08-09. Combined

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	1	0	1	0	1	1	0	0	0	0	0	4	0.15%
12:15:00 AM	0	0	0	0	0	1	3	0	0	0	0	0	0	0	4	0.15%
12:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.07%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.04%
2:15:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0.07%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0.07%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
3:15:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.07%
3:30:00 AM	0	0	1	0	0	0	0	1	0	1	0	0	0	0	3	0.11%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	1	0	1	0	0	1	0	0	0	0	3	0.11%
4:15:00 AM	0	0	0	0	0	2	1	0	1	0	0	0	0	0	4	0.15%
4:30:00 AM	0	0	1	0	0	1	0	1	0	0	0	0	0	0	3	0.11%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
5:00:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.07%
5:15:00 AM	0	0	0	1	0	2	0	1	0	1	0	0	0	0	5	0.18%
5:30:00 AM	0	0	1	0	0	0	1	3	2	1	3	0	0	0	11	0.41%
5:45:00 AM	0	0	0	0	0	2	5	3	2	1	0	2	0	0	15	0.55%
6:00:00 AM	0	0	0	0	1	4	4	2	4	0	0	0	1	0	16	0.59%
6:15:00 AM	0	0	0	0	1	2	4	3	3	2	2	1	0	0	18	0.67%
6:30:00 AM	0	0	0	0	0	3	5	3	3	1	0	1	1	0	17	0.63%
6:45:00 AM	0	0	0	1	2	1	6	4	8	2	1	1	1	1	28	1.04%
7:00:00 AM	0	0	0	0	1	3	5	6	3	4	2	3	0	1	28	1.04%
7:15:00 AM	0	0	0	1	0	1	5	9	8	6	2	2	1	1	36	1.33%
7:30:00 AM	0	0	0	0	0	2	4	7	6	6	2	0	1	2	30	1.11%
7:45:00 AM	0	0	1	1	2	2	11	22	10	7	5	0	0	0	61	2.26%
8:00:00 AM	0	0	0	0	2	2	20	23	23	18	5	2	2	1	98	3.62%
8:15:00 AM	0	2	0	0	2	1	17	37	34	12	7	3	2	1	118	4.36%
8:30:00 AM	0	0	0	0	1	9	8	21	19	11	2	1	2	0	74	2.74%
8:45:00 AM	0	0	0	0	2	5	13	10	6	8	1	0	0	0	45	1.66%
9:00:00 AM	0	0	0	0	0	4	7	12	2	2	0	0	0	0	27	1.00%
9:15:00 AM	0	0	0	0	0	5	5	10	7	5	2	0	0	0	34	1.26%
9:30:00 AM	0	0	0	0	0	6	6	10	4	2	2	0	0	0	30	1.11%
9:45:00 AM	0	0	0	0	0	7	8	8	9	3	0	1	0	1	37	1.37%
10:00:00 AM	0	0	0	1	4	6	12	14	0	6	0	1	0	0	44	1.63%
10:15:00 AM	0	0	0	0	1	6	11	12	5	2	1	0	0	0	38	1.40%
10:30:00 AM	0	0	0	0	4	11	7	9	7	4	1	0	1	0	44	1.63%
10:45:00 AM	0	0	0	0	0	10	14	9	6	2	3	1	0	0	45	1.66%
11:00:00 AM	0	0	0	1	2	5	7	11	4	5	1	0	0	0	36	1.33%
11:15:00 AM	0	0	0	0	2	0	15	14	6	3	1	0	1	0	42	1.55%
11:30:00 AM	1	0	0	2	2	11	11	7	6	2	2	1	0	0	45	1.66%
11:45:00 AM	0	0	2	0	2	7	10	12	11	4	0	0	1	1	50	1.85%
AM TOTAL	1	2	6	10	34	122	228	288	200	124	45	20	18	9	1,107	40.92%
PERCENTAGE	0.1%	0.2%	0.5%	0.9%	3.1%	11.0%	20.6%	26.0%	18.1%	11.2%	4.1%	1.8%	1.6%	0.8%		
CUMULATIVE	1	3	9	19	53	175	403	691	891	1,015	1,060	1,080	1,098	1,107		
PERCENTAGE	0.1%	0.3%	0.8%	1.7%	4.8%	15.8%	36.4%	62.4%	80.5%	91.7%	95.8%	97.6%	99.2%	100.0%		

15th Percentile	34	Mean Speed Average	44
50th Percentile	43	10 MPH Pace Speed	39-48
85th Percentile	53	Number in Pace	282
95th Percentile	60	Percent in Pace	25%

SPEED2 Madison between Sun City and Avenue 40 .08-09. Combined

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	1	0	1	0	2	9	9	5	1	3	0	0	0	31	1.15%

12:15:00 PM	0	2	1	0	1	4	20	8	6	5	3	0	0	0	50	1.85%
12:30:00 PM	0	0	0	0	2	6	6	10	11	1	2	0	0	0	38	1.40%
12:45:00 PM	0	2	0	1	6	9	12	12	9	1	2	2	1	0	57	2.11%
1:00:00 PM	0	2	0	0	3	10	15	10	6	1	3	0	0	0	50	1.85%
1:15:00 PM	0	0	0	2	0	7	12	10	7	4	1	0	0	0	43	1.59%
1:30:00 PM	0	0	3	2	0	4	10	10	6	1	1	1	0	0	38	1.40%
1:45:00 PM	0	0	0	0	2	14	14	4	7	3	3	0	0	0	47	1.74%
2:00:00 PM	0	1	3	0	2	9	8	11	10	5	1	0	1	0	51	1.89%
2:15:00 PM	0	0	0	0	3	5	8	10	5	5	2	1	0	0	39	1.44%
2:30:00 PM	1	0	0	0	0	6	11	7	6	7	2	1	0	0	41	1.52%
2:45:00 PM	0	0	0	0	3	4	15	17	11	5	2	0	0	0	57	2.11%
3:00:00 PM	0	0	0	0	4	12	14	8	11	7	2	0	0	0	58	2.14%
3:15:00 PM	0	1	0	2	5	7	19	23	13	9	2	1	0	0	82	3.03%
3:30:00 PM	0	0	1	0	2	10	24	25	38	20	9	0	0	0	129	4.77%
3:45:00 PM	0	0	0	2	0	14	30	36	40	14	3	2	0	0	141	5.21%
4:00:00 PM	0	0	0	0	0	8	13	14	7	9	4	0	2	0	57	2.11%
4:15:00 PM	0	0	0	0	0	9	7	9	13	4	3	0	0	0	45	1.66%
4:30:00 PM	0	0	0	0	0	7	8	19	7	7	4	0	0	0	52	1.92%
4:45:00 PM	0	0	0	3	3	8	11	9	3	3	2	0	2	1	45	1.66%
5:00:00 PM	0	0	0	0	2	10	13	6	6	2	1	0	0	0	40	1.48%
5:15:00 PM	0	0	0	0	0	4	11	9	1	1	0	1	1	0	28	1.04%
5:30:00 PM	0	0	1	0	0	3	7	4	4	9	0	0	0	0	28	1.04%
5:45:00 PM	0	0	0	1	3	6	8	7	8	1	0	0	0	0	34	1.26%
6:00:00 PM	0	1	0	0	4	11	11	5	5	2	3	1	0	0	43	1.59%
6:15:00 PM	0	0	1	1	1	4	9	7	5	1	1	0	0	0	30	1.11%
6:30:00 PM	0	0	0	0	0	7	6	3	5	2	2	0	0	0	25	0.92%
6:45:00 PM	0	0	0	0	1	1	8	2	5	1	1	0	1	1	21	0.78%
7:00:00 PM	0	0	0	0	0	2	3	7	2	2	2	1	0	0	19	0.70%
7:15:00 PM	0	0	0	2	1	4	1	3	4	3	1	0	0	0	19	0.70%
7:30:00 PM	0	0	0	0	1	4	4	4	1	3	0	0	0	0	17	0.63%
7:45:00 PM	0	0	0	0	3	2	3	4	1	0	0	1	0	0	14	0.52%
8:00:00 PM	0	0	0	0	1	2	6	5	5	2	1	0	0	0	22	0.81%
8:15:00 PM	0	0	0	0	1	2	0	5	3	4	0	0	0	0	15	0.55%
8:30:00 PM	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5	0.18%
8:45:00 PM	0	0	0	0	0	4	3	5	2	0	1	1	0	0	16	0.59%
9:00:00 PM	0	0	0	0	0	2	0	2	3	2	0	0	0	0	9	0.33%
9:15:00 PM	0	0	0	1	2	0	0	7	4	0	0	0	0	0	14	0.52%
9:30:00 PM	0	0	0	0	0	2	0	2	1	1	1	0	1	0	8	0.30%
9:45:00 PM	0	0	0	1	2	2	0	0	1	2	0	0	0	0	8	0.30%
10:00:00 PM	0	0	0	1	1	3	1	1	0	2	1	0	0	1	11	0.41%
10:15:00 PM	0	0	0	0	0	1	1	2	2	0	0	0	0	0	6	0.22%
10:30:00 PM	0	0	0	1	0	0	2	1	0	0	0	0	0	0	4	0.15%
10:45:00 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.11%
11:00:00 PM	0	0	0	0	0	0	1	0	1	0	0	1	0	0	3	0.11%
11:15:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0.07%
11:30:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.07%
11:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
PM TOTAL	1	10	10	21	60	232	369	353	292	155	69	14	9	3	1,598	59.08%
PERCENTAGE	0.1%	0.6%	0.6%	1.3%	3.8%	14.5%	23.1%	22.1%	18.3%	9.7%	4.3%	0.9%	0.6%	0.2%		
CUMULATIVE	1	11	21	42	102	334	703	1,056	1,348	1,503	1,572	1,586	1,595	1,598		
PERCENTAGE	0.1%	0.7%	1.3%	2.6%	6.4%	20.9%	44.0%	66.1%	84.4%	94.1%	98.4%	99.2%	99.8%	100.0%		

15th Percentile	32	Mean Speed Average	43
50th Percentile	43	10 MPH Pace Speed	33-42
85th Percentile	54	Number in Pace	269
95th Percentile	58	Percent in Pace	17%

DAY TOTAL	2	12	16	31	94	354	597	641	492	279	114	34	27	12	2,705	
PERCENTAGE	0.1%	0.4%	0.6%	1.1%	3.5%	13.1%	22.1%	23.7%	18.2%	10.3%	4.2%	1.3%	1.0%	0.4%	2,705	100.00%
	0.1%	0.5%	1.1%	2.3%	5.7%	18.8%	40.9%	64.6%	82.8%	93.1%	97.3%	98.6%	99.6%	100.0%		
85th Percentile	54															

SPEED2 Madison between Sun City and Avenue 40 .08-09. Northbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
12:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.07%
12:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.07%
1:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.07%
1:15:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.07%
1:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0.14%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.07%
3:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.07%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:45:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0.14%
5:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
5:15:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.22%
5:30:00 AM	0	0	0	0	1	0	1	1	1	0	0	0	0	0	4	0.29%
5:45:00 AM	0	0	1	0	0	2	2	1	3	1	1	0	0	0	11	0.80%
6:00:00 AM	0	0	0	0	3	3	4	0	3	0	1	0	0	0	14	1.01%
6:15:00 AM	0	0	0	1	1	0	2	2	2	1	1	0	0	0	10	0.72%
6:30:00 AM	0	0	0	0	0	1	0	2	1	0	0	0	0	0	4	0.29%
6:45:00 AM	0	0	0	0	2	1	2	1	1	0	0	0	0	0	7	0.51%
7:00:00 AM	0	0	0	0	1	1	11	2	0	1	1	0	0	0	17	1.23%
7:15:00 AM	0	0	0	0	2	2	4	2	0	2	3	1	0	0	16	1.16%
7:30:00 AM	0	0	0	1	1	3	2	2	3	0	0	0	0	0	12	0.87%
7:45:00 AM	0	0	0	0	0	4	7	7	4	3	0	1	0	0	26	1.88%
8:00:00 AM	0	0	0	0	0	2	15	21	17	9	0	0	0	0	64	4.63%
8:15:00 AM	0	1	0	0	0	2	10	31	39	9	2	1	0	0	95	6.87%
8:30:00 AM	0	0	0	0	4	2	3	5	6	0	0	0	0	0	20	1.45%
8:45:00 AM	0	0	1	0	2	5	5	4	1	1	0	0	0	0	19	1.37%
9:00:00 AM	0	0	0	0	4	2	5	4	0	0	0	0	0	0	15	1.09%
9:15:00 AM	0	0	0	0	1	2	4	3	2	1	0	0	0	0	13	0.94%
9:30:00 AM	0	0	0	0	0	1	3	3	2	0	1	0	0	0	10	0.72%
9:45:00 AM	0	0	0	0	6	3	7	4	0	1	0	1	0	0	22	1.59%
10:00:00 AM	0	0	0	0	2	4	5	0	0	1	0	0	0	0	12	0.87%
10:15:00 AM	0	0	0	0	1	2	3	1	1	1	0	0	0	0	9	0.65%
10:30:00 AM	0	0	0	0	0	7	3	4	3	0	0	1	0	0	18	1.30%
10:45:00 AM	0	0	0	1	2	1	3	3	0	0	0	0	0	0	10	0.72%
11:00:00 AM	1	0	0	0	1	2	8	8	0	0	0	0	0	0	20	1.45%
11:15:00 AM	0	0	0	0	2	9	12	2	0	0	0	0	0	0	25	1.81%
11:30:00 AM	0	0	0	0	1	5	5	4	3	1	0	0	0	0	19	1.37%
11:45:00 AM	0	1	0	0	3	12	11	0	3	2	0	0	0	0	32	2.32%
AM TOTAL	1	2	3	5	40	80	143	120	97	34	10	5	0	0	540	39.07%
PERCENTAGE	0.2%	0.4%	0.6%	0.9%	7.4%	14.8%	26.5%	22.2%	18.0%	6.3%	1.9%	0.9%	0.0%	0.0%		
CUMULATIVE	1	3	6	11	51	131	274	394	491	525	535	540	540	540		
PERCENTAGE	0.2%	0.6%	1.1%	2.0%	9.4%	24.3%	50.7%	73.0%	90.9%	97.2%	99.1%	100.0%	100.0%	100.0%		

15th Percentile	33	Mean Speed Average	41
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	48	Number in Pace	266
95th Percentile	52	Percent in Pace	49%

SPEED2 Madison between Sun City and Avenue 40 .08-09. Northbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	3	3	8	4	2	3	0	0	0	0	23	1.66%

12:15:00 PM	0	0	2	0	2	4	6	3	0	0	0	1	0	0	18	1.30%
12:30:00 PM	0	0	0	0	0	8	9	8	0	0	0	0	0	0	25	1.81%
12:45:00 PM	0	0	3	2	1	8	2	4	1	1	1	0	0	0	23	1.66%
1:00:00 PM	0	0	1	1	2	3	1	1	0	2	1	0	0	0	12	0.87%
1:15:00 PM	0	0	0	0	2	4	6	4	4	2	0	0	0	0	22	1.59%
1:30:00 PM	0	0	0	0	4	8	7	5	1	0	0	0	0	0	25	1.81%
1:45:00 PM	0	0	0	0	2	6	8	5	4	0	0	0	0	0	25	1.81%
2:00:00 PM	0	0	2	0	3	1	7	6	1	0	0	0	0	0	20	1.45%
2:15:00 PM	0	0	1	0	1	11	5	7	3	1	0	0	0	0	29	2.10%
2:30:00 PM	0	0	0	0	3	9	4	3	2	1	3	0	0	0	25	1.81%
2:45:00 PM	0	0	0	0	4	2	13	5	2	1	0	0	0	0	27	1.95%
3:00:00 PM	0	1	0	1	0	3	17	16	6	0	0	0	0	0	44	3.18%
3:15:00 PM	0	0	1	0	0	9	13	9	10	3	1	0	0	0	46	3.33%
3:30:00 PM	0	1	0	1	0	2	14	10	5	2	2	0	0	0	37	2.68%
3:45:00 PM	0	0	1	0	2	10	14	10	1	3	1	1	0	0	43	3.11%
4:00:00 PM	0	0	0	0	2	7	7	5	7	3	0	0	0	0	31	2.24%
4:15:00 PM	0	0	0	0	0	4	11	6	0	1	0	0	0	0	22	1.59%
4:30:00 PM	0	0	0	0	3	1	4	8	1	1	1	0	0	0	19	1.37%
4:45:00 PM	0	0	0	0	1	8	5	3	2	1	0	0	0	0	20	1.45%
5:00:00 PM	0	0	0	0	1	2	11	6	5	0	1	0	0	0	26	1.88%
5:15:00 PM	0	0	0	0	0	4	3	11	3	1	0	0	0	0	22	1.59%
5:30:00 PM	0	0	0	0	2	8	4	5	3	1	0	1	0	0	24	1.74%
5:45:00 PM	0	0	0	0	3	4	3	5	1	0	0	0	0	0	16	1.16%
6:00:00 PM	0	0	0	0	1	5	3	9	6	2	0	0	0	0	26	1.88%
6:15:00 PM	0	0	0	0	2	2	9	6	0	1	0	0	0	0	20	1.45%
6:30:00 PM	0	0	0	1	1	4	11	6	0	1	0	0	0	0	24	1.74%
6:45:00 PM	0	0	0	0	1	3	3	4	3	0	0	0	0	0	14	1.01%
7:00:00 PM	0	0	0	1	0	3	8	3	1	0	0	0	0	0	16	1.16%
7:15:00 PM	0	0	0	0	1	2	2	9	1	0	0	0	0	0	15	1.09%
7:30:00 PM	0	0	0	0	0	1	2	0	1	1	0	0	0	0	5	0.36%
7:45:00 PM	0	0	0	0	0	2	3	2	2	0	0	0	0	0	9	0.65%
8:00:00 PM	0	0	0	0	1	1	5	2	3	1	0	0	0	0	13	0.94%
8:15:00 PM	0	0	0	0	0	2	1	2	1	0	0	0	0	0	6	0.43%
8:30:00 PM	0	0	0	0	1	3	1	3	3	0	0	0	0	0	11	0.80%
8:45:00 PM	0	0	0	0	2	2	1	3	1	1	0	0	0	0	10	0.72%
9:00:00 PM	0	0	0	0	1	2	3	5	0	0	0	0	0	0	11	0.80%
9:15:00 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	6	0.43%
9:30:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.22%
9:45:00 PM	0	0	0	0	0	3	5	2	0	0	0	0	1	0	11	0.80%
10:00:00 PM	0	0	0	0	0	1	3	0	1	0	0	0	0	0	5	0.36%
10:15:00 PM	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3	0.22%
10:30:00 PM	0	0	1	0	0	1	1	0	0	1	0	0	0	0	4	0.29%
10:45:00 PM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3	0.22%
11:00:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.14%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.07%
PM TOTAL	0	2	12	7	53	171	249	209	89	35	11	3	1	0	842	60.93%
PERCENTAGE	0.0%	0.2%	1.4%	0.8%	6.3%	20.3%	29.6%	24.8%	10.6%	4.2%	1.3%	0.4%	0.1%	0		
CUMULATIVE	0	2	14	21	74	245	494	703	792	827	838	841	842	842		
PERCENTAGE	0.0%	0.2%	1.7%	2.5%	8.8%	29.1%	58.7%	83.5%	94.1%	98.2%	99.5%	99.9%	100.0%	100.0%		

15th Percentile	32	Mean Speed Average	39
50th Percentile	40	10 MPH Pace Speed	36-45
85th Percentile	47	Number in Pace	283
95th Percentile	52	Percent in Pace	34%

DAY TOTAL	1	4	15	12	93	251	392	329	186	69	21	8	1	0	1,382	
PERCENTAGE	0.1%	0.3%	1.1%	0.9%	6.7%	18.2%	28.4%	23.8%	13.5%	5.0%	1.5%	0.6%	0.1%	0.00%	1,382	100.00%
	0.1%	0.4%	1.4%	2.3%	9.0%	27.2%	55.6%	79.4%	92.8%	97.8%	99.3%	99.9%	100.0%	100.00%		
85th Percentile	48															

#N/A
Southbound

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.07%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.30%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.07%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.07%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.15%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.07%
3:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.15%
4:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.07%
4:30:00 AM	0	0	0	1	0	0	1	2	0	0	0	0	0	0	4	0.30%
4:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0.15%
5:00:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	1	0	4	0.30%
5:15:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.07%
5:30:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	1	0	3	0.22%
5:45:00 AM	0	0	0	0	1	0	1	0	1	1	1	0	0	0	5	0.37%
6:00:00 AM	0	0	0	0	0	0	1	1	2	2	0	1	1	0	8	0.59%
6:15:00 AM	0	0	0	0	0	0	0	1	0	1	2	0	1	0	5	0.37%
6:30:00 AM	0	0	0	0	0	3	0	6	2	0	1	0	0	0	12	0.89%
6:45:00 AM	0	0	0	0	0	0	3	0	2	1	1	1	0	1	9	0.66%
7:00:00 AM	0	0	0	0	1	1	0	3	6	4	4	1	0	0	20	1.48%
7:15:00 AM	0	0	0	0	0	0	5	9	0	1	3	3	0	2	23	1.70%
7:30:00 AM	0	0	0	0	0	2	1	3	5	4	3	1	0	1	20	1.48%
7:45:00 AM	0	0	0	0	0	0	3	4	2	2	2	0	0	0	13	0.96%
8:00:00 AM	0	0	0	0	0	1	4	9	8	9	4	2	0	1	38	2.80%
8:15:00 AM	0	0	0	0	0	0	7	9	12	10	4	4	1	1	48	3.54%
8:30:00 AM	0	0	0	0	0	2	5	10	12	8	5	3	2	0	47	3.47%
8:45:00 AM	0	0	0	0	0	3	8	7	4	4	4	0	0	0	30	2.21%
9:00:00 AM	0	0	0	0	0	3	3	7	3	1	1	1	0	0	19	1.40%
9:15:00 AM	0	0	0	0	0	0	7	9	3	5	2	0	0	0	26	1.92%
9:30:00 AM	0	0	0	1	0	0	3	3	3	3	3	0	0	1	17	1.25%
9:45:00 AM	0	0	0	0	4	3	3	6	8	2	3	3	0	1	33	2.44%
10:00:00 AM	0	0	0	0	0	3	5	12	5	4	2	1	0	0	32	2.36%
10:15:00 AM	0	0	0	0	0	2	4	4	3	2	1	0	1	0	17	1.25%
10:30:00 AM	0	0	0	0	1	2	8	10	8	2	0	2	0	0	33	2.44%
10:45:00 AM	0	0	0	0	1	9	3	3	6	2	3	0	0	0	27	1.99%
11:00:00 AM	0	0	0	0	0	2	4	2	4	1	0	1	0	0	14	1.03%
11:15:00 AM	0	0	0	0	1	2	5	10	5	0	0	0	0	0	23	1.70%
11:30:00 AM	1	0	0	0	3	0	7	4	4	0	4	0	0	0	23	1.70%
11:45:00 AM	0	0	0	0	0	1	3	9	4	8	4	0	0	0	29	2.14%
AM TOTAL	1	0	1	3	12	41	96	147	118	78	60	24	9	9	599	44.21%
PERCENTAGE	0.2%	0.0%	0.2%	0.5%	2.0%	6.8%	16.0%	24.5%	19.7%	13.0%	10.0%	4.0%	1.5%	39.1%		
CUMULATIVE	1	1	2	5	17	58	154	301	419	497	557	581	590	599		
PERCENTAGE	0.2%	0.2%	0.3%	0.8%	2.8%	9.7%	25.7%	50.3%	69.9%	83.0%	93.0%	97.0%	98.5%	100.0%		

15th Percentile	38	Mean Speed Average	46
50th Percentile	45	10 MPH Pace Speed	38-47
85th Percentile	55	Number in Pace	260
95th Percentile	60	Percent in Pace	43%

#N/A
Southbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	1	6	3	7	1	1	1	1	0	23	1.70%

12:15:00 PM	0	0	0	0	0	1	7	7	2	3	3	1	0	0	24	1.77%
12:30:00 PM	0	0	0	0	2	2	5	6	5	2	0	0	0	0	22	1.62%
12:45:00 PM	0	0	0	0	0	3	4	3	3	2	0	2	0	1	18	1.33%
1:00:00 PM	0	0	0	0	0	0	10	8	2	5	2	1	0	1	29	2.14%
1:15:00 PM	0	0	0	0	0	0	6	2	4	0	2	0	0	0	14	1.03%
1:30:00 PM	0	0	0	1	1	2	6	6	6	2	1	1	0	0	26	1.92%
1:45:00 PM	0	0	0	0	1	1	3	4	2	2	0	2	0	0	15	1.11%
2:00:00 PM	0	0	0	0	1	0	1	6	7	3	0	0	0	2	20	1.48%
2:15:00 PM	0	0	0	0	2	6	4	1	4	2	1	0	0	1	21	1.55%
2:30:00 PM	0	0	0	0	0	4	2	8	2	2	1	0	0	0	19	1.40%
2:45:00 PM	0	0	0	0	0	1	9	4	4	7	1	1	0	0	27	1.99%
3:00:00 PM	2	0	0	0	0	3	3	11	9	2	1	0	0	0	31	2.29%
3:15:00 PM	0	0	0	0	0	1	3	3	4	4	4	2	1	1	23	1.70%
3:30:00 PM	0	0	0	0	1	0	4	6	24	16	6	4	0	0	61	4.50%
3:45:00 PM	0	0	0	0	0	0	2	31	51	26	2	1	0	0	113	8.34%
4:00:00 PM	0	0	0	0	0	4	6	3	4	1	4	0	1	0	23	1.70%
4:15:00 PM	0	0	0	0	0	0	3	4	3	6	2	3	3	0	24	1.77%
4:30:00 PM	0	0	0	0	0	1	5	5	4	2	0	1	0	0	18	1.33%
4:45:00 PM	0	0	0	0	0	0	2	8	5	4	3	0	2	0	24	1.77%
5:00:00 PM	0	0	0	0	0	2	0	5	7	6	2	0	0	0	22	1.62%
5:15:00 PM	0	0	0	0	2	0	1	5	5	3	3	0	0	0	19	1.40%
5:30:00 PM	0	0	0	0	0	1	5	5	1	4	2	0	0	0	18	1.33%
5:45:00 PM	0	0	0	0	0	0	3	3	1	1	1	1	0	0	10	0.74%
6:00:00 PM	0	0	0	0	0	1	1	3	0	2	2	0	0	0	9	0.66%
6:15:00 PM	0	0	0	0	0	0	2	3	2	2	0	0	0	0	9	0.66%
6:30:00 PM	0	0	0	0	0	0	1	2	4	3	0	0	0	1	11	0.81%
6:45:00 PM	0	0	0	0	0	0	1	3	3	2	0	0	0	1	10	0.74%
7:00:00 PM	0	0	0	0	0	1	0	5	0	1	3	1	0	0	11	0.81%
7:15:00 PM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0.30%
7:30:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	0	1	4	0.30%
7:45:00 PM	0	0	0	0	0	2	2	0	0	0	0	1	0	0	5	0.37%
8:00:00 PM	0	0	0	0	0	0	0	2	2	3	1	0	0	0	8	0.59%
8:15:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	0	3	0.22%
8:30:00 PM	0	0	0	0	0	0	4	1	0	4	1	0	0	0	10	0.74%
8:45:00 PM	0	0	0	0	0	0	1	1	2	0	1	0	0	0	5	0.37%
9:00:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.15%
9:15:00 PM	0	0	0	0	0	1	0	0	1	0	1	0	0	0	3	0.22%
9:30:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.07%
9:45:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3	0.22%
10:00:00 PM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	4	0.30%
10:15:00 PM	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3	0.22%
10:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
10:45:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.15%
11:00:00 PM	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3	0.22%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.07%
11:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.07%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
PM TOTAL	2	0	0	3	12	38	116	178	184	126	53	24	9	11	756	55.79%
PERCENTAGE	0.3%	0.0%	0.0%	0.4%	1.6%	5.0%	15.3%	23.5%	24.3%	16.7%	7.0%	3.2%	1.2%	0		
CUMULATIVE	2	2	2	5	17	55	171	349	533	659	712	736	745	756		
PERCENTAGE	0.3%	0.3%	0.3%	0.7%	2.2%	7.3%	22.6%	46.2%	70.5%	87.2%	94.2%	97.4%	98.5%	100.0%		

15th Percentile	38	Mean Speed Average	46
50th Percentile	46	10 MPH Pace Speed	39-48
85th Percentile	55	Number in Pace	278
95th Percentile	61	Percent in Pace	37%

DAY TOTAL	3	0	1	6	24	79	212	325	302	204	113	48	18	20	1,355	
PERCENTAGE	0.2%	0.0%	0.1%	0.4%	1.8%	5.8%	15.6%	24.0%	22.3%	15.1%	8.3%	3.5%	1.3%	1.48%	1,355	100.00%
	0.2%	0.2%	0.3%	0.7%	2.5%	8.3%	24.0%	48.0%	70.3%	85.3%	93.7%	97.2%	98.5%	100.00%		
85th Percentile	55															

SPEED2 Madison between Sun City and Avenue 40 .08-09. Combined

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
12:30:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.07%
12:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.04%
1:00:00 AM	0	0	0	0	0	0	0	1	3	1	0	0	0	0	5	0.18%
1:15:00 AM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0.07%
1:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
1:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.04%
2:00:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0.07%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.04%
3:00:00 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3	0.11%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.04%
3:45:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.07%
4:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.04%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
4:30:00 AM	0	0	0	1	0	0	1	2	0	0	0	0	0	0	4	0.15%
4:45:00 AM	0	0	0	0	0	2	0	1	0	0	0	0	0	1	4	0.15%
5:00:00 AM	0	0	0	0	0	0	1	1	0	0	2	0	1	0	5	0.18%
5:15:00 AM	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4	0.15%
5:30:00 AM	0	0	0	0	1	1	1	1	1	0	1	0	1	0	7	0.26%
5:45:00 AM	0	0	1	0	1	2	3	1	4	2	2	0	0	0	16	0.58%
6:00:00 AM	0	0	0	0	3	3	5	1	5	2	1	1	1	0	22	0.80%
6:15:00 AM	0	0	0	1	1	0	2	3	2	2	3	0	1	0	15	0.55%
6:30:00 AM	0	0	0	0	0	4	0	8	3	0	1	0	0	0	16	0.58%
6:45:00 AM	0	0	0	0	2	1	5	1	3	1	1	1	0	1	16	0.58%
7:00:00 AM	0	0	0	0	2	2	11	5	6	5	5	1	0	0	37	1.35%
7:15:00 AM	0	0	0	0	2	2	9	11	0	3	6	4	0	2	39	1.42%
7:30:00 AM	0	0	0	1	1	5	3	5	8	4	3	1	0	1	32	1.17%
7:45:00 AM	0	0	0	0	0	4	10	11	6	5	2	1	0	0	39	1.42%
8:00:00 AM	0	0	0	0	0	3	19	30	25	18	4	2	0	1	102	3.73%
8:15:00 AM	0	1	0	0	0	2	17	40	51	19	6	5	1	1	143	5.22%
8:30:00 AM	0	0	0	0	4	4	8	15	18	8	5	3	2	0	67	2.45%
8:45:00 AM	0	0	1	0	2	8	13	11	5	5	4	0	0	0	49	1.79%
9:00:00 AM	0	0	0	0	4	5	8	11	3	1	1	1	0	0	34	1.24%
9:15:00 AM	0	0	0	0	1	2	11	12	5	6	2	0	0	0	39	1.42%
9:30:00 AM	0	0	0	1	0	1	6	6	5	3	4	0	0	1	27	0.99%
9:45:00 AM	0	0	0	0	10	6	10	10	8	3	3	4	0	1	55	2.01%
10:00:00 AM	0	0	0	0	2	7	10	12	5	5	2	1	0	0	44	1.61%
10:15:00 AM	0	0	0	0	1	4	7	5	4	3	1	0	1	0	26	0.95%
10:30:00 AM	0	0	0	0	1	9	11	14	11	2	0	3	0	0	51	1.86%
10:45:00 AM	0	0	0	1	3	10	6	6	6	2	3	0	0	0	37	1.35%
11:00:00 AM	1	0	0	0	1	4	12	10	4	1	0	1	0	0	34	1.24%
11:15:00 AM	0	0	0	0	3	11	17	12	5	0	0	0	0	0	48	1.75%
11:30:00 AM	1	0	0	0	4	5	12	8	7	1	4	0	0	0	42	1.53%
11:45:00 AM	0	1	0	0	3	13	14	9	7	10	4	0	0	0	61	2.23%
AM TOTAL	2	2	4	8	52	121	239	267	215	112	70	29	9	9	1,139	41.61%
PERCENTAGE	0.2%	0.2%	0.4%	0.7%	4.6%	10.6%	21.0%	23.4%	18.9%	9.8%	6.1%	2.5%	0.8%	0.8%		
CUMULATIVE	2	4	8	16	68	189	428	695	910	1,022	1,092	1,121	1,130	1,139		
PERCENTAGE	0.2%	0.4%	0.7%	1.4%	6.0%	16.6%	37.6%	61.0%	79.9%	89.7%	95.9%	98.4%	99.2%	100.0%		

15th Percentile	34	Mean Speed Average	44
50th Percentile	43	10 MPH Pace Speed	36-45
85th Percentile	54	Number in Pace	283
95th Percentile	60	Percent in Pace	25%

SPEED2 Madison between Sun City and Avenue 40 .08-09. Combined

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES

12:00:00 PM	0	0	0	1	4	4	14	7	9	4	1	1	1	0	46	1.68%
12:15:00 PM	0	0	2	0	2	5	13	10	2	3	3	2	0	0	42	1.53%
12:30:00 PM	0	0	0	0	2	10	14	14	5	2	0	0	0	0	47	1.72%
12:45:00 PM	0	0	3	2	1	11	6	7	4	3	1	2	0	1	41	1.50%
1:00:00 PM	0	0	1	1	2	3	11	9	2	7	3	1	0	1	41	1.50%
1:15:00 PM	0	0	0	0	2	4	12	6	8	2	2	0	0	0	36	1.32%
1:30:00 PM	0	0	0	1	5	10	13	11	7	2	1	1	0	0	51	1.86%
1:45:00 PM	0	0	0	0	3	7	11	9	6	2	0	2	0	0	40	1.46%
2:00:00 PM	0	0	2	0	4	1	8	12	8	3	0	0	0	2	40	1.46%
2:15:00 PM	0	0	1	0	3	17	9	8	7	3	1	0	0	1	50	1.83%
2:30:00 PM	0	0	0	0	3	13	6	11	4	3	4	0	0	0	44	1.61%
2:45:00 PM	0	0	0	0	4	3	22	9	6	8	1	1	0	0	54	1.97%
3:00:00 PM	2	1	0	1	0	6	20	27	15	2	1	0	0	0	75	2.74%
3:15:00 PM	0	0	1	0	0	10	16	12	14	7	5	2	1	1	69	2.52%
3:30:00 PM	0	1	0	1	1	2	18	16	29	18	8	4	0	0	98	3.58%
3:45:00 PM	0	0	1	0	2	10	16	41	52	29	3	2	0	0	156	5.70%
4:00:00 PM	0	0	0	0	2	11	13	8	11	4	4	0	1	0	54	1.97%
4:15:00 PM	0	0	0	0	0	4	14	10	3	7	2	3	3	0	46	1.68%
4:30:00 PM	0	0	0	0	3	2	9	13	5	3	1	1	0	0	37	1.35%
4:45:00 PM	0	0	0	0	1	8	7	11	7	5	3	0	2	0	44	1.61%
5:00:00 PM	0	0	0	0	1	4	11	11	12	6	3	0	0	0	48	1.75%
5:15:00 PM	0	0	0	0	2	4	4	16	8	4	3	0	0	0	41	1.50%
5:30:00 PM	0	0	0	0	2	9	9	10	4	5	2	1	0	0	42	1.53%
5:45:00 PM	0	0	0	0	3	4	6	8	2	1	1	1	0	0	26	0.95%
6:00:00 PM	0	0	0	0	1	6	4	12	6	4	2	0	0	0	35	1.28%
6:15:00 PM	0	0	0	0	2	2	11	9	2	3	0	0	0	0	29	1.06%
6:30:00 PM	0	0	0	1	1	4	12	8	4	4	0	0	0	1	35	1.28%
6:45:00 PM	0	0	0	0	1	3	4	7	6	2	0	0	0	1	24	0.88%
7:00:00 PM	0	0	0	1	0	4	8	8	1	1	3	1	0	0	27	0.99%
7:15:00 PM	0	0	0	0	1	2	3	10	3	0	0	0	0	0	19	0.69%
7:30:00 PM	0	0	0	0	0	1	2	2	1	1	1	0	0	1	9	0.33%
7:45:00 PM	0	0	0	0	0	4	5	2	2	0	0	1	0	0	14	0.51%
8:00:00 PM	0	0	0	0	1	1	5	4	5	4	1	0	0	0	21	0.77%
8:15:00 PM	0	0	0	0	0	2	1	3	2	0	0	0	1	0	9	0.33%
8:30:00 PM	0	0	0	0	1	3	5	4	3	4	1	0	0	0	21	0.77%
8:45:00 PM	0	0	0	0	2	2	2	4	3	1	1	0	0	0	15	0.55%
9:00:00 PM	0	0	0	0	1	2	4	5	0	0	1	0	0	0	13	0.47%
9:15:00 PM	0	0	0	0	0	2	2	3	1	0	1	0	0	0	9	0.33%
9:30:00 PM	0	0	0	1	0	1	1	1	0	0	0	0	0	0	4	0.15%
9:45:00 PM	0	0	0	0	0	3	5	4	0	0	0	0	1	1	14	0.51%
10:00:00 PM	0	0	0	0	1	1	4	2	1	0	0	0	0	0	9	0.33%
10:15:00 PM	0	0	0	0	1	1	2	1	0	0	0	1	0	0	6	0.22%
10:30:00 PM	0	0	1	0	0	1	1	0	0	1	0	0	0	0	4	0.15%
10:45:00 PM	0	0	0	0	0	0	2	0	2	1	0	0	0	0	5	0.18%
11:00:00 PM	0	0	0	0	0	1	0	2	1	1	0	0	0	0	5	0.18%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.04%
11:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.04%
11:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04%
PM TOTAL	2	2	12	10	65	209	365	387	273	161	64	27	10	11	1,598	58.39%
PERCENTAGE	0.1%	0.1%	0.8%	0.6%	4.1%	13.1%	22.8%	24.2%	17.1%	10.1%	4.0%	1.7%	0.6%	0.7%		
CUMULATIVE	2	4	16	26	91	300	665	1,052	1,325	1,486	1,550	1,577	1,587	1,598		
PERCENTAGE	0.1%	0.3%	1.0%	1.6%	5.7%	18.8%	41.6%	65.8%	82.9%	93.0%	97.0%	98.7%	99.3%	100.0%		

15th Percentile	33	Mean Speed Average	43
50th Percentile	43	10 MPH Pace Speed	35-44
85th Percentile	54	Number in Pace	277
95th Percentile	59	Percent in Pace	17%

DAY TOTAL	4	4	16	18	117	330	604	654	488	273	134	56	19	20	2,737	100.00%
PERCENTAGE	0.1%	0.1%	0.6%	0.7%	4.3%	12.1%	22.1%	23.9%	17.8%	10.0%	4.9%	2.0%	0.7%	0.7%	2,737	100.00%
	0.1%	0.3%	0.9%	1.5%	5.8%	17.9%	39.9%	63.8%	81.7%	91.6%	96.5%	98.6%	99.3%	100.0%		
85th Percentile	54															

SPEED3 Avenue 38 between Burr and Kevin .07.

Project# **SC3235**

Eastbound

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
12:45:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.52%
1:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.13%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.13%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.26%
2:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.13%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.13%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
5:00:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.26%
5:15:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.26%
5:30:00 AM	0	0	0	0	0	0	0	1	1	2	0	0	0	0	4	0.52%
5:45:00 AM	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4	0.52%
6:00:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.26%
6:15:00 AM	0	0	0	0	0	0	1	1	2	0	0	2	0	0	6	0.78%
6:30:00 AM	0	0	0	0	1	1	2	1	1	1	0	0	0	0	7	0.91%
6:45:00 AM	0	0	0	0	0	1	0	1	1	1	0	0	0	0	4	0.52%
7:00:00 AM	0	0	0	0	0	0	1	3	0	0	0	0	0	0	4	0.52%
7:15:00 AM	0	0	0	0	0	0	0	1	4	2	0	0	0	0	7	0.91%
7:30:00 AM	0	0	0	0	0	0	0	1	1	3	1	1	0	0	7	0.91%
7:45:00 AM	0	0	0	0	0	0	1	2	7	3	0	0	0	0	13	1.69%
8:00:00 AM	0	0	0	0	0	1	3	8	21	10	0	1	0	0	44	5.74%
8:15:00 AM	0	0	1	2	0	0	6	14	27	9	3	0	0	0	62	8.08%
8:30:00 AM	0	0	0	0	0	1	1	7	12	3	1	2	0	0	27	3.52%
8:45:00 AM	0	0	0	0	0	1	2	1	5	2	2	2	0	0	15	1.96%
9:00:00 AM	0	0	0	0	0	0	0	2	4	0	0	0	0	0	6	0.78%
9:15:00 AM	0	0	0	0	0	0	2	1	2	1	3	1	0	0	10	1.30%
9:30:00 AM	0	0	0	0	0	1	0	0	2	4	0	0	0	0	7	0.91%
9:45:00 AM	0	0	0	0	0	0	0	1	3	2	0	0	0	0	6	0.78%
10:00:00 AM	0	0	0	0	0	0	0	2	3	0	2	0	0	0	7	0.91%
10:15:00 AM	0	0	0	0	0	0	2	1	2	0	0	0	0	0	5	0.65%
10:30:00 AM	0	0	0	0	2	0	1	0	3	0	0	0	0	0	6	0.78%
10:45:00 AM	1	0	0	0	0	0	3	5	4	1	0	0	0	0	14	1.83%
11:00:00 AM	0	0	0	0	0	0	0	1	6	3	0	0	0	0	10	1.30%
11:15:00 AM	0	0	0	0	0	1	0	5	5	1	0	0	0	1	13	1.69%
11:30:00 AM	0	0	0	0	0	1	1	2	6	2	0	0	0	0	12	1.56%
11:45:00 AM	0	0	0	0	0	0	4	0	3	4	0	0	0	0	11	1.43%
AM TOTAL	1	0	1	2	3	8	35	66	133	58	12	9	0	1	329	42.89%
PERCENTAGE	0.3%	0.0%	0.3%	0.6%	0.9%	2.4%	10.6%	20.1%	40.4%	17.6%	3.6%	2.7%	0.0%	0.3%		
CUMULATIVE	1	1	2	4	7	15	50	116	249	307	319	328	328	329		
PERCENTAGE	0.3%	0.3%	0.6%	1.2%	2.1%	4.6%	15.2%	35.3%	75.7%	93.3%	97.0%	99.7%	99.7%	100.0%		

15th Percentile	41	Mean Speed Average	47
50th Percentile	47	10 MPH Pace Speed	43-52
85th Percentile	52	Number in Pace	188
95th Percentile	58	Percent in Pace	57%

SPEED3 Avenue 38 between Burr and Kevin .07.

Project# **SC3235**

Eastbound

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	0	0	3	4	2	3	0	0	0	12	1.56%
12:15:00 PM	0	0	0	0	0	0	4	10	2	1	2	0	0	0	19	2.48%
12:30:00 PM	0	0	0	0	0	0	3	2	2	1	0	0	0	0	8	1.04%

12:45:00 PM	0	0	0	0	0	0	1	3	2	0	1	0	0	0	7	0.91%
1:00:00 PM	0	0	0	0	0	4	0	3	3	1	1	0	0	0	12	1.56%
1:15:00 PM	0	0	0	0	0	1	1	5	1	1	1	0	0	0	10	1.30%
1:30:00 PM	0	0	0	0	0	1	1	2	4	2	0	1	0	0	11	1.43%
1:45:00 PM	0	0	0	0	0	0	2	1	1	3	0	1	0	0	8	1.04%
2:00:00 PM	0	0	0	1	0	1	1	2	3	2	1	0	0	0	11	1.43%
2:15:00 PM	0	0	0	0	0	1	0	1	2	4	0	0	0	1	9	1.17%
2:30:00 PM	0	0	0	0	0	0	3	3	3	5	1	0	0	0	15	1.96%
2:45:00 PM	0	1	0	0	0	0	3	5	5	3	1	0	0	0	18	2.35%
3:00:00 PM	0	0	0	0	0	0	2	7	4	4	0	2	0	1	20	2.61%
3:15:00 PM	0	0	0	0	0	0	2	9	11	8	6	0	0	0	36	4.69%
3:30:00 PM	0	0	0	0	0	0	2	15	9	10	1	2	0	0	39	5.08%
3:45:00 PM	0	0	0	0	0	0	4	1	6	8	2	0	0	0	21	2.74%
4:00:00 PM	0	0	0	0	0	0	0	3	3	1	0	0	0	1	8	1.04%
4:15:00 PM	0	0	0	0	0	1	0	3	4	3	0	0	0	1	12	1.56%
4:30:00 PM	0	0	0	0	0	0	0	3	1	3	2	1	0	0	10	1.30%
4:45:00 PM	0	0	0	0	0	0	0	0	3	3	1	0	0	0	7	0.91%
5:00:00 PM	0	0	0	0	0	0	4	3	6	1	1	0	0	0	15	1.96%
5:15:00 PM	0	0	0	0	0	0	3	5	2	0	4	0	1	0	15	1.96%
5:30:00 PM	0	0	0	0	1	0	0	4	4	6	1	0	0	0	16	2.09%
5:45:00 PM	0	0	0	0	0	1	1	3	3	2	1	0	0	0	11	1.43%
6:00:00 PM	0	0	0	0	0	0	2	0	2	2	1	0	0	0	7	0.91%
6:15:00 PM	0	0	0	0	0	1	0	5	0	2	0	0	0	0	8	1.04%
6:30:00 PM	0	0	0	0	0	1	1	2	2	1	0	0	0	0	7	0.91%
6:45:00 PM	0	0	0	0	0	1	1	5	2	2	0	0	0	0	11	1.43%
7:00:00 PM	0	0	0	0	1	1	0	2	2	1	0	1	0	0	8	1.04%
7:15:00 PM	0	0	0	0	0	0	2	2	1	0	0	0	0	0	5	0.65%
7:30:00 PM	0	0	0	0	0	0	1	0	1	0	1	0	0	0	3	0.39%
7:45:00 PM	0	0	0	0	0	0	0	1	2	2	0	0	0	0	5	0.65%
8:00:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.39%
8:15:00 PM	0	0	0	0	0	1	1	1	1	0	0	0	0	0	4	0.52%
8:30:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0.39%
8:45:00 PM	0	0	0	0	0	1	1	3	0	0	0	0	0	0	5	0.65%
9:00:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.26%
9:15:00 PM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.39%
9:30:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0.39%
9:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.13%
10:00:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.26%
10:15:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.26%
10:30:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
10:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:00:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0.26%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
11:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.13%
11:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
PM TOTAL	0	1	0	1	2	18	55	124	105	86	32	8	2	4	438	57.11%
PERCENTAGE	0.0%	0.2%	0.0%	0.2%	0.5%	4.1%	12.6%	28.3%	24.0%	19.6%	7.3%	1.8%	0.5%	0.9%		
CUMULATIVE	0	1	1	2	4	22	77	201	306	392	424	432	434	438		
PERCENTAGE	0.0%	0.2%	0.2%	0.5%	0.9%	5.0%	17.6%	45.9%	69.9%	89.5%	96.8%	98.6%	99.1%	100.0%		

15th Percentile	40	Mean Speed Average	47
50th Percentile	46	10 MPH Pace Speed	39-48
85th Percentile	53	Number in Pace	225
95th Percentile	58	Percent in Pace	51%

DAY TOTAL	1	1	1	3	5	26	90	190	238	144	44	17	2	5	767	
PERCENTAGE	0.1%	0.1%	0.1%	0.4%	0.7%	3.4%	11.7%	24.8%	31.0%	18.8%	5.7%	2.2%	0.3%	0.7%	767	100.00%
	0.1%	0.3%	0.4%	0.8%	1.4%	4.8%	16.6%	41.3%	72.4%	91.1%	96.9%	99.1%	99.3%	100.0%		
85th Percentile	53															

SPEED3 Avenue 38 between Burr and Kevin .07. Westbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.12%
12:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0.24%
3:30:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.12%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.24%
4:15:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.24%
4:30:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.24%
4:45:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.24%
5:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
5:15:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.12%
5:30:00 AM	0	0	0	0	1	1	1	0	1	0	0	0	0	0	4	0.49%
5:45:00 AM	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0.24%
6:00:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.24%
6:15:00 AM	0	0	0	0	0	0	1	2	2	0	0	0	0	0	5	0.61%
6:30:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.24%
6:45:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.37%
7:00:00 AM	0	0	0	0	1	1	4	1	1	1	0	0	0	0	9	1.10%
7:15:00 AM	0	0	0	0	0	3	3	4	2	2	1	0	1	0	16	1.96%
7:30:00 AM	0	1	0	0	1	0	5	5	2	1	0	0	0	0	15	1.84%
7:45:00 AM	0	0	0	0	2	3	3	9	3	1	0	0	0	0	21	2.57%
8:00:00 AM	0	2	0	0	0	2	5	9	4	4	0	0	0	0	26	3.18%
8:15:00 AM	0	0	2	0	0	0	13	14	4	0	1	0	0	0	34	4.16%
8:30:00 AM	0	0	0	0	2	0	7	17	6	1	0	0	0	0	33	4.04%
8:45:00 AM	0	0	0	0	0	0	6	4	3	0	0	0	0	0	13	1.59%
9:00:00 AM	0	0	0	1	0	1	5	1	2	0	0	0	0	0	10	1.22%
9:15:00 AM	0	0	0	0	0	1	0	5	0	0	0	0	0	0	6	0.73%
9:30:00 AM	0	0	0	0	0	0	2	2	1	0	0	0	0	0	5	0.61%
9:45:00 AM	0	0	0	0	0	2	6	2	0	0	2	0	0	0	12	1.47%
10:00:00 AM	0	0	0	0	2	0	3	0	3	0	0	0	0	0	8	0.98%
10:15:00 AM	0	0	0	0	0	3	3	3	0	0	0	0	0	0	9	1.10%
10:30:00 AM	0	0	0	0	1	1	4	2	0	1	1	0	0	0	10	1.22%
10:45:00 AM	0	0	0	0	2	2	0	7	0	0	0	0	0	0	11	1.35%
11:00:00 AM	0	0	0	0	1	3	3	3	0	0	0	0	0	0	10	1.22%
11:15:00 AM	0	0	0	0	0	3	4	2	1	1	0	0	0	0	11	1.35%
11:30:00 AM	0	0	0	0	0	1	4	2	1	1	0	0	0	0	9	1.10%
11:45:00 AM	0	0	0	0	0	4	2	6	0	1	0	1	0	0	14	1.71%
AM TOTAL	1	3	3	2	15	33	90	103	41	18	6	1	1	0	317	38.80%
PERCENTAGE	0.3%	0.9%	0.9%	0.6%	4.7%	10.4%	28.4%	32.5%	12.9%	5.7%	1.9%	0.3%	0.3%	0.0%		
CUMULATIVE	1	4	7	9	24	57	147	250	291	309	315	316	317	317		
PERCENTAGE	0.3%	1.3%	2.2%	2.8%	7.6%	18.0%	46.4%	78.9%	91.8%	97.5%	99.4%	99.7%	100.0%	100.0%		

15th Percentile	35	Mean Speed Average	41
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	47	Number in Pace	203
95th Percentile	52	Percent in Pace	64%

SPEED3 Avenue 38 between Burr and Kevin .07. Westbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	2	2	2	3	1	1	0	0	0	1	12	1.47%
12:15:00 PM	0	0	0	0	1	4	5	2	2	1	0	1	0	2	18	2.20%
12:30:00 PM	0	0	0	0	0	1	3	1	1	0	0	0	0	0	6	0.73%
12:45:00 PM	0	0	0	0	1	2	2	2	1	1	0	0	0	0	9	1.10%
1:00:00 PM	1	0	0	0	0	4	2	3	0	0	0	0	0	0	10	1.22%

1:15:00 PM	0	0	0	0	1	1	0	7	0	0	0	0	0	0	9	1.10%
1:30:00 PM	0	0	0	0	1	1	1	2	1	1	0	0	0	0	7	0.86%
1:45:00 PM	0	0	0	0	0	1	3	5	2	2	0	0	0	0	13	1.59%
2:00:00 PM	0	0	0	0	0	1	5	4	1	1	0	0	0	0	12	1.47%
2:15:00 PM	1	1	0	0	1	1	2	3	1	0	0	0	0	0	10	1.22%
2:30:00 PM	0	0	1	0	0	2	5	2	0	0	0	0	0	0	10	1.22%
2:45:00 PM	0	0	0	0	2	0	7	3	2	2	0	0	1	0	17	2.08%
3:00:00 PM	0	0	0	0	0	1	4	2	2	1	0	0	0	0	10	1.22%
3:15:00 PM	0	0	0	0	0	2	7	0	3	0	0	0	0	0	12	1.47%
3:30:00 PM	0	0	0	0	1	1	4	33	19	6	0	1	0	0	65	7.96%
3:45:00 PM	0	1	0	0	3	7	21	31	16	4	1	0	0	0	84	10.28%
4:00:00 PM	0	0	0	0	2	4	7	4	3	0	0	0	0	0	20	2.45%
4:15:00 PM	0	0	0	0	0	5	8	8	1	0	0	0	0	0	22	2.69%
4:30:00 PM	0	0	0	0	0	1	4	5	1	1	1	1	0	0	14	1.71%
4:45:00 PM	0	0	0	0	0	3	0	6	1	0	0	0	0	0	10	1.22%
5:00:00 PM	0	0	0	0	0	4	3	5	2	0	0	0	0	0	14	1.71%
5:15:00 PM	0	0	0	0	0	1	1	3	0	3	0	0	0	0	8	0.98%
5:30:00 PM	0	0	0	0	0	2	0	3	2	0	0	0	0	0	7	0.86%
5:45:00 PM	0	0	0	0	2	2	2	2	0	2	0	0	0	0	10	1.22%
6:00:00 PM	0	0	0	0	0	0	3	3	2	0	0	0	0	0	8	0.98%
6:15:00 PM	0	0	0	0	0	2	3	4	0	0	0	0	0	0	9	1.10%
6:30:00 PM	0	0	0	0	0	1	4	2	2	1	0	0	0	0	10	1.22%
6:45:00 PM	0	0	0	0	0	1	0	2	0	1	0	0	0	0	4	0.49%
7:00:00 PM	0	0	0	0	0	1	2	2	1	0	0	0	0	0	6	0.73%
7:15:00 PM	0	0	0	0	1	1	3	2	0	0	0	0	0	0	7	0.86%
7:30:00 PM	0	0	0	0	0	1	3	2	2	0	0	0	0	0	8	0.98%
7:45:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.24%
8:00:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.24%
8:15:00 PM	0	0	0	0	2	0	0	2	1	0	0	0	0	0	5	0.61%
8:30:00 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4	0.49%
8:45:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.24%
9:00:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
9:15:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.24%
9:30:00 PM	0	0	0	1	0	0	0	1	1	0	0	0	0	0	3	0.37%
9:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
10:00:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.24%
10:15:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.24%
10:30:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0.24%
10:45:00 PM	0	0	1	0	0	0	0	1	1	0	0	0	1	0	4	0.49%
11:00:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0.24%
11:15:00 PM	0	0	0	0	0	1	0	3	0	0	0	0	0	0	4	0.49%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
PM TOTAL	2	2	2	1	20	63	124	171	75	29	3	3	2	3	500	61.20%
PERCENTAGE	0.4%	0.4%	0.4%	0.2%	4.0%	12.6%	24.8%	34.2%	15.0%	5.8%	0.6%	0.6%	0.4%	0.6%		
CUMULATIVE	2	4	6	7	27	90	214	385	460	489	492	495	497	500		
PERCENTAGE	0.4%	0.8%	1.2%	1.4%	5.4%	18.0%	42.8%	77.0%	92.0%	97.8%	98.4%	99.0%	99.4%	100.0%		

15th Percentile	35	Mean Speed Average	41
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	47	Number in Pace	268
95th Percentile	52	Percent in Pace	54%

DAY TOTAL	3	5	5	3	35	96	214	274	116	47	9	4	3	3	817	
PERCENTAGE	0.4%	0.6%	0.6%	0.4%	4.3%	11.8%	26.2%	33.5%	14.2%	5.8%	1.1%	0.5%	0.4%	0.37%	817	100.00%
	0.4%	1.0%	1.6%	2.0%	6.2%	18.0%	44.2%	77.7%	91.9%	97.7%	98.8%	99.3%	99.6%	100.00%		
85th Percentile	47															

SPEED3 Avenue 38 between Burr and Kevin .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.06%
12:30:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.13%
12:45:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.25%
1:00:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.13%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.13%
2:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.06%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	1	0	0	0	0	1	1	0	0	0	0	3	0.19%
3:30:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.06%
3:45:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.06%
4:00:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.13%
4:15:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.13%
4:30:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.13%
4:45:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.13%
5:00:00 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3	0.19%
5:15:00 AM	0	0	0	0	0	0	0	1	1	0	1	0	0	0	3	0.19%
5:30:00 AM	0	0	0	0	1	1	1	1	2	2	0	0	0	0	8	0.51%
5:45:00 AM	0	0	0	0	1	0	0	2	3	0	0	0	0	0	6	0.38%
6:00:00 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	4	0.25%
6:15:00 AM	0	0	0	0	0	0	2	3	4	0	0	2	0	0	11	0.69%
6:30:00 AM	0	0	0	0	1	2	2	1	1	2	0	0	0	0	9	0.57%
6:45:00 AM	0	0	0	0	0	1	1	1	2	2	0	0	0	0	7	0.44%
7:00:00 AM	0	0	0	0	1	1	5	4	1	1	0	0	0	0	13	0.82%
7:15:00 AM	0	0	0	0	0	3	3	5	6	4	1	0	1	0	23	1.45%
7:30:00 AM	0	1	0	0	1	0	5	6	3	4	1	1	0	0	22	1.39%
7:45:00 AM	0	0	0	0	2	3	4	11	10	4	0	0	0	0	34	2.15%
8:00:00 AM	0	2	0	0	0	3	8	17	25	14	0	1	0	0	70	4.42%
8:15:00 AM	0	0	3	2	0	0	19	28	31	9	4	0	0	0	96	6.06%
8:30:00 AM	0	0	0	0	2	1	8	24	18	4	1	2	0	0	60	3.79%
8:45:00 AM	0	0	0	0	0	1	8	5	8	2	2	2	0	0	28	1.77%
9:00:00 AM	0	0	0	1	0	1	5	3	6	0	0	0	0	0	16	1.01%
9:15:00 AM	0	0	0	0	0	1	2	6	2	1	3	1	0	0	16	1.01%
9:30:00 AM	0	0	0	0	0	1	2	2	3	4	0	0	0	0	12	0.76%
9:45:00 AM	0	0	0	0	0	2	6	3	3	2	2	0	0	0	18	1.14%
10:00:00 AM	0	0	0	0	2	0	3	2	6	0	2	0	0	0	15	0.95%
10:15:00 AM	0	0	0	0	0	3	5	4	2	0	0	0	0	0	14	0.88%
10:30:00 AM	0	0	0	0	3	1	5	2	3	1	1	0	0	0	16	1.01%
10:45:00 AM	1	0	0	0	2	2	3	12	4	1	0	0	0	0	25	1.58%
11:00:00 AM	0	0	0	0	1	3	3	4	6	3	0	0	0	0	20	1.26%
11:15:00 AM	0	0	0	0	0	4	4	7	6	2	0	0	0	1	24	1.52%
11:30:00 AM	0	0	0	0	0	2	5	4	7	3	0	0	0	0	21	1.33%
11:45:00 AM	0	0	0	0	0	4	6	6	3	5	0	1	0	0	25	1.58%
AM TOTAL	2	3	4	4	18	41	125	169	174	76	18	10	1	1	646	40.78%
PERCENTAGE	0.3%	0.5%	0.6%	0.6%	2.8%	6.3%	19.3%	26.2%	26.9%	11.8%	2.8%	1.5%	0.2%	0.2%		
CUMULATIVE	2	5	9	13	31	72	197	366	540	616	634	644	645	646		
PERCENTAGE	0.3%	0.8%	1.4%	2.0%	4.8%	11.1%	30.5%	56.7%	83.6%	95.4%	98.1%	99.7%	99.8%	100.0%		

15th Percentile	37	Mean Speed Average	43
50th Percentile	44	10 MPH Pace Speed	37-46
85th Percentile	51	Number in Pace	274
95th Percentile	55	Percent in Pace	42%

SPEED3 Avenue 38 between Burr and Kevin .07.
Combined

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	2	2	2	6	5	3	3	0	0	1	24	1.52%

12:15:00 PM	0	0	0	0	1	4	9	12	4	2	2	1	0	2	37	2.34%
12:30:00 PM	0	0	0	0	0	1	6	3	3	1	0	0	0	0	14	0.88%
12:45:00 PM	0	0	0	0	1	2	3	5	3	1	1	0	0	0	16	1.01%
1:00:00 PM	1	0	0	0	0	8	2	6	3	1	1	0	0	0	22	1.39%
1:15:00 PM	0	0	0	0	1	2	1	12	1	1	1	0	0	0	19	1.20%
1:30:00 PM	0	0	0	0	1	2	2	4	5	3	0	1	0	0	18	1.14%
1:45:00 PM	0	0	0	0	0	1	5	6	3	5	0	1	0	0	21	1.33%
2:00:00 PM	0	0	0	1	0	2	6	6	4	3	1	0	0	0	23	1.45%
2:15:00 PM	1	1	0	0	1	2	2	4	3	4	0	0	0	1	19	1.20%
2:30:00 PM	0	0	1	0	0	2	8	5	3	5	1	0	0	0	25	1.58%
2:45:00 PM	0	1	0	0	2	0	10	8	7	5	1	0	1	0	35	2.21%
3:00:00 PM	0	0	0	0	0	1	6	9	6	5	0	2	0	1	30	1.89%
3:15:00 PM	0	0	0	0	0	2	9	9	14	8	6	0	0	0	48	3.03%
3:30:00 PM	0	0	0	0	1	1	6	48	28	16	1	3	0	0	104	6.57%
3:45:00 PM	0	1	0	0	3	7	25	32	22	12	3	0	0	0	105	6.63%
4:00:00 PM	0	0	0	0	2	4	7	7	6	1	0	0	0	1	28	1.77%
4:15:00 PM	0	0	0	0	0	6	8	11	5	3	0	0	0	1	34	2.15%
4:30:00 PM	0	0	0	0	0	1	4	8	2	4	3	2	0	0	24	1.52%
4:45:00 PM	0	0	0	0	0	3	0	6	4	3	1	0	0	0	17	1.07%
5:00:00 PM	0	0	0	0	0	4	7	8	8	1	1	0	0	0	29	1.83%
5:15:00 PM	0	0	0	0	0	1	4	8	2	3	4	0	1	0	23	1.45%
5:30:00 PM	0	0	0	0	1	2	0	7	6	6	1	0	0	0	23	1.45%
5:45:00 PM	0	0	0	0	2	3	3	5	3	4	1	0	0	0	21	1.33%
6:00:00 PM	0	0	0	0	0	0	5	3	4	2	1	0	0	0	15	0.95%
6:15:00 PM	0	0	0	0	0	3	3	9	0	2	0	0	0	0	17	1.07%
6:30:00 PM	0	0	0	0	0	2	5	4	4	2	0	0	0	0	17	1.07%
6:45:00 PM	0	0	0	0	0	2	1	7	2	3	0	0	0	0	15	0.95%
7:00:00 PM	0	0	0	0	1	2	2	4	3	1	0	1	0	0	14	0.88%
7:15:00 PM	0	0	0	0	1	1	5	4	1	0	0	0	0	0	12	0.76%
7:30:00 PM	0	0	0	0	0	1	4	2	3	0	1	0	0	0	11	0.69%
7:45:00 PM	0	0	0	0	0	0	0	1	3	3	0	0	0	0	7	0.44%
8:00:00 PM	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5	0.32%
8:15:00 PM	0	0	0	0	2	1	1	3	2	0	0	0	0	0	9	0.57%
8:30:00 PM	0	0	0	0	0	0	2	5	0	0	0	0	0	0	7	0.44%
8:45:00 PM	0	0	0	0	0	1	2	4	0	0	0	0	0	0	7	0.44%
9:00:00 PM	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3	0.19%
9:15:00 PM	0	0	0	0	0	0	2	2	1	0	0	0	0	0	5	0.32%
9:30:00 PM	0	0	0	1	0	0	3	1	1	0	0	0	0	0	6	0.38%
9:45:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.13%
10:00:00 PM	0	0	0	0	0	0	2	1	1	0	0	0	0	0	4	0.25%
10:15:00 PM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.25%
10:30:00 PM	0	0	0	0	0	0	1	1	0	0	1	0	0	0	3	0.19%
10:45:00 PM	0	0	1	0	0	0	0	1	1	0	0	0	1	0	4	0.25%
11:00:00 PM	0	0	0	0	0	2	1	0	0	0	0	0	1	0	4	0.25%
11:15:00 PM	0	0	0	0	0	1	1	3	0	0	0	0	0	0	5	0.32%
11:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06%
11:45:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.13%
PM TOTAL	2	3	2	2	22	81	179	295	180	115	35	11	4	7	938	59.22%
PERCENTAGE	0.2%	0.3%	0.2%	0.2%	2.3%	8.6%	19.1%	31.4%	19.2%	12.3%	3.7%	1.2%	0.4%	0.7%		
CUMULATIVE	2	5	7	9	31	112	291	586	766	881	916	927	931	938		
PERCENTAGE	0.2%	0.5%	0.7%	1.0%	3.3%	11.9%	31.0%	62.5%	81.7%	93.9%	97.7%	98.8%	99.3%	100.0%		

15th Percentile	36	Mean Speed Average	44
50th Percentile	44	10 MPH Pace Speed	38-47
85th Percentile	53	Number in Pace	278
95th Percentile	57	Percent in Pace	30%

DAY TOTAL	4	6	6	6	40	122	304	464	354	191	53	21	5	8	1,584	
PERCENTAGE	0.3%	0.4%	0.4%	0.4%	2.5%	7.7%	19.2%	29.3%	22.3%	12.1%	3.3%	1.3%	0.3%	0.5%	1,584	100.00%
	0.3%	0.6%	1.0%	1.4%	3.9%	11.6%	30.8%	60.1%	82.4%	94.5%	97.9%	99.2%	99.5%	100.0%		
85th Percentile	52															

SPEED3 Avenue 38 between Burr and Kevin .08-09. Eastbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.24%
12:15:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.24%
12:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.12%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
5:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
5:15:00 AM	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0.24%
5:30:00 AM	0	0	0	0	0	0	1	1	1	1	0	0	0	0	4	0.49%
5:45:00 AM	0	1	0	0	0	0	1	2	1	0	0	0	0	0	5	0.61%
6:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
6:15:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3	0.36%
6:30:00 AM	0	0	0	0	0	1	0	1	0	1	0	0	0	0	3	0.36%
6:45:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.36%
7:00:00 AM	0	0	0	0	0	0	0	3	3	0	0	0	0	0	6	0.73%
7:15:00 AM	0	0	0	0	0	0	3	1	5	0	1	0	0	0	10	1.21%
7:30:00 AM	0	0	0	0	0	0	0	1	2	4	1	0	1	0	9	1.09%
7:45:00 AM	0	0	0	0	0	0	4	5	7	5	2	0	0	0	23	2.79%
8:00:00 AM	0	0	0	0	0	1	7	7	23	12	2	1	0	0	53	6.43%
8:15:00 AM	0	0	1	1	0	1	6	21	23	15	4	1	0	0	73	8.86%
8:30:00 AM	0	0	0	0	0	1	1	2	10	6	1	1	0	0	22	2.67%
8:45:00 AM	0	0	0	0	0	2	3	3	1	1	1	1	0	0	12	1.46%
9:00:00 AM	0	0	0	0	0	0	0	2	3	2	0	0	0	0	7	0.85%
9:15:00 AM	0	0	0	0	0	0	1	1	1	1	4	1	0	0	9	1.09%
9:30:00 AM	0	0	0	0	0	1	0	0	2	3	0	0	0	0	6	0.73%
9:45:00 AM	0	0	0	0	0	0	0	1	2	1	1	0	0	0	5	0.61%
10:00:00 AM	0	0	0	0	0	0	1	1	4	0	1	0	0	0	7	0.85%
10:15:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.36%
10:30:00 AM	0	0	0	0	1	0	1	0	2	0	0	0	0	0	4	0.49%
10:45:00 AM	1	0	0	0	0	1	2	6	3	1	0	0	0	0	14	1.70%
11:00:00 AM	0	0	0	0	0	0	0	1	4	4	0	0	0	0	9	1.09%
11:15:00 AM	0	0	0	0	0	2	1	2	7	1	0	1	0	0	14	1.70%
11:30:00 AM	0	0	0	0	1	2	2	3	2	0	0	0	0	0	10	1.21%
11:45:00 AM	0	0	0	0	0	3	2	4	4	2	1	0	0	0	16	1.94%
AM TOTAL	1	1	1	1	3	15	41	75	112	63	20	6	1	0	340	41.26%
PERCENTAGE	0.3%	0.3%	0.3%	0.3%	0.9%	4.4%	12.1%	22.1%	32.9%	18.5%	5.9%	1.8%	0.3%	0.0%		
CUMULATIVE	1	2	3	4	7	22	63	138	250	313	333	339	340	340		
PERCENTAGE	0.3%	0.6%	0.9%	1.2%	2.1%	6.5%	18.5%	40.6%	73.5%	92.1%	97.9%	99.7%	100.0%	100.0%		

15th Percentile	40	Mean Speed Average	46
50th Percentile	46	10 MPH Pace Speed	45-54
85th Percentile	52	Number in Pace	180
95th Percentile	56	Percent in Pace	53%

SPEED3 Avenue 38 between Burr and Kevin .08-09. Eastbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	3	4	3	2	3	1	0	0	0	0	16	1.94%
12:15:00 PM	0	0	0	0	0	2	2	3	3	2	0	0	0	0	12	1.46%
12:30:00 PM	0	0	0	0	1	0	1	2	1	1	1	1	0	0	8	0.97%

12:45:00 PM	0	0	0	0	0	2	2	1	0	3	0	0	0	0	8	0.97%
1:00:00 PM	1	0	0	0	0	2	4	3	2	1	1	0	1	0	15	1.82%
1:15:00 PM	0	0	0	0	0	0	2	2	1	1	1	0	0	0	7	0.85%
1:30:00 PM	0	0	0	0	1	1	1	6	1	0	1	1	0	0	12	1.46%
1:45:00 PM	0	0	0	0	0	0	3	5	2	0	0	0	0	0	10	1.21%
2:00:00 PM	0	0	0	0	0	3	1	4	6	1	0	0	0	0	15	1.82%
2:15:00 PM	0	0	0	0	0	0	2	4	0	3	0	0	1	0	10	1.21%
2:30:00 PM	0	0	0	0	0	1	3	2	2	3	1	2	0	0	14	1.70%
2:45:00 PM	0	0	0	1	0	0	1	4	3	3	1	0	0	0	13	1.58%
3:00:00 PM	0	0	0	0	0	2	2	5	5	4	1	0	0	0	19	2.31%
3:15:00 PM	1	1	1	1	1	10	14	8	5	1	1	0	0	0	44	5.34%
3:30:00 PM	0	0	0	2	0	6	5	11	7	4	0	1	0	0	36	4.37%
3:45:00 PM	0	0	0	0	0	0	5	5	9	4	0	0	0	0	23	2.79%
4:00:00 PM	0	0	0	0	0	0	4	2	3	2	0	2	0	0	13	1.58%
4:15:00 PM	0	0	0	0	0	0	1	2	2	3	1	0	0	0	9	1.09%
4:30:00 PM	1	0	0	0	0	1	1	3	5	1	0	1	1	0	14	1.70%
4:45:00 PM	0	0	0	0	0	0	0	7	4	2	1	1	0	0	15	1.82%
5:00:00 PM	0	0	1	0	0	0	2	9	1	1	0	0	0	0	14	1.70%
5:15:00 PM	0	0	0	0	0	0	2	3	2	4	0	0	0	1	12	1.46%
5:30:00 PM	0	0	0	0	0	1	1	2	4	0	0	2	0	0	10	1.21%
5:45:00 PM	0	0	0	0	0	1	5	4	3	3	0	0	0	0	16	1.94%
6:00:00 PM	0	0	0	0	1	0	2	6	3	1	0	0	0	0	13	1.58%
6:15:00 PM	0	0	0	0	0	0	3	6	2	1	0	1	0	0	13	1.58%
6:30:00 PM	0	0	0	0	1	0	2	4	0	0	0	1	0	0	8	0.97%
6:45:00 PM	0	0	0	0	0	0	1	4	2	1	1	1	0	1	11	1.33%
7:00:00 PM	0	0	0	0	0	0	0	1	0	0	3	0	0	1	5	0.61%
7:15:00 PM	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	0.36%
7:30:00 PM	0	0	0	0	0	0	1	2	2	1	0	0	0	0	6	0.73%
7:45:00 PM	0	0	0	0	0	1	1	0	2	1	0	0	0	0	5	0.61%
8:00:00 PM	0	0	0	0	0	0	2	3	3	0	1	1	0	0	10	1.21%
8:15:00 PM	0	0	0	0	0	0	1	2	2	2	0	0	0	0	7	0.85%
8:30:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.24%
8:45:00 PM	0	0	0	0	0	0	1	1	2	2	0	0	0	0	6	0.73%
9:00:00 PM	0	0	0	0	0	0	1	2	2	2	0	0	0	0	7	0.85%
9:15:00 PM	0	0	0	0	1	0	0	2	1	0	0	0	0	0	4	0.49%
9:30:00 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.36%
9:45:00 PM	0	0	0	0	0	1	1	0	0	1	0	0	0	0	3	0.36%
10:00:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.24%
10:15:00 PM	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	0.36%
10:30:00 PM	0	1	0	0	1	0	0	1	0	0	0	0	0	0	3	0.36%
10:45:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.24%
11:00:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.24%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
PM TOTAL	3	2	2	4	10	39	85	141	102	60	15	15	3	3	484	58.74%
PERCENTAGE	0.6%	0.4%	0.4%	0.8%	2.1%	8.1%	17.6%	29.1%	21.1%	12.4%	3.1%	3.1%	0.6%	0.6%		
CUMULATIVE	3	5	7	11	21	60	145	286	388	448	463	478	481	484		
PERCENTAGE	0.6%	1.0%	1.4%	2.3%	4.3%	12.4%	30.0%	59.1%	80.2%	92.6%	95.7%	98.8%	99.4%	100.0%		

15th Percentile	37	Mean Speed Average	44
50th Percentile	44	10 MPH Pace Speed	39-48
85th Percentile	51	Number in Pace	235
95th Percentile	57	Percent in Pace	49%

DAY TOTAL	4	3	3	5	13	54	126	216	214	123	35	21	4	3	824	
PERCENTAGE	0.5%	0.4%	0.4%	0.6%	1.6%	6.6%	15.3%	26.2%	26.0%	14.9%	4.2%	2.5%	0.5%	0.4%	824	100.00%
	0.5%	0.8%	1.2%	1.8%	3.4%	10.0%	25.2%	51.5%	77.4%	92.4%	96.6%	99.2%	99.6%	100.0%		
85th Percentile	52															

SPEED3 Avenue 38 between Burr and Kevin .08-09. Westbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0.23%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.12%
2:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.12%
2:30:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.12%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.23%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.12%
4:15:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.12%
4:30:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.23%
4:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
5:00:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0.23%
5:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
5:30:00 AM	0	0	0	0	1	1	2	0	1	0	0	0	0	0	5	0.59%
5:45:00 AM	0	0	0	0	1	5	0	1	1	0	0	0	0	0	8	0.94%
6:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
6:15:00 AM	0	0	0	0	0	0	1	2	1	0	0	0	0	0	4	0.47%
6:30:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	4	0.47%
6:45:00 AM	0	0	0	0	2	4	2	2	1	2	0	0	0	0	13	1.52%
7:00:00 AM	0	0	0	0	2	1	4	2	3	0	0	0	1	0	13	1.52%
7:15:00 AM	2	0	1	0	1	2	3	4	2	1	0	0	0	0	16	1.88%
7:30:00 AM	0	0	0	0	3	0	2	5	6	0	0	0	0	0	16	1.88%
7:45:00 AM	0	0	0	0	1	5	6	7	4	1	0	0	0	0	24	2.81%
8:00:00 AM	0	1	0	0	0	1	4	4	3	4	0	0	0	0	17	1.99%
8:15:00 AM	0	0	2	0	1	1	10	13	8	1	1	0	0	0	37	4.34%
8:30:00 AM	0	0	0	0	2	0	7	14	5	2	0	0	0	0	30	3.52%
8:45:00 AM	0	0	0	0	0	1	4	4	2	0	0	0	0	0	11	1.29%
9:00:00 AM	0	0	0	1	0	1	3	1	1	0	0	0	0	0	7	0.82%
9:15:00 AM	0	0	0	0	0	1	1	4	1	0	0	0	0	0	7	0.82%
9:30:00 AM	0	0	0	0	0	1	4	0	2	0	0	0	0	0	7	0.82%
9:45:00 AM	0	0	0	1	0	1	4	1	0	0	1	0	0	0	8	0.94%
10:00:00 AM	0	0	0	0	1	1	4	0	2	0	1	0	0	0	9	1.06%
10:15:00 AM	0	0	0	0	0	2	3	6	0	0	0	0	0	0	11	1.29%
10:30:00 AM	0	0	0	0	2	2	5	3	0	2	1	0	0	0	15	1.76%
10:45:00 AM	0	0	0	0	2	4	0	5	1	1	0	0	0	0	13	1.52%
11:00:00 AM	0	0	0	1	1	2	3	3	0	0	0	0	0	0	10	1.17%
11:15:00 AM	0	0	0	0	1	3	5	1	0	1	0	0	0	0	11	1.29%
11:30:00 AM	0	0	0	0	0	3	3	2	3	1	0	0	0	0	12	1.41%
11:45:00 AM	1	1	0	0	0	3	1	4	2	1	0	0	0	0	13	1.52%
AM TOTAL	4	2	4	3	22	48	87	91	52	20	4	0	1	0	338	39.62%
PERCENTAGE	1.2%	0.6%	1.2%	0.9%	6.5%	14.2%	25.7%	26.9%	15.4%	5.9%	1.2%	0.0%	0.3%	0.0%		
CUMULATIVE	4	6	10	13	35	83	170	261	313	333	337	337	338	338		
PERCENTAGE	1.2%	1.8%	3.0%	3.8%	10.4%	24.6%	50.3%	77.2%	92.6%	98.5%	99.7%	99.7%	100.0%	100.0%		

15th Percentile	33	Mean Speed Average	40
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	47	Number in Pace	191
95th Percentile	51	Percent in Pace	57%

SPEED3 Avenue 38 between Burr and Kevin .08-09. Westbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	1	0	1	1	2	0	0	0	0	7	0.82%
12:15:00 PM	0	0	0	0	2	1	6	3	1	2	1	0	0	0	16	1.88%
12:30:00 PM	1	0	0	0	0	1	2	4	3	0	0	0	0	0	11	1.29%
12:45:00 PM	0	0	0	0	1	0	4	3	4	0	0	0	0	0	12	1.41%
1:00:00 PM	0	0	0	0	0	5	3	4	0	1	0	0	0	0	13	1.52%

1:15:00 PM	0	0	0	0	2	1	1	4	2	0	0	0	0	0	10	1.17%
1:30:00 PM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.35%
1:45:00 PM	0	0	0	0	0	0	3	5	1	1	0	0	0	0	10	1.17%
2:00:00 PM	0	1	0	0	2	2	1	4	1	1	0	0	0	0	12	1.41%
2:15:00 PM	0	0	0	0	0	1	2	4	1	1	0	0	0	0	9	1.06%
2:30:00 PM	0	2	0	0	0	2	3	2	0	1	0	0	0	0	10	1.17%
2:45:00 PM	0	0	0	2	2	1	5	5	0	1	0	0	0	0	16	1.88%
3:00:00 PM	0	0	0	0	0	1	2	2	2	1	0	0	0	0	8	0.94%
3:15:00 PM	1	1	4	1	3	8	0	0	0	0	0	0	0	0	18	2.11%
3:30:00 PM	3	0	0	0	0	14	20	27	12	3	2	0	0	1	82	9.61%
3:45:00 PM	0	0	1	0	0	7	28	21	14	5	2	1	0	0	79	9.26%
4:00:00 PM	0	0	0	0	1	0	8	4	6	0	0	0	0	0	19	2.23%
4:15:00 PM	0	0	0	0	0	1	4	6	7	1	0	0	0	0	19	2.23%
4:30:00 PM	0	0	0	0	2	3	5	5	2	0	0	0	0	0	17	1.99%
4:45:00 PM	0	0	0	0	1	1	5	2	1	1	1	0	0	0	12	1.41%
5:00:00 PM	0	0	1	0	2	2	1	1	1	0	1	0	0	0	9	1.06%
5:15:00 PM	0	0	0	0	1	3	5	0	1	0	1	0	0	0	11	1.29%
5:30:00 PM	0	1	0	0	0	2	6	3	0	1	0	0	0	0	13	1.52%
5:45:00 PM	0	0	0	0	0	3	1	2	0	0	0	0	0	0	6	0.70%
6:00:00 PM	0	0	0	0	0	0	5	1	0	0	0	0	0	0	6	0.70%
6:15:00 PM	0	0	0	0	1	2	5	1	2	0	0	0	0	0	11	1.29%
6:30:00 PM	0	0	0	0	1	2	2	4	0	0	0	0	0	0	9	1.06%
6:45:00 PM	0	0	0	1	0	0	2	2	2	0	0	0	0	0	7	0.82%
7:00:00 PM	0	0	0	0	0	1	2	3	2	0	0	0	0	0	8	0.94%
7:15:00 PM	0	0	0	0	0	1	3	5	0	0	0	0	0	0	9	1.06%
7:30:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0.35%
7:45:00 PM	0	0	0	0	0	1	2	1	2	0	0	0	0	0	6	0.70%
8:00:00 PM	0	0	0	0	0	1	4	0	0	0	0	0	0	0	5	0.59%
8:15:00 PM	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3	0.35%
8:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
8:45:00 PM	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5	0.59%
9:00:00 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.35%
9:15:00 PM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.35%
9:30:00 PM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.35%
9:45:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.23%
10:00:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.23%
10:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.12%
10:30:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0.23%
10:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:00:00 PM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.35%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
PM TOTAL	5	5	6	6	22	73	149	145	71	22	8	1	0	2	515	60.38%
PERCENTAGE	1.0%	1.0%	1.2%	1.2%	4.3%	14.2%	28.9%	28.2%	13.8%	4.3%	1.6%	0.2%	0.0%	0.4%		
CUMULATIVE	5	10	16	22	44	117	266	411	482	504	512	513	513	515		
PERCENTAGE	1.0%	1.9%	3.1%	4.3%	8.5%	22.7%	51.7%	79.8%	93.6%	97.9%	99.4%	99.6%	99.6%	100.0%		

15th Percentile	33	Mean Speed Average	40
50th Percentile	40	10 MPH Pace Speed	36-45
85th Percentile	48	Number in Pace	272
95th Percentile	50	Percent in Pace	53%

DAY TOTAL	9	7	10	9	44	121	236	236	123	42	12	1	1	2	853	
PERCENTAGE	1.1%	0.8%	1.2%	1.1%	5.2%	14.2%	27.7%	27.7%	14.4%	4.9%	1.4%	0.1%	0.1%	0.23%	853	100.00%
	1.1%	1.9%	3.0%	4.1%	9.3%	23.4%	51.1%	78.8%	93.2%	98.1%	99.5%	99.6%	99.8%	100.00%		
85th Percentile	48															

SPEED3 Avenue 38 between Burr and Kevin .08-09. Combined

Project# SC3235

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.12%
12:15:00 AM	1	0	0	0	0	0	2	1	0	0	0	0	0	0	4	0.24%
12:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.06%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06%
2:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.06%
2:30:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.12%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.12%
4:15:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06%
4:30:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.12%
4:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06%
5:00:00 AM	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0.18%
5:15:00 AM	0	0	0	0	1	0	0	1	1	0	0	0	0	0	3	0.18%
5:30:00 AM	0	0	0	0	1	1	3	1	2	1	0	0	0	0	9	0.54%
5:45:00 AM	0	1	0	0	1	5	1	3	2	0	0	0	0	0	13	0.78%
6:00:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.12%
6:15:00 AM	0	0	0	0	0	0	1	3	1	1	1	0	0	0	7	0.42%
6:30:00 AM	0	0	0	0	0	1	0	2	2	2	0	0	0	0	7	0.42%
6:45:00 AM	0	0	0	0	2	4	4	3	1	2	0	0	0	0	16	0.95%
7:00:00 AM	0	0	0	0	2	1	4	5	6	0	0	0	1	0	19	1.13%
7:15:00 AM	2	0	1	0	1	2	6	5	7	1	1	0	0	0	26	1.55%
7:30:00 AM	0	0	0	0	3	0	2	6	8	4	1	0	1	0	25	1.49%
7:45:00 AM	0	0	0	0	1	5	10	12	11	6	2	0	0	0	47	2.80%
8:00:00 AM	0	1	0	0	0	2	11	11	26	16	2	1	0	0	70	4.17%
8:15:00 AM	0	0	3	1	1	2	16	34	31	16	5	1	0	0	110	6.56%
8:30:00 AM	0	0	0	0	2	1	8	16	15	8	1	1	0	0	52	3.10%
8:45:00 AM	0	0	0	0	0	3	7	7	3	1	1	1	0	0	23	1.37%
9:00:00 AM	0	0	0	1	0	1	3	3	4	2	0	0	0	0	14	0.83%
9:15:00 AM	0	0	0	0	0	1	2	5	2	1	4	1	0	0	16	0.95%
9:30:00 AM	0	0	0	0	0	2	4	0	4	3	0	0	0	0	13	0.78%
9:45:00 AM	0	0	0	1	0	1	4	2	2	1	2	0	0	0	13	0.78%
10:00:00 AM	0	0	0	0	1	1	5	1	6	0	2	0	0	0	16	0.95%
10:15:00 AM	0	0	0	0	0	2	4	7	1	0	0	0	0	0	14	0.83%
10:30:00 AM	0	0	0	0	3	2	6	3	2	2	1	0	0	0	19	1.13%
10:45:00 AM	1	0	0	0	2	5	2	11	4	2	0	0	0	0	27	1.61%
11:00:00 AM	0	0	0	1	1	2	3	4	4	4	0	0	0	0	19	1.13%
11:15:00 AM	0	0	0	0	1	5	6	3	7	2	0	1	0	0	25	1.49%
11:30:00 AM	0	0	0	0	1	5	5	5	5	1	0	0	0	0	22	1.31%
11:45:00 AM	1	1	0	0	0	6	3	8	6	3	1	0	0	0	29	1.73%
AM TOTAL	5	3	5	4	25	63	128	166	164	83	24	6	2	0	678	40.43%
PERCENTAGE	0.7%	0.4%	0.7%	0.6%	3.7%	9.3%	18.9%	24.5%	24.2%	12.2%	3.5%	0.9%	0.3%	0.0%		
CUMULATIVE	5	8	13	17	42	105	233	399	563	646	670	676	678	678		
PERCENTAGE	0.7%	1.2%	1.9%	2.5%	6.2%	15.5%	34.4%	58.8%	83.0%	95.3%	98.8%	99.7%	100.0%	100.0%		

15th Percentile	35	Mean Speed Average	43
50th Percentile	44	10 MPH Pace Speed	38-47
85th Percentile	52	Number in Pace	278
95th Percentile	56	Percent in Pace	41%

SPEED3 Avenue 38 between Burr and Kevin .08-09. Combined

Project# SC3235

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	4	5	3	3	4	3	0	0	0	0	23	1.37%

12:15:00 PM	0	0	0	0	2	3	8	6	4	4	1	0	0	0	28	1.67%
12:30:00 PM	1	0	0	0	1	1	3	6	4	1	1	1	0	0	19	1.13%
12:45:00 PM	0	0	0	0	1	2	6	4	4	3	0	0	0	0	20	1.19%
1:00:00 PM	1	0	0	0	0	7	7	7	2	2	1	0	1	0	28	1.67%
1:15:00 PM	0	0	0	0	2	1	3	6	3	1	1	0	0	0	17	1.01%
1:30:00 PM	0	0	0	0	1	1	2	8	1	0	1	1	0	0	15	0.89%
1:45:00 PM	0	0	0	0	0	0	6	10	3	1	0	0	0	0	20	1.19%
2:00:00 PM	0	1	0	0	2	5	2	8	7	2	0	0	0	0	27	1.61%
2:15:00 PM	0	0	0	0	0	1	4	8	1	4	0	0	1	0	19	1.13%
2:30:00 PM	0	2	0	0	0	3	6	4	2	4	1	2	0	0	24	1.43%
2:45:00 PM	0	0	0	3	2	1	6	9	3	4	1	0	0	0	29	1.73%
3:00:00 PM	0	0	0	0	0	3	4	7	7	5	1	0	0	0	27	1.61%
3:15:00 PM	2	2	5	2	4	18	14	8	5	1	1	0	0	0	62	3.70%
3:30:00 PM	3	0	0	2	0	20	25	38	19	7	2	1	0	1	118	7.04%
3:45:00 PM	0	0	1	0	0	7	33	26	23	9	2	1	0	0	102	6.08%
4:00:00 PM	0	0	0	0	1	0	12	6	9	2	0	2	0	0	32	1.91%
4:15:00 PM	0	0	0	0	0	1	5	8	9	4	1	0	0	0	28	1.67%
4:30:00 PM	1	0	0	0	2	4	6	8	7	1	0	1	1	0	31	1.85%
4:45:00 PM	0	0	0	0	1	1	5	9	5	3	2	1	0	0	27	1.61%
5:00:00 PM	0	0	2	0	2	2	3	10	2	1	1	0	0	0	23	1.37%
5:15:00 PM	0	0	0	0	1	3	7	3	3	4	1	0	0	1	23	1.37%
5:30:00 PM	0	1	0	0	0	3	7	5	4	1	0	2	0	0	23	1.37%
5:45:00 PM	0	0	0	0	0	4	6	6	3	3	0	0	0	0	22	1.31%
6:00:00 PM	0	0	0	0	1	0	7	7	3	1	0	0	0	0	19	1.13%
6:15:00 PM	0	0	0	0	1	2	8	7	4	1	0	1	0	0	24	1.43%
6:30:00 PM	0	0	0	0	2	2	4	8	0	0	0	1	0	0	17	1.01%
6:45:00 PM	0	0	0	1	0	0	3	6	4	1	1	1	0	1	18	1.07%
7:00:00 PM	0	0	0	0	0	1	2	4	2	0	3	0	0	1	13	0.78%
7:15:00 PM	0	0	0	0	0	1	3	7	1	0	0	0	0	0	12	0.72%
7:30:00 PM	0	0	0	0	0	0	1	5	2	1	0	0	0	0	9	0.54%
7:45:00 PM	0	0	0	0	0	2	3	1	4	1	0	0	0	0	11	0.66%
8:00:00 PM	0	0	0	0	0	1	6	3	3	0	1	1	0	0	15	0.89%
8:15:00 PM	0	0	0	0	0	1	1	4	2	2	0	0	0	0	10	0.60%
8:30:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.12%
8:45:00 PM	0	0	0	0	0	1	3	3	2	2	0	0	0	0	11	0.66%
9:00:00 PM	0	0	0	0	0	0	3	3	2	2	0	0	0	0	10	0.60%
9:15:00 PM	0	0	0	0	1	0	1	4	1	0	0	0	0	0	7	0.42%
9:30:00 PM	0	0	0	0	0	0	1	2	3	0	0	0	0	0	6	0.36%
9:45:00 PM	0	0	0	0	0	2	1	0	1	1	0	0	0	0	5	0.30%
10:00:00 PM	0	0	0	0	0	1	0	2	1	0	0	0	0	0	4	0.24%
10:15:00 PM	0	0	0	0	0	0	0	2	1	0	0	0	0	1	4	0.24%
10:30:00 PM	0	1	0	1	1	1	0	1	0	0	0	0	0	0	5	0.30%
10:45:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.12%
11:00:00 PM	0	0	0	0	0	0	1	2	1	0	0	0	0	0	4	0.24%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.06%
11:30:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.12%
11:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06%
PM TOTAL	8	7	8	10	32	112	234	286	173	82	23	16	3	5	999	59.57%
PERCENTAGE	0.8%	0.7%	0.8%	1.0%	3.2%	11.2%	23.4%	28.6%	17.3%	8.2%	2.3%	1.6%	0.3%	0.5%		
CUMULATIVE	8	15	23	33	65	177	411	697	870	952	975	991	994	999		
PERCENTAGE	0.8%	1.5%	2.3%	3.3%	6.5%	17.7%	41.1%	69.8%	87.1%	95.3%	97.6%	99.2%	99.5%	100.0%		

15th Percentile	33	Mean Speed Average	42
50th Percentile	42	10 MPH Pace Speed	36-45
85th Percentile	51	Number in Pace	280
95th Percentile	56	Percent in Pace	28%

DAY TOTAL	13	10	13	14	57	175	362	452	337	165	47	22	5	5	1,677	
PERCENTAGE	0.8%	0.6%	0.8%	0.8%	3.4%	10.4%	21.6%	27.0%	20.1%	9.8%	2.8%	1.3%	0.3%	0.3%	1,677	100.00%
	0.8%	1.4%	2.1%	3.0%	6.4%	16.8%	38.4%	65.4%	85.5%	95.3%	98.1%	99.4%	99.7%	100.0%		
85th Percentile	51															

SPEED3 Avenue 38 between Burr and Kevin .08-09. Eastbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
12:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
12:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.12%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.12%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
5:00:00 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0.24%
5:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.12%
5:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
5:45:00 AM	0	0	0	0	1	0	2	0	2	1	0	0	0	0	6	0.73%
6:00:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.37%
6:15:00 AM	0	0	0	0	0	0	0	1	1	2	0	1	0	0	5	0.61%
6:30:00 AM	0	0	0	0	0	1	1	0	1	0	0	0	0	0	3	0.37%
6:45:00 AM	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	0.37%
7:00:00 AM	0	0	0	0	0	0	0	2	2	2	0	0	0	0	6	0.73%
7:15:00 AM	0	0	0	0	0	0	2	3	2	1	1	0	0	0	9	1.10%
7:30:00 AM	0	0	0	0	0	0	2	3	3	2	2	2	0	0	14	1.71%
7:45:00 AM	0	0	0	0	0	4	1	5	3	1	0	1	0	0	15	1.83%
8:00:00 AM	0	0	0	0	0	0	4	16	19	12	3	0	1	0	55	6.71%
8:15:00 AM	0	0	0	0	0	3	6	34	26	16	0	2	0	0	87	10.61%
8:30:00 AM	0	0	0	0	0	1	3	2	3	2	3	0	0	0	14	1.71%
8:45:00 AM	0	0	0	0	0	1	2	0	1	2	0	0	0	0	6	0.73%
9:00:00 AM	1	0	0	0	1	1	2	2	4	1	0	0	0	0	12	1.46%
9:15:00 AM	0	0	0	0	0	1	2	1	2	1	0	0	0	0	7	0.85%
9:30:00 AM	0	0	0	0	0	0	0	1	1	2	2	0	0	0	6	0.73%
9:45:00 AM	0	0	0	0	1	0	2	1	3	3	0	1	0	0	11	1.34%
10:00:00 AM	0	0	0	0	1	0	0	3	1	2	0	0	0	0	7	0.85%
10:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0.24%
10:30:00 AM	0	0	0	0	0	0	2	3	0	2	0	1	0	1	9	1.10%
10:45:00 AM	0	0	0	0	0	2	1	1	1	0	0	0	0	0	5	0.61%
11:00:00 AM	0	0	0	0	1	0	1	2	4	2	0	0	0	0	10	1.22%
11:15:00 AM	2	0	0	0	0	2	1	1	1	0	0	0	0	0	7	0.85%
11:30:00 AM	1	0	0	0	0	0	0	1	4	2	0	0	1	0	9	1.10%
11:45:00 AM	0	0	0	0	0	0	2	1	2	5	0	0	0	0	10	1.22%
AM TOTAL	4	0	0	1	5	17	37	90	89	63	13	8	3	1	331	40.37%
PERCENTAGE	1.2%	0.0%	0.0%	0.3%	1.5%	5.1%	11.2%	27.2%	26.9%	19.0%	3.9%	2.4%	0.9%	0.3%		
CUMULATIVE	4	4	4	5	10	27	64	154	243	306	319	327	330	331		
PERCENTAGE	1.2%	1.2%	1.2%	1.5%	3.0%	8.2%	19.3%	46.5%	73.4%	92.4%	96.4%	98.8%	99.7%	100.0%		

15th Percentile	39	Mean Speed Average	46
50th Percentile	46	10 MPH Pace Speed	39-48
85th Percentile	53	Number in Pace	165
95th Percentile	57	Percent in Pace	50%

SPEED3 Avenue 38 between Burr and Kevin .08-09. Eastbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	1	0	1	3	2	2	2	1	0	0	12	1.46%

12:15:00 PM	0	0	0	0	1	1	1	1	3	0	0	0	1	0	8	0.98%
12:30:00 PM	0	0	0	0	0	0	0	3	5	1	0	0	0	0	9	1.10%
12:45:00 PM	0	0	0	0	0	0	2	1	3	2	1	0	0	0	9	1.10%
1:00:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	0.37%
1:15:00 PM	0	0	0	0	0	0	5	0	2	0	2	0	0	0	9	1.10%
1:30:00 PM	0	0	0	0	0	1	1	1	1	1	0	1	0	0	6	0.73%
1:45:00 PM	0	0	0	0	0	1	1	2	1	3	0	0	0	0	8	0.98%
2:00:00 PM	0	0	0	0	0	0	0	3	2	2	0	0	0	0	7	0.85%
2:15:00 PM	0	0	0	0	0	0	3	5	5	4	0	0	0	0	17	2.07%
2:30:00 PM	0	0	1	0	0	0	2	4	2	2	0	2	1	0	14	1.71%
2:45:00 PM	0	0	0	0	0	0	2	6	6	0	1	0	0	0	15	1.83%
3:00:00 PM	0	0	0	1	0	0	2	19	3	4	0	0	0	0	29	3.54%
3:15:00 PM	0	0	0	0	0	1	8	5	9	4	5	0	0	1	33	4.02%
3:30:00 PM	0	0	0	0	0	0	7	10	8	5	0	1	1	0	32	3.90%
3:45:00 PM	0	0	0	0	0	0	1	7	10	9	1	2	0	0	30	3.66%
4:00:00 PM	0	0	0	0	0	0	4	3	3	3	2	0	1	0	16	1.95%
4:15:00 PM	0	0	0	0	0	0	2	5	4	0	0	1	0	0	12	1.46%
4:30:00 PM	0	0	0	0	0	1	0	3	4	2	2	0	0	0	12	1.46%
4:45:00 PM	0	0	0	0	0	0	2	3	0	2	2	0	0	0	9	1.10%
5:00:00 PM	0	0	0	0	1	0	3	4	3	4	0	0	0	0	15	1.83%
5:15:00 PM	0	0	0	0	0	0	0	6	3	2	2	0	0	0	13	1.59%
5:30:00 PM	0	0	0	0	1	2	4	2	3	1	0	1	0	1	15	1.83%
5:45:00 PM	0	0	0	0	0	0	1	5	3	0	0	0	0	0	9	1.10%
6:00:00 PM	0	0	0	0	1	0	2	7	3	4	0	0	0	0	17	2.07%
6:15:00 PM	0	0	0	0	0	3	3	7	1	1	1	0	0	0	16	1.95%
6:30:00 PM	0	0	0	0	2	2	5	5	2	1	0	0	0	0	17	2.07%
6:45:00 PM	0	0	0	0	0	0	0	2	3	0	0	1	0	0	6	0.73%
7:00:00 PM	0	0	0	0	0	1	3	5	2	0	0	0	0	0	11	1.34%
7:15:00 PM	0	0	0	0	0	0	3	2	3	0	0	0	0	0	8	0.98%
7:30:00 PM	0	0	0	0	0	3	0	0	4	1	0	0	0	0	8	0.98%
7:45:00 PM	0	0	0	1	0	1	1	4	0	0	0	0	0	0	7	0.85%
8:00:00 PM	0	0	0	0	0	1	2	4	1	1	0	0	0	0	9	1.10%
8:15:00 PM	0	0	0	0	0	1	1	0	0	2	1	0	0	0	5	0.61%
8:30:00 PM	0	0	0	0	0	0	1	2	1	3	0	0	0	0	7	0.85%
8:45:00 PM	0	0	0	0	0	1	1	2	2	1	0	0	0	1	8	0.98%
9:00:00 PM	0	0	0	0	0	0	2	2	3	0	0	0	0	0	7	0.85%
9:15:00 PM	0	0	0	0	0	0	2	2	0	1	0	0	0	0	5	0.61%
9:30:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
9:45:00 PM	0	0	0	0	0	1	1	0	1	0	0	0	1	0	4	0.49%
10:00:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.37%
10:15:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.12%
10:30:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.24%
10:45:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.24%
11:00:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.24%
11:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12%
PM TOTAL	0	0	1	2	7	23	81	151	113	70	22	11	5	3	489	59.63%
PERCENTAGE	0.0%	0.0%	0.2%	0.4%	1.4%	4.7%	16.6%	30.9%	23.1%	14.3%	4.5%	2.2%	1.0%	0		
CUMULATIVE	0	0	1	3	10	33	114	265	378	448	470	481	486	489		
PERCENTAGE	0.0%	0.0%	0.2%	0.6%	2.0%	6.7%	23.3%	54.2%	77.3%	91.6%	96.1%	98.4%	99.4%	100.0%		

15th Percentile	39	Mean Speed Average	46
50th Percentile	45	10 MPH Pace Speed	39-48
85th Percentile	52	Number in Pace	250
95th Percentile	58	Percent in Pace	51%

DAY TOTAL	4	0	1	3	12	40	118	241	202	133	35	19	8	4	820	
PERCENTAGE	0.5%	0.0%	0.1%	0.4%	1.5%	4.9%	14.4%	29.4%	24.6%	16.2%	4.3%	2.3%	1.0%	0.49%	820	100.00%
	0.5%	0.5%	0.6%	1.0%	2.4%	7.3%	21.7%	51.1%	75.7%	92.0%	96.2%	98.5%	99.5%	100.00%		
85th Percentile	52															

#N/A
Westbound

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.12%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0.36%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.12%
1:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:45:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.12%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.24%
3:45:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.24%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.24%
4:30:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12%
4:45:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.24%
5:00:00 AM	0	0	0	0	0	0	1	2	0	0	1	0	0	0	4	0.49%
5:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
5:30:00 AM	0	0	0	0	1	0	1	0	2	0	0	0	0	0	4	0.49%
5:45:00 AM	0	0	0	0	1	2	1	0	3	0	0	0	0	0	7	0.85%
6:00:00 AM	0	0	0	0	0	0	1	1	1	1	0	0	0	0	4	0.49%
6:15:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	0.36%
6:30:00 AM	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3	0.36%
6:45:00 AM	0	0	0	0	0	0	1	3	1	1	0	0	0	0	6	0.73%
7:00:00 AM	0	0	0	1	1	2	3	4	3	1	0	0	0	0	15	1.82%
7:15:00 AM	0	0	0	0	1	2	5	3	1	3	0	0	1	0	16	1.94%
7:30:00 AM	0	0	0	0	0	0	5	2	3	1	1	0	0	0	12	1.46%
7:45:00 AM	0	0	0	0	2	2	1	2	2	1	0	0	0	0	10	1.21%
8:00:00 AM	0	4	0	0	1	4	6	8	3	2	1	0	0	0	29	3.52%
8:15:00 AM	0	0	0	0	0	2	8	11	9	3	2	1	0	0	36	4.37%
8:30:00 AM	0	0	1	0	0	3	5	11	7	0	1	0	0	1	29	3.52%
8:45:00 AM	0	0	0	0	1	3	1	3	1	1	0	0	0	0	10	1.21%
9:00:00 AM	0	0	0	0	0	1	1	4	2	0	1	0	0	0	9	1.09%
9:15:00 AM	0	0	0	0	0	2	4	6	1	0	0	0	0	0	13	1.58%
9:30:00 AM	0	0	0	0	0	1	2	1	2	0	0	1	0	0	7	0.85%
9:45:00 AM	0	1	0	0	1	3	2	3	2	3	1	0	0	0	16	1.94%
10:00:00 AM	0	0	0	0	0	2	7	4	0	1	0	0	0	0	14	1.70%
10:15:00 AM	0	0	0	0	0	0	1	1	4	0	0	0	0	0	6	0.73%
10:30:00 AM	0	0	0	0	0	0	3	4	1	1	0	0	0	0	9	1.09%
10:45:00 AM	0	0	0	0	1	1	3	5	1	0	1	0	0	0	12	1.46%
11:00:00 AM	0	0	0	0	1	1	1	2	0	1	0	0	0	0	6	0.73%
11:15:00 AM	0	0	0	1	2	0	2	0	0	0	0	0	0	0	5	0.61%
11:30:00 AM	0	0	1	1	1	0	2	7	1	0	0	0	1	0	14	1.70%
11:45:00 AM	0	0	0	0	2	1	4	4	2	2	0	0	0	0	15	1.82%
AM TOTAL	2	5	2	4	16	33	76	96	57	24	9	2	2	1	329	39.93%
PERCENTAGE	0.6%	1.5%	0.6%	1.2%	4.9%	10.0%	23.1%	29.2%	17.3%	7.3%	2.7%	0.6%	0.6%	7.1%		
CUMULATIVE	2	7	9	13	29	62	138	234	291	315	324	326	328	329		
PERCENTAGE	0.6%	2.1%	2.7%	4.0%	8.8%	18.8%	41.9%	71.1%	88.4%	95.7%	98.5%	99.1%	99.7%	100.0%		

15th Percentile	35	Mean Speed Average	42
50th Percentile	42	10 MPH Pace Speed	37-46
85th Percentile	49	Number in Pace	184
95th Percentile	54	Percent in Pace	56%

#N/A
Westbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	2	0	0	0	3	2	2	1	1	0	0	0	0	11	1.33%

12:15:00 PM	0	0	0	0	1	2	6	2	0	2	1	1	0	0	15	1.82%
12:30:00 PM	0	0	0	0	0	3	0	1	0	0	0	0	0	0	4	0.49%
12:45:00 PM	0	0	0	0	1	2	4	2	1	0	0	1	0	0	11	1.33%
1:00:00 PM	0	0	0	0	1	3	1	5	0	1	0	0	1	0	12	1.46%
1:15:00 PM	0	0	1	0	0	1	3	2	2	0	0	0	0	0	9	1.09%
1:30:00 PM	1	0	0	0	0	3	2	0	2	0	0	0	0	0	8	0.97%
1:45:00 PM	0	0	0	0	0	0	2	4	0	0	0	0	0	0	6	0.73%
2:00:00 PM	0	0	0	1	1	0	4	3	0	0	1	0	0	0	10	1.21%
2:15:00 PM	0	0	0	0	0	1	2	1	1	0	1	0	0	0	6	0.73%
2:30:00 PM	0	0	0	0	0	1	3	3	2	0	0	0	0	0	9	1.09%
2:45:00 PM	0	0	0	0	0	4	5	5	1	0	0	0	0	0	15	1.82%
3:00:00 PM	0	0	0	0	1	1	4	6	0	0	0	0	0	0	12	1.46%
3:15:00 PM	0	0	0	0	0	2	5	7	1	3	0	0	0	0	18	2.18%
3:30:00 PM	1	0	0	0	1	2	17	30	12	1	0	1	0	0	65	7.89%
3:45:00 PM	0	0	0	0	0	9	28	30	11	6	3	1	0	0	88	10.68%
4:00:00 PM	0	0	0	0	0	2	1	3	3	2	0	0	0	0	11	1.33%
4:15:00 PM	0	0	0	0	0	2	7	6	3	1	1	0	0	0	20	2.43%
4:30:00 PM	0	0	0	0	1	0	2	3	2	0	0	0	0	0	8	0.97%
4:45:00 PM	0	0	0	1	1	3	4	9	2	1	0	0	0	0	21	2.55%
5:00:00 PM	0	0	0	0	2	3	4	3	3	1	0	0	0	0	16	1.94%
5:15:00 PM	0	0	0	0	0	2	5	4	2	2	0	0	0	0	15	1.82%
5:30:00 PM	0	0	0	0	1	3	3	4	0	0	0	0	0	0	11	1.33%
5:45:00 PM	0	0	0	0	0	2	1	3	2	0	0	0	0	0	8	0.97%
6:00:00 PM	0	0	0	0	2	2	4	1	1	0	0	0	0	0	10	1.21%
6:15:00 PM	0	0	0	0	1	1	2	1	0	0	0	0	0	0	5	0.61%
6:30:00 PM	0	0	0	0	0	1	3	2	0	0	0	1	0	0	7	0.85%
6:45:00 PM	0	0	0	0	0	1	1	2	0	1	0	0	0	0	5	0.61%
7:00:00 PM	0	0	0	0	0	1	4	3	2	0	1	0	0	0	11	1.33%
7:15:00 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0.36%
7:30:00 PM	0	0	0	0	0	0	2	1	1	0	0	0	0	0	4	0.49%
7:45:00 PM	0	0	0	0	1	1	0	0	1	0	0	0	0	0	3	0.36%
8:00:00 PM	0	0	0	0	0	1	1	6	0	0	0	0	0	0	8	0.97%
8:15:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.24%
8:30:00 PM	0	0	0	0	0	1	1	4	0	1	0	1	0	0	8	0.97%
8:45:00 PM	0	0	0	0	1	2	0	1	1	0	0	0	0	0	5	0.61%
9:00:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.12%
9:15:00 PM	0	0	0	0	1	0	1	0	1	0	0	0	0	0	3	0.36%
9:30:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12%
9:45:00 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3	0.36%
10:00:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12%
10:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
10:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
10:45:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.24%
11:00:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.24%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.24%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
PM TOTAL	2	2	1	4	17	67	140	163	59	24	9	6	1	0	495	60.07%
PERCENTAGE	0.4%	0.4%	0.2%	0.8%	3.4%	13.5%	28.3%	32.9%	11.9%	4.8%	1.8%	1.2%	0.2%	0		
CUMULATIVE	2	4	5	9	26	93	233	396	455	479	488	494	495	495		
PERCENTAGE	0.4%	0.8%	1.0%	1.8%	5.3%	18.8%	47.1%	80.0%	91.9%	96.8%	98.6%	99.8%	100.0%	100.0%		

15th Percentile	35	Mean Speed Average	41	
50th Percentile	41	10 MPH Pace Speed	36-45	
85th Percentile	47	Number in Pace	274	
95th Percentile	53	Percent in Pace	55%	

DAY TOTAL	4	7	3	8	33	100	216	259	116	48	18	8	3	1	824	
PERCENTAGE	0.5%	0.8%	0.4%	1.0%	4.0%	12.1%	26.2%	31.4%	14.1%	5.8%	2.2%	1.0%	0.4%	0.12%	824	100.00%
	0.5%	1.3%	1.7%	2.7%	6.7%	18.8%	45.0%	76.5%	90.5%	96.4%	98.5%	99.5%	99.9%	100.00%		
85th Percentile	48															

SPEED3 Avenue 38 between Burr and Kevin .08-09. Combined

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:15:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0.12%
12:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
12:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
1:00:00 AM	0	0	0	0	0	0	0	1	2	0	1	0	0	0	4	0.24%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.06%
1:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.06%
1:45:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.06%
2:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0.12%
3:45:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.12%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.12%
4:30:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.06%
4:45:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.12%
5:00:00 AM	0	0	0	1	0	0	1	3	0	0	1	0	0	0	6	0.36%
5:15:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.06%
5:30:00 AM	0	0	0	0	1	0	1	1	2	0	0	0	0	0	5	0.30%
5:45:00 AM	0	0	0	0	2	2	3	0	5	1	0	0	0	0	13	0.79%
6:00:00 AM	0	0	0	0	0	0	1	3	1	1	1	0	0	0	7	0.43%
6:15:00 AM	0	0	0	0	0	0	1	1	2	3	0	1	0	0	8	0.49%
6:30:00 AM	0	0	0	0	0	2	1	2	1	0	0	0	0	0	6	0.36%
6:45:00 AM	0	0	0	0	0	0	1	5	2	1	0	0	0	0	9	0.55%
7:00:00 AM	0	0	0	1	1	2	3	6	5	3	0	0	0	0	21	1.28%
7:15:00 AM	0	0	0	0	1	2	7	6	3	4	1	0	1	0	25	1.52%
7:30:00 AM	0	0	0	0	0	0	7	5	6	3	3	2	0	0	26	1.58%
7:45:00 AM	0	0	0	0	2	6	2	7	5	2	0	1	0	0	25	1.52%
8:00:00 AM	0	4	0	0	1	4	10	24	22	14	4	0	1	0	84	5.11%
8:15:00 AM	0	0	0	0	0	5	14	45	35	19	2	3	0	0	123	7.48%
8:30:00 AM	0	0	1	0	0	4	8	13	10	2	4	0	0	1	43	2.62%
8:45:00 AM	0	0	0	0	1	4	3	3	2	3	0	0	0	0	16	0.97%
9:00:00 AM	1	0	0	0	1	2	3	6	6	1	1	0	0	0	21	1.28%
9:15:00 AM	0	0	0	0	0	3	6	7	3	1	0	0	0	0	20	1.22%
9:30:00 AM	0	0	0	0	0	1	2	2	3	2	2	1	0	0	13	0.79%
9:45:00 AM	0	1	0	0	2	3	4	4	5	6	1	1	0	0	27	1.64%
10:00:00 AM	0	0	0	0	1	2	7	7	1	3	0	0	0	0	21	1.28%
10:15:00 AM	0	0	0	0	0	0	1	1	4	1	0	0	1	0	8	0.49%
10:30:00 AM	0	0	0	0	0	0	5	7	1	3	0	1	0	1	18	1.09%
10:45:00 AM	0	0	0	0	1	3	4	6	2	0	1	0	0	0	17	1.03%
11:00:00 AM	0	0	0	0	2	1	2	4	4	3	0	0	0	0	16	0.97%
11:15:00 AM	2	0	0	1	2	2	3	1	1	0	0	0	0	0	12	0.73%
11:30:00 AM	1	0	1	1	1	0	2	8	5	2	0	0	2	0	23	1.40%
11:45:00 AM	0	0	0	0	2	1	6	5	4	7	0	0	0	0	25	1.52%
AM TOTAL	6	5	2	5	21	50	113	186	146	87	22	10	5	2	660	40.15%
PERCENTAGE	0.9%	0.8%	0.3%	0.8%	3.2%	7.6%	17.1%	28.2%	22.1%	13.2%	3.3%	1.5%	0.8%	0.3%		
CUMULATIVE	6	11	13	18	39	89	202	388	534	621	643	653	658	660		
PERCENTAGE	0.9%	1.7%	2.0%	2.7%	5.9%	13.5%	30.6%	58.8%	80.9%	94.1%	97.4%	98.9%	99.7%	100.0%		

15th Percentile	36	Mean Speed Average	43
50th Percentile	44	10 MPH Pace Speed	39-48
85th Percentile	52	Number in Pace	280
95th Percentile	56	Percent in Pace	42%

SPEED3 Avenue 38 between Burr and Kevin .08-09. Combined

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES

12:00:00 PM	0	2	0	0	1	3	3	5	3	3	2	1	0	0	23	1.40%
12:15:00 PM	0	0	0	0	2	3	7	3	3	2	1	1	1	0	23	1.40%
12:30:00 PM	0	0	0	0	0	3	0	4	5	1	0	0	0	0	13	0.79%
12:45:00 PM	0	0	0	0	1	2	6	3	4	2	1	1	0	0	20	1.22%
1:00:00 PM	0	0	0	0	1	3	1	6	1	1	0	1	1	0	15	0.91%
1:15:00 PM	0	0	1	0	0	1	8	2	4	0	2	0	0	0	18	1.09%
1:30:00 PM	1	0	0	0	0	4	3	1	3	1	0	1	0	0	14	0.85%
1:45:00 PM	0	0	0	0	0	1	3	6	1	3	0	0	0	0	14	0.85%
2:00:00 PM	0	0	0	1	1	0	4	6	2	2	1	0	0	0	17	1.03%
2:15:00 PM	0	0	0	0	0	1	5	6	6	4	1	0	0	0	23	1.40%
2:30:00 PM	0	0	1	0	0	1	5	7	4	2	0	2	1	0	23	1.40%
2:45:00 PM	0	0	0	0	0	4	7	11	7	0	1	0	0	0	30	1.82%
3:00:00 PM	0	0	0	1	1	1	6	25	3	4	0	0	0	0	41	2.49%
3:15:00 PM	0	0	0	0	0	3	13	12	10	7	5	0	0	1	51	3.10%
3:30:00 PM	1	0	0	0	1	2	24	40	20	6	0	2	1	0	97	5.90%
3:45:00 PM	0	0	0	0	0	9	29	37	21	15	4	3	0	0	118	7.18%
4:00:00 PM	0	0	0	0	0	2	5	6	6	5	2	0	1	0	27	1.64%
4:15:00 PM	0	0	0	0	0	2	9	11	7	1	1	1	0	0	32	1.95%
4:30:00 PM	0	0	0	0	1	1	2	6	6	2	2	0	0	0	20	1.22%
4:45:00 PM	0	0	0	1	1	3	6	12	2	3	2	0	0	0	30	1.82%
5:00:00 PM	0	0	0	0	3	3	7	7	6	5	0	0	0	0	31	1.89%
5:15:00 PM	0	0	0	0	0	2	5	10	5	4	2	0	0	0	28	1.70%
5:30:00 PM	0	0	0	0	2	5	7	6	3	1	0	1	0	1	26	1.58%
5:45:00 PM	0	0	0	0	0	2	2	8	5	0	0	0	0	0	17	1.03%
6:00:00 PM	0	0	0	0	3	2	6	8	4	4	0	0	0	0	27	1.64%
6:15:00 PM	0	0	0	0	1	4	5	8	1	1	1	0	0	0	21	1.28%
6:30:00 PM	0	0	0	0	2	3	8	7	2	1	0	1	0	0	24	1.46%
6:45:00 PM	0	0	0	0	0	1	1	4	3	1	0	1	0	0	11	0.67%
7:00:00 PM	0	0	0	0	0	2	7	8	4	0	1	0	0	0	22	1.34%
7:15:00 PM	0	0	0	0	0	0	5	3	3	0	0	0	0	0	11	0.67%
7:30:00 PM	0	0	0	0	0	3	2	1	5	1	0	0	0	0	12	0.73%
7:45:00 PM	0	0	0	1	1	2	1	4	1	0	0	0	0	0	10	0.61%
8:00:00 PM	0	0	0	0	0	2	3	10	1	1	0	0	0	0	17	1.03%
8:15:00 PM	0	0	0	0	0	1	2	0	0	3	1	0	0	0	7	0.43%
8:30:00 PM	0	0	0	0	0	1	2	6	1	4	0	1	0	0	15	0.91%
8:45:00 PM	0	0	0	0	1	3	1	3	3	1	0	0	0	1	13	0.79%
9:00:00 PM	0	0	0	0	0	1	2	2	3	0	0	0	0	0	8	0.49%
9:15:00 PM	0	0	0	0	1	0	3	2	1	1	0	0	0	0	8	0.49%
9:30:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0.12%
9:45:00 PM	0	0	0	0	0	2	1	1	2	0	0	0	1	0	7	0.43%
10:00:00 PM	0	0	0	1	0	1	1	1	0	0	0	0	0	0	4	0.24%
10:15:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06%
10:30:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.12%
10:45:00 PM	0	0	0	0	0	0	0	3	0	1	0	0	0	0	4	0.24%
11:00:00 PM	0	0	0	0	0	1	2	0	0	1	0	0	0	0	4	0.24%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.12%
11:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.06%
PM TOTAL	2	2	2	6	24	90	221	314	172	94	31	17	6	3	984	59.85%
PERCENTAGE	0.2%	0.2%	0.2%	0.6%	2.4%	9.1%	22.5%	31.9%	17.5%	9.6%	3.2%	1.7%	0.6%	0.3%		
CUMULATIVE	2	4	6	12	36	126	347	661	833	927	958	975	981	984		
PERCENTAGE	0.2%	0.4%	0.6%	1.2%	3.7%	12.8%	35.3%	67.2%	84.7%	94.2%	97.4%	99.1%	99.7%	100.0%		

15th Percentile	35	Mean Speed Average	44
50th Percentile	43	10 MPH Pace Speed	39-48
85th Percentile	52	Number in Pace	285
95th Percentile	58	Percent in Pace	29%

DAY TOTAL	8	7	4	11	45	140	334	500	318	181	53	27	11	5	1,644	100.00%
PERCENTAGE	0.5%	0.4%	0.2%	0.7%	2.7%	8.5%	20.3%	30.4%	19.3%	11.0%	3.2%	1.6%	0.7%	0.3%	1,644	100.00%
	0.5%	0.9%	1.2%	1.8%	4.6%	13.1%	33.4%	63.8%	83.2%	94.2%	97.4%	99.0%	99.7%	100.0%		
85th Percentile	52															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Northbound

Project# SC3235

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.02%
12:15:00 AM	0	0	0	1	0	0	0	0	1	1	1	1	0	0	5	0.11%
12:30:00 AM	0	0	0	0	0	0	0	1	1	0	3	0	0	0	5	0.11%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.02%
1:00:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3	0.07%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	0.07%
1:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.02%
1:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
2:00:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	1	0	3	0.07%
2:15:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.04%
2:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0.04%
3:00:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.04%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0.04%
3:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
4:00:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.04%
4:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.02%
4:30:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.07%
4:45:00 AM	0	0	0	0	0	0	0	2	3	2	0	1	0	0	8	0.17%
5:00:00 AM	0	0	0	0	0	0	0	2	4	3	2	1	1	0	13	0.28%
5:15:00 AM	0	0	0	0	0	0	1	1	0	4	1	0	0	1	8	0.17%
5:30:00 AM	0	0	0	0	0	0	2	5	6	2	1	0	0	0	16	0.35%
5:45:00 AM	0	0	0	0	0	0	1	11	16	6	2	3	0	0	39	0.85%
6:00:00 AM	0	0	0	0	0	0	4	6	9	4	4	3	0	0	30	0.65%
6:15:00 AM	0	0	0	0	0	0	7	13	10	9	3	2	1	1	46	1.00%
6:30:00 AM	0	0	0	0	1	2	3	11	11	5	2	2	0	0	37	0.80%
6:45:00 AM	0	0	0	0	0	3	7	13	12	9	0	1	0	0	45	0.98%
7:00:00 AM	0	0	0	0	0	4	11	12	2	3	3	2	1	0	38	0.82%
7:15:00 AM	0	0	0	0	0	4	4	9	8	6	2	2	1	0	36	0.78%
7:30:00 AM	3	0	0	0	0	7	15	17	12	19	4	5	0	0	82	1.78%
7:45:00 AM	0	0	0	0	4	19	61	50	18	4	4	0	0	0	160	3.47%
8:00:00 AM	0	2	2	2	14	65	85	40	5	0	0	1	0	0	216	4.68%
8:15:00 AM	115	3	11	11	20	26	54	45	14	4	2	0	0	0	305	6.61%
8:30:00 AM	0	0	0	11	19	14	36	41	10	0	0	0	0	0	131	2.84%
8:45:00 AM	0	0	0	0	0	13	28	36	36	6	1	4	0	0	124	2.69%
9:00:00 AM	0	0	0	0	0	2	14	14	10	4	4	0	0	0	48	1.04%
9:15:00 AM	0	0	0	0	0	3	10	15	17	13	4	0	0	0	62	1.34%
9:30:00 AM	0	0	0	0	0	1	13	12	9	5	1	1	0	0	42	0.91%
9:45:00 AM	0	0	0	0	0	5	10	21	27	5	7	2	0	0	77	1.67%
10:00:00 AM	0	0	0	0	0	2	1	16	25	6	1	0	1	0	52	1.13%
10:15:00 AM	0	0	0	0	0	0	9	14	9	6	2	2	0	0	42	0.91%
10:30:00 AM	0	0	0	0	4	2	4	10	7	4	3	1	0	0	35	0.76%
10:45:00 AM	0	0	0	0	0	1	2	21	8	4	1	0	0	0	37	0.80%
11:00:00 AM	0	0	0	0	0	3	7	11	6	9	1	0	0	0	37	0.80%
11:15:00 AM	0	0	0	0	0	2	8	11	16	1	0	0	1	0	39	0.85%
11:30:00 AM	0	0	0	0	1	1	2	10	10	7	1	0	0	0	32	0.69%
11:45:00 AM	0	0	0	0	0	3	6	15	13	4	6	1	0	0	48	1.04%
AM TOTAL	118	5	13	25	63	183	407	490	342	158	70	37	9	4	1,924	41.69%
PERCENTAGE	6.1%	0.3%	0.7%	1.3%	3.3%	9.5%	21.2%	25.5%	17.8%	8.2%	3.6%	1.9%	0.5%	0.2%		
CUMULATIVE	118	123	136	161	224	407	814	1,304	1,646	1,804	1,874	1,911	1,920	1,924		
PERCENTAGE	6.1%	6.4%	7.1%	8.4%	11.6%	21.2%	42.3%	67.8%	85.6%	93.8%	97.4%	99.3%	99.8%	100.0%		

15th Percentile	22	Mean Speed Average	39
50th Percentile	41	10 MPH Pace Speed	36-45
85th Percentile	54	Number in Pace	288
95th Percentile	60	Percent in Pace	15%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Northbound

Project# SC3235

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	4	3	11	9	4	2	0	1	0	34	0.74%
12:15:00 PM	0	0	0	1	1	0	1	15	8	10	2	1	0	0	39	0.85%
12:30:00 PM	0	0	0	0	0	1	8	15	20	2	4	0	0	1	51	1.11%

12:45:00 PM	1	0	0	0	1	2	2	7	17	10	5	0	0	0	45	0.98%
1:00:00 PM	0	0	0	0	0	0	1	10	12	7	2	4	1	0	37	0.80%
1:15:00 PM	0	0	0	0	0	0	11	11	12	8	4	0	0	0	46	1.00%
1:30:00 PM	0	0	0	0	0	0	11	10	6	5	1	0	0	0	33	0.72%
1:45:00 PM	0	0	0	0	1	1	5	12	19	6	2	1	1	0	48	1.04%
2:00:00 PM	0	0	0	0	0	1	5	11	14	8	4	0	0	0	43	0.93%
2:15:00 PM	0	0	0	0	1	4	8	15	9	7	2	1	0	0	47	1.02%
2:30:00 PM	0	0	0	0	0	0	12	21	18	7	4	1	0	0	63	1.37%
2:45:00 PM	2	0	0	0	0	4	13	26	31	17	5	1	0	0	99	2.15%
3:00:00 PM	0	0	0	0	0	2	29	52	24	7	4	0	0	0	118	2.56%
3:15:00 PM	0	0	0	3	15	19	61	63	25	12	3	0	0	0	201	4.36%
3:30:00 PM	5	0	1	3	16	13	64	39	8	1	0	1	0	0	151	3.27%
3:45:00 PM	38	4	0	1	16	23	35	21	3	3	2	1	0	1	148	3.21%
4:00:00 PM	3	0	0	0	3	19	17	28	15	6	1	0	0	1	93	2.02%
4:15:00 PM	3	0	0	0	0	5	26	36	9	10	2	1	0	0	92	1.99%
4:30:00 PM	0	0	0	0	0	2	21	32	19	5	0	0	0	1	80	1.73%
4:45:00 PM	0	0	0	0	0	4	14	26	22	13	3	1	0	0	83	1.80%
5:00:00 PM	0	0	0	1	2	3	16	33	22	9	2	0	0	0	88	1.91%
5:15:00 PM	0	0	0	1	0	10	30	40	27	5	1	0	0	1	115	2.49%
5:30:00 PM	0	0	0	0	1	9	30	43	11	7	2	1	0	1	105	2.28%
5:45:00 PM	0	0	0	0	0	12	23	22	17	5	1	0	0	0	80	1.73%
6:00:00 PM	0	0	0	0	2	10	29	33	23	2	0	2	0	0	101	2.19%
6:15:00 PM	0	0	0	0	1	0	15	21	26	9	2	1	0	0	75	1.63%
6:30:00 PM	0	0	0	0	2	5	9	29	13	6	7	0	0	0	71	1.54%
6:45:00 PM	0	0	0	0	1	4	16	13	29	10	4	0	0	0	77	1.67%
7:00:00 PM	0	0	0	0	0	0	3	16	22	5	2	0	0	0	48	1.04%
7:15:00 PM	0	0	0	0	0	0	10	11	8	8	2	0	0	0	39	0.85%
7:30:00 PM	0	0	0	0	0	2	3	15	10	3	2	0	0	0	35	0.76%
7:45:00 PM	0	0	0	0	0	2	5	8	17	4	2	0	0	0	38	0.82%
8:00:00 PM	0	0	0	0	0	0	4	6	12	12	4	0	0	0	38	0.82%
8:15:00 PM	0	0	0	0	0	1	3	4	12	5	3	1	0	2	31	0.67%
8:30:00 PM	0	0	0	0	0	1	0	7	5	2	2	0	2	0	19	0.41%
8:45:00 PM	0	0	0	0	0	0	1	10	7	1	1	0	0	0	20	0.43%
9:00:00 PM	0	0	0	0	0	0	6	7	6	6	1	1	0	1	28	0.61%
9:15:00 PM	0	0	0	0	0	1	2	3	6	4	2	1	2	0	21	0.46%
9:30:00 PM	0	0	0	0	0	2	0	1	4	4	0	0	0	0	11	0.24%
9:45:00 PM	0	0	0	0	0	0	0	3	3	3	1	1	1	1	13	0.28%
10:00:00 PM	0	0	0	0	0	1	0	2	4	1	1	0	0	0	9	0.20%
10:15:00 PM	0	0	0	0	0	0	0	4	7	8	2	2	4	0	27	0.59%
10:30:00 PM	0	0	0	0	0	0	1	5	1	2	2	0	0	0	11	0.24%
10:45:00 PM	0	0	0	0	0	0	0	0	3	4	1	0	0	0	8	0.17%
11:00:00 PM	0	0	0	0	0	1	1	0	2	3	1	0	0	0	8	0.17%
11:15:00 PM	0	0	0	0	1	0	0	1	2	0	0	0	0	2	6	0.13%
11:30:00 PM	0	0	0	0	0	0	1	0	5	3	0	0	0	0	9	0.20%
11:45:00 PM	0	0	0	0	0	0	0	2	2	3	0	1	1	0	9	0.20%
PM TOTAL	52	4	1	10	64	168	555	800	606	282	100	24	13	12	2,691	58.31%
PERCENTAGE	1.9%	0.1%	0.0%	0.4%	2.4%	6.2%	20.6%	29.7%	22.5%	10.5%	3.7%	0.9%	0.5%	0.4%		
CUMULATIVE	52	56	57	67	131	299	854	1,654	2,260	2,542	2,642	2,666	2,679	2,691		
PERCENTAGE	1.9%	2.1%	2.1%	2.5%	4.9%	11.1%	31.7%	61.5%	84.0%	94.5%	98.2%	99.1%	99.6%	100.0%		

15th Percentile	32	Mean Speed Average	42
50th Percentile	43	10 MPH Pace Speed	38-47
85th Percentile	55	Number in Pace	289
95th Percentile	59	Percent in Pace	11%

DAY TOTAL	170	9	14	35	127	351	962	1,290	948	440	170	61	22	16	4,615	
PERCENTAGE	3.7%	0.2%	0.3%	0.8%	2.8%	7.6%	20.8%	28.0%	20.5%	9.5%	3.7%	1.3%	0.5%	0.3%	4,615	100.00%
	3.7%	3.9%	4.2%	4.9%	7.7%	15.3%	36.1%	64.1%	84.6%	94.2%	97.9%	99.2%	99.7%	100.0%		
85th Percentile	54															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Southbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3	0.06%
12:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
12:30:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.02%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.04%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.04%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.02%
2:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:45:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0.04%
3:00:00 AM	0	0	0	0	0	1	1	0	0	0	1	0	0	0	3	0.06%
3:15:00 AM	0	0	0	0	0	1	1	3	0	0	0	1	0	0	6	0.12%
3:30:00 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.06%
3:45:00 AM	0	0	0	0	0	0	1	5	3	1	0	0	0	0	10	0.20%
4:00:00 AM	0	0	0	0	0	0	1	0	1	1	1	0	0	0	4	0.08%
4:15:00 AM	0	0	0	0	0	1	3	1	0	0	0	0	0	0	5	0.10%
4:30:00 AM	0	0	0	0	0	1	2	5	2	2	0	0	0	0	12	0.24%
4:45:00 AM	0	0	0	0	0	0	7	1	1	0	0	0	0	0	9	0.18%
5:00:00 AM	0	0	0	0	2	5	3	2	1	1	0	0	0	0	14	0.28%
5:15:00 AM	0	0	0	0	0	1	4	5	1	0	0	0	0	0	11	0.22%
5:30:00 AM	0	0	0	0	0	0	3	5	9	2	1	0	0	0	20	0.40%
5:45:00 AM	0	0	0	0	1	5	4	11	4	1	1	0	0	0	27	0.54%
6:00:00 AM	0	0	0	0	1	6	7	8	7	0	1	0	0	0	30	0.60%
6:15:00 AM	0	0	0	2	3	5	16	8	8	0	1	0	0	0	43	0.86%
6:30:00 AM	0	0	0	1	3	8	29	23	8	2	2	0	0	0	76	1.52%
6:45:00 AM	0	0	0	1	3	7	19	14	9	4	1	0	0	0	58	1.16%
7:00:00 AM	0	0	0	5	10	6	31	21	8	0	0	0	0	0	81	1.62%
7:15:00 AM	0	0	1	0	9	13	45	15	10	2	0	0	0	0	95	1.90%
7:30:00 AM	0	0	0	4	18	34	50	9	7	0	0	0	0	0	122	2.44%
7:45:00 AM	0	0	0	4	29	62	42	13	5	2	2	0	0	0	159	3.18%
8:00:00 AM	7	17	9	21	52	58	20	2	0	2	0	0	0	0	188	3.76%
8:15:00 AM	91	54	46	13	21	11	6	2	0	0	0	0	0	0	244	4.88%
8:30:00 AM	102	62	17	10	13	9	9	6	0	1	0	0	0	0	229	4.58%
8:45:00 AM	2	0	5	4	16	67	58	17	1	0	0	0	0	0	170	3.40%
9:00:00 AM	0	0	0	1	11	24	32	14	1	0	1	0	0	0	84	1.68%
9:15:00 AM	0	0	0	2	3	27	21	1	1	1	0	0	0	0	56	1.12%
9:30:00 AM	0	0	0	0	17	20	22	8	1	0	0	0	0	0	68	1.36%
9:45:00 AM	0	0	2	0	3	22	13	7	4	0	0	0	0	0	51	1.02%
10:00:00 AM	0	0	2	6	4	11	19	6	1	0	0	0	0	0	49	0.98%
10:15:00 AM	0	0	0	0	3	20	24	3	2	0	0	0	0	0	52	1.04%
10:30:00 AM	0	0	0	1	4	12	17	8	3	0	0	0	0	0	45	0.90%
10:45:00 AM	2	0	0	0	6	14	22	5	2	0	0	0	0	0	51	1.02%
11:00:00 AM	0	0	0	0	2	12	12	8	1	0	0	0	0	0	35	0.70%
11:15:00 AM	0	0	0	0	9	14	9	4	4	0	0	0	0	0	40	0.80%
11:30:00 AM	0	0	1	1	3	9	11	8	1	1	0	0	0	0	35	0.70%
11:45:00 AM	0	0	0	0	1	11	15	5	1	0	1	0	0	0	34	0.68%
AM TOTAL	204	133	83	76	247	500	582	258	109	24	15	1	0	0	2,232	44.68%
PERCENTAGE	9.1%	6.0%	3.7%	3.4%	11.1%	22.4%	26.1%	11.6%	4.9%	1.1%	0.7%	0.0%	0.0%	0.0%		
CUMULATIVE	204	337	420	496	743	1,243	1,825	2,083	2,192	2,216	2,231	2,232	2,232	2,232		
PERCENTAGE	9.1%	15.1%	18.8%	22.2%	33.3%	55.7%	81.8%	93.3%	98.2%	99.3%	100.0%	100.0%	100.0%	100.0%		

15th Percentile	12	Mean Speed Average	29
50th Percentile	31	10 MPH Pace Speed	31-40
85th Percentile	44	Number in Pace	292
95th Percentile	49	Percent in Pace	13%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Southbound

Project# **SC3235**

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	14	10	11	2	0	0	0	0	0	39	0.78%
12:15:00 PM	0	0	1	0	3	13	22	7	1	0	0	0	0	0	47	0.94%
12:30:00 PM	0	1	0	0	1	8	12	7	3	0	0	0	0	0	32	0.64%
12:45:00 PM	1	0	0	0	4	15	16	8	2	1	2	0	0	0	49	0.98%
1:00:00 PM	0	0	0	0	3	15	16	9	1	0	0	0	0	0	44	0.88%

1:15:00 PM	0	0	0	1	6	13	15	8	0	1	0	1	0	0	45	0.90%
1:30:00 PM	0	0	0	0	4	14	19	8	0	2	0	0	0	0	47	0.94%
1:45:00 PM	0	0	0	2	4	14	23	12	2	1	0	0	0	0	58	1.16%
2:00:00 PM	0	0	0	0	3	15	23	16	3	0	1	0	0	0	61	1.22%
2:15:00 PM	0	0	0	0	4	9	15	15	4	0	1	0	0	0	48	0.96%
2:30:00 PM	0	0	0	1	3	18	25	13	2	0	0	0	0	0	62	1.24%
2:45:00 PM	0	0	0	2	7	21	27	9	3	2	1	0	0	1	73	1.46%
3:00:00 PM	0	0	0	0	3	23	23	10	1	1	0	0	0	0	61	1.22%
3:15:00 PM	3	0	0	1	4	10	27	20	4	1	0	0	0	0	70	1.40%
3:30:00 PM	169	35	14	19	49	47	19	0	0	0	0	0	0	0	352	7.05%
3:45:00 PM	249	37	4	5	6	3	0	0	0	0	0	0	1	0	305	6.10%
4:00:00 PM	32	27	28	17	9	32	23	3	1	1	0	0	0	0	173	3.46%
4:15:00 PM	0	0	0	1	11	33	37	14	1	0	0	0	0	0	97	1.94%
4:30:00 PM	0	0	0	0	3	18	28	14	2	0	0	0	0	0	65	1.30%
4:45:00 PM	0	0	6	0	8	16	29	13	6	0	1	0	0	0	79	1.58%
5:00:00 PM	0	3	0	3	9	17	22	8	1	2	0	0	0	0	65	1.30%
5:15:00 PM	0	0	0	1	3	35	52	10	1	0	0	0	0	0	102	2.04%
5:30:00 PM	2	0	0	1	13	45	24	7	2	0	0	0	0	1	95	1.90%
5:45:00 PM	0	0	0	0	23	31	33	9	6	0	0	0	0	0	102	2.04%
6:00:00 PM	1	0	0	2	14	27	26	9	2	1	0	0	0	0	82	1.64%
6:15:00 PM	0	0	0	1	10	29	27	6	2	1	0	0	0	0	76	1.52%
6:30:00 PM	0	0	0	0	3	6	12	12	0	0	0	0	0	0	33	0.66%
6:45:00 PM	0	0	0	0	0	5	21	9	3	3	0	0	0	0	41	0.82%
7:00:00 PM	0	0	0	0	4	5	5	9	1	1	0	0	0	0	25	0.50%
7:15:00 PM	0	0	0	0	2	6	12	5	4	3	0	0	0	0	32	0.64%
7:30:00 PM	0	0	0	0	7	7	13	4	3	0	0	0	0	0	34	0.68%
7:45:00 PM	0	0	0	0	1	5	8	4	1	1	0	0	0	0	20	0.40%
8:00:00 PM	0	0	0	0	1	9	5	4	4	1	0	0	0	0	24	0.48%
8:15:00 PM	0	0	0	0	5	14	25	8	2	0	1	0	0	0	55	1.10%
8:30:00 PM	0	0	0	0	7	12	19	6	1	0	0	0	0	0	45	0.90%
8:45:00 PM	0	0	0	0	0	7	7	5	2	0	0	1	0	0	22	0.44%
9:00:00 PM	0	0	0	0	3	7	9	5	3	0	0	0	0	0	27	0.54%
9:15:00 PM	0	0	0	0	2	2	2	2	1	2	0	0	0	0	11	0.22%
9:30:00 PM	0	0	0	0	0	3	1	3	3	1	0	0	0	0	11	0.22%
9:45:00 PM	0	0	0	0	0	1	6	2	2	1	0	0	0	0	12	0.24%
10:00:00 PM	0	0	0	0	0	0	0	2	1	1	0	0	0	0	4	0.08%
10:15:00 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	6	0.12%
10:30:00 PM	0	0	0	1	0	3	4	2	3	1	0	0	0	0	14	0.28%
10:45:00 PM	0	0	0	0	0	1	2	2	1	0	1	0	0	0	7	0.14%
11:00:00 PM	0	0	0	0	1	0	0	1	1	2	0	0	0	0	5	0.10%
11:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
11:30:00 PM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0.08%
11:45:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.04%
PM TOTAL	457	103	53	59	244	629	749	335	91	31	8	2	1	2	2,764	55.32%
PERCENTAGE	16.5%	3.7%	1.9%	2.1%	8.8%	22.8%	27.1%	12.1%	3.3%	1.1%	0.3%	0.1%	0.0%	0.1%		
CUMULATIVE	457	560	613	672	916	1,545	2,294	2,629	2,720	2,751	2,759	2,761	2,762	2,764		
PERCENTAGE	16.5%	20.3%	22.2%	24.3%	33.1%	55.9%	83.0%	95.1%	98.4%	99.5%	99.8%	99.9%	99.9%	100.0%		

15th Percentile	11	Mean Speed Average	30
50th Percentile	32	10 MPH Pace Speed	31-40
85th Percentile	44	Number in Pace	288
95th Percentile	49	Percent in Pace	10%

DAY TOTAL	661	236	136	135	491	1,129	1,331	593	200	55	23	3	1	2	4,996	
PERCENTAGE	13.2%	4.7%	2.7%	2.7%	9.8%	22.6%	26.6%	11.9%	4.0%	1.1%	0.5%	0.1%	0.0%	0.04%	4,996	100.00%
	13.2%	18.0%	20.7%	23.4%	33.2%	55.8%	82.4%	94.3%	98.3%	99.4%	99.9%	99.9%	100.0%	100.00%		
85th Percentile	44															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Combined

Project# SC3235

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	1	4	0.04%
12:15:00 AM	0	0	0	1	0	0	0	1	1	1	1	1	0	0	6	0.06%
12:30:00 AM	0	0	0	0	0	1	0	1	1	0	3	0	0	0	6	0.06%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.01%
1:00:00 AM	0	0	0	0	0	1	1	1	1	0	0	0	0	1	5	0.05%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	0.03%
1:30:00 AM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0.03%
1:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.01%
2:00:00 AM	0	0	0	0	0	0	0	1	1	0	1	0	1	0	4	0.04%
2:15:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.03%
2:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.01%
2:45:00 AM	0	0	0	0	0	1	1	0	0	1	0	1	0	0	4	0.04%
3:00:00 AM	0	0	0	0	0	1	1	0	1	1	1	0	0	0	5	0.05%
3:15:00 AM	0	0	0	0	0	1	1	3	0	0	0	1	0	0	6	0.06%
3:30:00 AM	0	0	0	0	0	1	2	1	0	0	0	0	1	0	5	0.05%
3:45:00 AM	0	0	0	0	0	0	1	5	4	1	0	0	0	0	11	0.11%
4:00:00 AM	0	0	0	0	0	0	1	0	1	2	2	0	0	0	6	0.06%
4:15:00 AM	0	0	0	0	0	1	3	1	0	0	0	0	1	0	6	0.06%
4:30:00 AM	0	0	0	0	0	1	2	7	2	2	1	0	0	0	15	0.16%
4:45:00 AM	0	0	0	0	0	0	7	3	4	2	0	1	0	0	17	0.18%
5:00:00 AM	0	0	0	0	2	5	3	4	5	4	2	1	1	0	27	0.28%
5:15:00 AM	0	0	0	0	0	1	5	6	1	4	1	0	0	1	19	0.20%
5:30:00 AM	0	0	0	0	0	0	5	10	15	4	2	0	0	0	36	0.37%
5:45:00 AM	0	0	0	0	1	5	5	22	20	7	3	3	0	0	66	0.69%
6:00:00 AM	0	0	0	0	1	6	11	14	16	4	5	3	0	0	60	0.62%
6:15:00 AM	0	0	0	2	3	5	23	21	18	9	4	2	1	1	89	0.93%
6:30:00 AM	0	0	0	1	4	10	32	34	19	7	4	2	0	0	113	1.18%
6:45:00 AM	0	0	0	1	3	10	26	27	21	13	1	1	0	0	103	1.07%
7:00:00 AM	0	0	0	5	10	10	42	33	10	3	3	2	1	0	119	1.24%
7:15:00 AM	0	0	1	0	9	17	49	24	18	8	2	2	1	0	131	1.36%
7:30:00 AM	3	0	0	4	18	41	65	26	19	19	4	5	0	0	204	2.12%
7:45:00 AM	0	0	0	4	33	81	103	63	23	6	6	0	0	0	319	3.32%
8:00:00 AM	7	19	11	23	66	123	105	42	5	2	0	1	0	0	404	4.20%
8:15:00 AM	206	57	57	24	41	37	60	47	14	4	2	0	0	0	549	5.71%
8:30:00 AM	102	62	17	21	32	23	45	47	10	1	0	0	0	0	360	3.75%
8:45:00 AM	2	0	5	4	16	80	86	53	37	6	1	4	0	0	294	3.06%
9:00:00 AM	0	0	0	1	11	26	46	28	11	4	5	0	0	0	132	1.37%
9:15:00 AM	0	0	0	2	3	30	31	16	18	14	4	0	0	0	118	1.23%
9:30:00 AM	0	0	0	0	17	21	35	20	10	5	1	1	0	0	110	1.14%
9:45:00 AM	0	0	2	0	3	27	23	28	31	5	7	2	0	0	128	1.33%
10:00:00 AM	0	0	2	6	4	13	20	22	26	6	1	0	1	0	101	1.05%
10:15:00 AM	0	0	0	0	3	20	33	17	11	6	2	2	0	0	94	0.98%
10:30:00 AM	0	0	0	1	8	14	21	18	10	4	3	1	0	0	80	0.83%
10:45:00 AM	2	0	0	0	6	15	24	26	10	4	1	0	0	0	88	0.92%
11:00:00 AM	0	0	0	0	2	15	19	19	7	9	1	0	0	0	72	0.75%
11:15:00 AM	0	0	0	0	9	16	17	15	20	1	0	0	1	0	79	0.82%
11:30:00 AM	0	0	1	1	4	10	13	18	11	8	1	0	0	0	67	0.70%
11:45:00 AM	0	0	0	0	1	14	21	20	14	4	7	1	0	0	82	0.85%
AM TOTAL	322	138	96	101	310	683	989	748	451	182	85	38	9	4	4,156	43.24%
PERCENTAGE	7.7%	3.3%	2.3%	2.4%	7.5%	16.4%	23.8%	18.0%	10.9%	4.4%	2.0%	0.9%	0.2%	0.1%		
CUMULATIVE	322	460	556	657	967	1,650	2,639	3,387	3,838	4,020	4,105	4,143	4,152	4,156		
PERCENTAGE	7.7%	11.1%	13.4%	15.8%	23.3%	39.7%	63.5%	81.5%	92.3%	96.7%	98.8%	99.7%	99.9%	100.0%		

15th Percentile	13	Mean Speed Average	34
50th Percentile	35	10 MPH Pace Speed	36-45
85th Percentile	52	Number in Pace	286
95th Percentile	58	Percent in Pace	7%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .07. Combined

Project# SC3235

Monday, February 07, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	18	13	22	11	4	2	0	1	0	73	0.76%

12:15:00 PM	0	0	1	1	4	13	23	22	9	10	2	1	0	0	86	0.89%
12:30:00 PM	0	1	0	0	1	9	20	22	23	2	4	0	0	1	83	0.86%
12:45:00 PM	2	0	0	0	5	17	18	15	19	11	7	0	0	0	94	0.98%
1:00:00 PM	0	0	0	0	3	15	17	19	13	7	2	4	1	0	81	0.84%
1:15:00 PM	0	0	0	1	6	13	26	19	12	9	4	1	0	0	91	0.95%
1:30:00 PM	0	0	0	0	4	14	30	18	6	7	1	0	0	0	80	0.83%
1:45:00 PM	0	0	0	2	5	15	28	24	21	7	2	1	1	0	106	1.10%
2:00:00 PM	0	0	0	0	3	16	28	27	17	8	5	0	0	0	104	1.08%
2:15:00 PM	0	0	0	0	5	13	23	30	13	7	3	1	0	0	95	0.99%
2:30:00 PM	0	0	0	1	3	18	37	34	20	7	4	1	0	0	125	1.30%
2:45:00 PM	2	0	0	2	7	25	40	35	34	19	6	1	0	1	172	1.79%
3:00:00 PM	0	0	0	0	3	25	52	62	25	8	4	0	0	0	179	1.86%
3:15:00 PM	3	0	0	4	19	29	88	83	29	13	3	0	0	0	271	2.82%
3:30:00 PM	174	35	15	22	65	60	83	39	8	1	0	1	0	0	503	5.23%
3:45:00 PM	287	41	4	6	22	26	35	21	3	3	2	1	1	1	453	4.71%
4:00:00 PM	35	27	28	17	12	51	40	31	16	7	1	0	0	1	266	2.77%
4:15:00 PM	3	0	0	1	11	38	63	50	10	10	2	1	0	0	189	1.97%
4:30:00 PM	0	0	0	0	3	20	49	46	21	5	0	0	0	1	145	1.51%
4:45:00 PM	0	0	6	0	8	20	43	39	28	13	4	1	0	0	162	1.69%
5:00:00 PM	0	3	0	4	11	20	38	41	23	11	2	0	0	0	153	1.59%
5:15:00 PM	0	0	0	2	3	45	82	50	28	5	1	0	0	1	217	2.26%
5:30:00 PM	2	0	0	1	14	54	54	50	13	7	2	1	0	2	200	2.08%
5:45:00 PM	0	0	0	0	23	43	56	31	23	5	1	0	0	0	182	1.89%
6:00:00 PM	1	0	0	2	16	37	55	42	25	3	0	2	0	0	183	1.90%
6:15:00 PM	0	0	0	1	11	29	42	27	28	10	2	1	0	0	151	1.57%
6:30:00 PM	0	0	0	0	5	11	21	41	13	6	7	0	0	0	104	1.08%
6:45:00 PM	0	0	0	0	1	9	37	22	32	13	4	0	0	0	118	1.23%
7:00:00 PM	0	0	0	0	4	5	8	25	23	6	2	0	0	0	73	0.76%
7:15:00 PM	0	0	0	0	2	6	22	16	12	11	2	0	0	0	71	0.74%
7:30:00 PM	0	0	0	0	7	9	16	19	13	3	2	0	0	0	69	0.72%
7:45:00 PM	0	0	0	0	1	7	13	12	18	5	2	0	0	0	58	0.60%
8:00:00 PM	0	0	0	0	1	9	9	10	16	13	4	0	0	0	62	0.65%
8:15:00 PM	0	0	0	0	5	15	28	12	14	5	4	1	0	2	86	0.89%
8:30:00 PM	0	0	0	0	7	13	19	13	6	2	2	0	2	0	64	0.67%
8:45:00 PM	0	0	0	0	0	7	8	15	9	1	1	1	0	0	42	0.44%
9:00:00 PM	0	0	0	0	3	7	15	12	9	6	1	1	0	1	55	0.57%
9:15:00 PM	0	0	0	0	2	3	4	5	7	6	2	1	2	0	32	0.33%
9:30:00 PM	0	0	0	0	0	5	1	4	7	5	0	0	0	0	22	0.23%
9:45:00 PM	0	0	0	0	0	1	6	5	5	4	1	1	1	1	25	0.26%
10:00:00 PM	0	0	0	0	0	1	0	4	5	2	1	0	0	0	13	0.14%
10:15:00 PM	0	0	0	0	0	1	2	7	7	8	2	2	4	0	33	0.34%
10:30:00 PM	0	0	0	1	0	3	5	7	4	3	2	0	0	0	25	0.26%
10:45:00 PM	0	0	0	0	0	1	2	2	4	4	2	0	0	0	15	0.16%
11:00:00 PM	0	0	0	0	1	1	1	1	3	5	1	0	0	0	13	0.14%
11:15:00 PM	0	0	0	0	1	0	1	1	2	0	0	0	0	2	7	0.07%
11:30:00 PM	0	0	0	0	0	0	2	1	7	3	0	0	0	0	13	0.14%
11:45:00 PM	0	0	0	0	0	0	1	2	3	3	0	1	1	0	11	0.11%
PM TOTAL	509	107	54	69	308	797	1,304	1,135	697	313	108	26	14	14	5,455	56.76%
PERCENTAGE	9.3%	2.0%	1.0%	1.3%	5.6%	14.6%	23.9%	20.8%	12.8%	5.7%	2.0%	0.5%	0.3%	0.3%		
CUMULATIVE	509	616	670	739	1,047	1,844	3,148	4,283	4,980	5,293	5,401	5,427	5,441	5,455		
PERCENTAGE	9.3%	11.3%	12.3%	13.5%	19.2%	33.8%	57.7%	78.5%	91.3%	97.0%	99.0%	99.5%	99.7%	100.0%		

15th Percentile	12	Mean Speed Average	35
50th Percentile	36	10 MPH Pace Speed	34-43
85th Percentile	54	Number in Pace	286
95th Percentile	58	Percent in Pace	5%

DAY TOTAL	831	245	150	170	618	1,480	2,293	1,883	1,148	495	193	64	23	18	9,611	
PERCENTAGE	8.6%	2.5%	1.6%	1.8%	6.4%	15.4%	23.9%	19.6%	11.9%	5.2%	2.0%	0.7%	0.2%	0.2%	9,611	100.00%
	8.6%	11.2%	12.8%	14.5%	21.0%	36.4%	60.2%	79.8%	91.7%	96.9%	98.9%	99.6%	99.8%	100.0%		
85th Percentile	53															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Northbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3	0.06%
12:15:00 AM	0	0	0	0	0	0	0	3	0	0	0	1	1	0	5	0.10%
12:30:00 AM	0	0	0	0	0	0	1	0	1	0	2	0	0	0	4	0.08%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.02%
1:00:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.04%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
1:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0.04%
1:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
2:00:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.04%
2:30:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
3:00:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0.04%
3:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:45:00 AM	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3	0.06%
4:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.04%
4:15:00 AM	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3	0.06%
4:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0.04%
4:45:00 AM	0	0	0	0	0	0	1	0	5	1	0	0	0	0	7	0.14%
5:00:00 AM	0	0	0	0	0	1	2	2	1	1	4	0	0	0	11	0.22%
5:15:00 AM	0	0	0	0	0	0	0	2	2	4	1	0	0	0	9	0.18%
5:30:00 AM	0	0	0	0	0	0	1	5	4	3	1	0	0	0	14	0.28%
5:45:00 AM	0	0	0	0	0	1	4	14	14	11	2	0	1	0	47	0.93%
6:00:00 AM	0	0	0	0	0	0	0	5	11	5	3	1	1	1	27	0.54%
6:15:00 AM	0	0	0	0	0	0	1	15	12	9	6	2	0	0	45	0.89%
6:30:00 AM	0	0	0	0	0	3	9	9	8	7	1	1	0	1	39	0.77%
6:45:00 AM	0	0	0	0	0	1	7	9	13	8	5	0	0	2	45	0.89%
7:00:00 AM	0	0	0	0	0	2	4	10	8	4	0	1	0	0	29	0.58%
7:15:00 AM	0	0	0	0	0	2	5	11	13	5	7	0	0	0	43	0.85%
7:30:00 AM	2	0	0	0	0	7	16	24	15	14	5	3	0	0	86	1.71%
7:45:00 AM	0	1	0	0	5	20	56	52	18	3	3	0	0	0	158	3.13%
8:00:00 AM	0	2	1	1	14	77	97	35	6	1	0	1	0	0	235	4.66%
8:15:00 AM	144	6	9	9	18	24	48	44	21	10	1	0	0	1	335	6.65%
8:30:00 AM	0	0	0	10	14	20	30	24	7	1	0	0	0	0	106	2.10%
8:45:00 AM	0	0	0	0	0	13	24	32	31	7	3	3	0	0	113	2.24%
9:00:00 AM	0	0	0	0	0	1	13	16	13	5	4	1	0	1	54	1.07%
9:15:00 AM	0	0	0	0	2	2	8	22	22	10	3	1	0	0	70	1.39%
9:30:00 AM	0	0	0	0	0	1	15	15	9	6	1	1	0	0	48	0.95%
9:45:00 AM	0	0	0	0	0	3	16	21	26	5	9	1	0	0	81	1.61%
10:00:00 AM	0	1	0	0	0	1	3	19	31	11	1	1	1	0	69	1.37%
10:15:00 AM	0	0	0	0	0	2	9	12	15	6	2	1	0	0	47	0.93%
10:30:00 AM	0	0	0	0	0	6	9	10	8	2	1	0	0	0	36	0.71%
10:45:00 AM	2	0	0	0	2	1	8	12	14	5	1	0	0	0	45	0.89%
11:00:00 AM	0	0	0	0	0	0	10	10	8	6	3	2	0	0	39	0.77%
11:15:00 AM	0	0	0	0	1	5	6	15	12	5	1	1	0	0	46	0.91%
11:30:00 AM	0	0	0	0	2	4	13	8	9	5	2	0	0	0	43	0.85%
11:45:00 AM	0	0	0	1	0	0	7	12	13	6	2	1	0	0	42	0.83%
AM TOTAL	148	10	10	22	58	197	425	473	377	172	78	24	5	7	2,006	39.79%
PERCENTAGE	7.4%	0.5%	0.5%	1.1%	2.9%	9.8%	21.2%	23.6%	18.8%	8.6%	3.9%	1.2%	0.2%	0.3%		
CUMULATIVE	148	158	168	190	248	445	870	1,343	1,720	1,892	1,970	1,994	1,999	2,006		
PERCENTAGE	7.4%	7.9%	8.4%	9.5%	12.4%	22.2%	43.4%	66.9%	85.7%	94.3%	98.2%	99.4%	99.7%	100.0%		

15th Percentile	20	Mean Speed Average	38
50th Percentile	41	10 MPH Pace Speed	33-42
85th Percentile	53	Number in Pace	278
95th Percentile	58	Percent in Pace	14%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Northbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	1	3	9	11	7	4	2	0	0	0	38	0.75%
12:15:00 PM	0	0	0	0	1	2	2	11	12	6	0	3	0	0	37	0.73%
12:30:00 PM	0	0	0	0	1	3	9	14	11	7	1	0	0	0	46	0.91%

12:45:00 PM	0	0	0	0	1	3	6	12	21	8	3	1	0	0	55	1.09%
1:00:00 PM	0	0	0	0	1	5	12	12	14	4	2	1	0	0	51	1.01%
1:15:00 PM	0	0	0	0	0	9	8	10	18	3	2	1	0	0	51	1.01%
1:30:00 PM	0	0	0	0	2	2	16	29	5	6	3	0	0	0	63	1.25%
1:45:00 PM	0	0	0	0	0	0	9	11	19	10	3	2	0	0	54	1.07%
2:00:00 PM	0	0	0	0	4	2	7	13	11	4	1	2	0	0	44	0.87%
2:15:00 PM	0	0	0	2	3	10	10	19	7	6	3	0	0	0	60	1.19%
2:30:00 PM	0	0	0	0	0	1	10	18	28	5	1	1	0	0	64	1.27%
2:45:00 PM	0	0	0	0	0	6	13	39	21	14	1	0	0	0	94	1.86%
3:00:00 PM	0	0	0	0	1	10	45	63	23	4	3	0	0	0	149	2.96%
3:15:00 PM	0	0	0	0	1	8	52	74	36	11	2	0	1	0	185	3.67%
3:30:00 PM	45	0	0	0	10	44	46	20	12	3	1	0	0	0	181	3.59%
3:45:00 PM	22	2	2	8	22	25	22	11	9	3	0	0	1	0	127	2.52%
4:00:00 PM	4	0	0	0	1	9	30	36	21	10	6	0	0	0	117	2.32%
4:15:00 PM	3	0	0	0	2	11	15	30	23	11	1	0	1	0	97	1.92%
4:30:00 PM	0	0	0	1	0	0	13	25	19	11	3	0	1	0	73	1.45%
4:45:00 PM	0	0	0	0	0	1	7	30	31	13	3	0	2	0	87	1.73%
5:00:00 PM	0	0	1	0	1	4	26	29	18	10	1	3	0	0	93	1.84%
5:15:00 PM	0	0	1	0	0	7	31	53	22	15	1	0	0	0	130	2.58%
5:30:00 PM	2	0	0	0	0	12	32	45	31	5	2	0	0	0	129	2.56%
5:45:00 PM	0	0	0	0	6	29	55	25	11	5	0	0	0	1	132	2.62%
6:00:00 PM	0	0	0	0	0	6	30	41	30	10	3	1	1	1	123	2.44%
6:15:00 PM	0	0	0	0	0	14	57	43	16	6	0	1	0	0	137	2.72%
6:30:00 PM	0	0	0	0	0	4	27	26	28	7	2	1	0	0	95	1.88%
6:45:00 PM	0	0	0	0	0	2	12	28	14	7	5	1	0	0	69	1.37%
7:00:00 PM	0	0	0	0	0	1	4	20	7	15	2	0	0	0	49	0.97%
7:15:00 PM	0	0	0	0	0	0	0	10	14	6	0	2	0	1	33	0.65%
7:30:00 PM	1	0	0	0	0	1	9	6	18	8	3	0	0	0	46	0.91%
7:45:00 PM	0	0	0	3	4	0	7	9	9	5	2	1	0	0	40	0.79%
8:00:00 PM	0	0	0	0	0	0	4	11	10	19	3	0	1	1	49	0.97%
8:15:00 PM	0	0	0	0	0	0	2	7	6	7	1	1	0	0	24	0.48%
8:30:00 PM	0	0	0	0	0	0	2	12	11	5	0	1	0	0	31	0.61%
8:45:00 PM	0	0	0	0	0	0	2	6	4	9	3	2	0	0	26	0.52%
9:00:00 PM	0	0	0	0	0	0	0	4	6	3	4	0	0	0	17	0.34%
9:15:00 PM	0	0	0	0	0	0	1	5	6	3	5	0	0	0	20	0.40%
9:30:00 PM	0	0	0	0	0	1	0	9	1	5	1	3	0	0	20	0.40%
9:45:00 PM	0	0	0	0	0	2	1	4	4	2	2	0	2	0	17	0.34%
10:00:00 PM	0	0	0	0	0	0	1	3	2	5	4	2	1	0	18	0.36%
10:15:00 PM	0	0	0	0	0	0	0	7	6	2	3	0	0	2	20	0.40%
10:30:00 PM	0	0	0	0	0	0	0	1	1	2	1	0	1	0	6	0.12%
10:45:00 PM	0	0	0	0	0	0	0	1	1	2	3	0	0	0	7	0.14%
11:00:00 PM	0	0	0	0	0	0	0	2	2	3	2	4	0	0	13	0.26%
11:15:00 PM	0	0	0	0	0	0	0	1	3	2	0	0	0	1	7	0.14%
11:30:00 PM	0	0	0	0	0	0	0	0	2	3	1	0	0	0	6	0.12%
11:45:00 PM	0	0	0	0	0	0	0	0	0	3	1	1	0	0	5	0.10%
PM TOTAL	77	2	4	15	62	237	644	896	631	317	96	35	12	7	3,035	60.21%
PERCENTAGE	2.5%	0.1%	0.1%	0.5%	2.0%	7.8%	21.2%	29.5%	20.8%	10.4%	3.2%	1.2%	0.4%	0.2%		
CUMULATIVE	77	79	83	98	160	397	1,041	1,937	2,568	2,885	2,981	3,016	3,028	3,035		
PERCENTAGE	2.5%	2.6%	2.7%	3.2%	5.3%	13.1%	34.3%	63.8%	84.6%	95.1%	98.2%	99.4%	99.8%	100.0%		

15th Percentile	30	Mean Speed Average	41
50th Percentile	43	10 MPH Pace Speed	37-46
85th Percentile	55	Number in Pace	276
95th Percentile	60	Percent in Pace	9%

DAY TOTAL	225	12	14	37	120	434	1,069	1,369	1,008	489	174	59	17	14	5,041	
PERCENTAGE	4.5%	0.2%	0.3%	0.7%	2.4%	8.6%	21.2%	27.2%	20.0%	9.7%	3.5%	1.2%	0.3%	0.3%	5,041	100.00%
	4.5%	4.7%	5.0%	5.7%	8.1%	16.7%	37.9%	65.1%	85.1%	94.8%	98.2%	99.4%	99.7%	100.0%		
85th Percentile	54															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Southbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	1	2	1	1	0	0	0	0	0	5	0.09%
12:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
12:30:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.02%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
1:30:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:30:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.04%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
3:00:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.04%
3:15:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.04%
3:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.04%
3:45:00 AM	0	0	0	0	0	0	2	0	3	2	0	0	0	0	7	0.13%
4:00:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.06%
4:15:00 AM	0	0	0	0	1	0	3	1	0	1	0	0	0	0	6	0.11%
4:30:00 AM	0	0	0	0	0	0	2	4	2	0	0	0	0	0	8	0.15%
4:45:00 AM	0	0	0	0	1	2	2	3	5	2	0	1	0	0	16	0.30%
5:00:00 AM	0	0	0	0	0	1	2	2	3	1	0	0	0	0	9	0.17%
5:15:00 AM	0	0	0	0	0	2	2	6	2	1	1	0	0	0	14	0.26%
5:30:00 AM	0	0	0	0	0	1	6	8	2	0	1	0	0	0	18	0.33%
5:45:00 AM	0	0	0	1	3	1	4	8	5	1	1	0	0	1	25	0.46%
6:00:00 AM	0	0	0	0	1	5	10	15	3	1	0	0	0	0	35	0.65%
6:15:00 AM	0	0	0	0	2	10	7	10	6	2	1	0	0	0	38	0.70%
6:30:00 AM	0	0	0	1	12	11	17	16	5	1	0	0	0	0	63	1.16%
6:45:00 AM	0	0	0	0	4	11	27	13	9	2	1	0	0	0	67	1.24%
7:00:00 AM	0	0	0	0	3	21	19	15	8	0	0	0	0	0	66	1.22%
7:15:00 AM	0	0	0	0	5	24	34	21	9	1	1	0	0	0	95	1.75%
7:30:00 AM	0	0	0	4	22	35	48	17	5	0	0	0	0	0	131	2.42%
7:45:00 AM	0	0	0	4	30	74	47	13	3	1	1	0	0	0	173	3.19%
8:00:00 AM	9	12	11	16	68	66	18	0	0	1	0	0	0	0	201	3.71%
8:15:00 AM	126	65	49	15	9	9	0	1	0	0	0	0	0	0	274	5.06%
8:30:00 AM	121	71	23	13	12	3	2	0	0	2	0	0	0	0	247	4.56%
8:45:00 AM	2	0	3	2	13	58	50	20	3	0	0	0	0	0	151	2.79%
9:00:00 AM	0	0	2	2	9	22	23	11	2	0	1	0	0	0	72	1.33%
9:15:00 AM	0	0	0	1	4	21	21	3	1	1	0	0	0	0	52	0.96%
9:30:00 AM	0	0	0	2	12	15	19	7	3	1	0	0	0	0	59	1.09%
9:45:00 AM	0	0	1	2	4	18	20	8	3	0	0	0	0	0	56	1.03%
10:00:00 AM	0	0	1	4	7	17	14	7	2	0	0	0	0	0	52	0.96%
10:15:00 AM	0	0	0	1	4	10	22	6	3	0	0	0	0	0	46	0.85%
10:30:00 AM	0	0	0	1	7	16	25	7	0	0	0	0	0	0	56	1.03%
10:45:00 AM	1	0	0	1	3	12	15	10	4	0	0	0	0	0	46	0.85%
11:00:00 AM	0	0	0	0	5	12	18	8	2	0	0	0	0	0	45	0.83%
11:15:00 AM	0	0	0	1	7	9	7	6	0	0	0	0	0	0	30	0.55%
11:30:00 AM	0	1	2	4	4	16	17	9	0	1	0	0	0	0	54	1.00%
11:45:00 AM	2	0	0	0	1	13	19	10	0	0	0	0	0	0	45	0.83%
AM TOTAL	261	149	92	75	253	520	527	272	96	24	8	1	0	1	2,279	42.06%
PERCENTAGE	11.5%	6.5%	4.0%	3.3%	11.1%	22.8%	23.1%	11.9%	4.2%	1.1%	0.4%	0.0%	0.0%	0.0%		
CUMULATIVE	261	410	502	577	830	1,350	1,877	2,149	2,245	2,269	2,277	2,278	2,278	2,279		
PERCENTAGE	11.5%	18.0%	22.0%	25.3%	36.4%	59.2%	82.4%	94.3%	98.5%	99.6%	99.9%	100.0%	100.0%	100.0%		

15th Percentile	11	Mean Speed Average	29
50th Percentile	31	10 MPH Pace Speed	31-40
85th Percentile	43	Number in Pace	289
95th Percentile	49	Percent in Pace	13%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Southbound

Project# **SC3235**

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	7	24	18	11	4	0	0	1	0	1	66	1.22%
12:15:00 PM	0	0	0	0	10	38	32	14	1	1	0	0	0	0	96	1.77%
12:30:00 PM	0	0	0	0	1	23	28	12	1	1	0	0	0	0	66	1.22%
12:45:00 PM	0	0	0	0	7	20	21	8	9	2	0	0	0	0	67	1.24%
1:00:00 PM	0	0	0	0	2	10	23	15	1	0	0	0	0	0	51	0.94%

1:15:00 PM	0	0	0	4	7	13	17	10	3	0	0	1	0	0	55	1.01%
1:30:00 PM	0	0	0	1	6	17	23	7	1	0	0	0	0	0	55	1.01%
1:45:00 PM	0	0	0	1	6	19	16	12	1	0	0	0	0	0	55	1.01%
2:00:00 PM	0	0	0	0	1	11	22	14	3	0	0	0	0	0	51	0.94%
2:15:00 PM	0	0	0	0	1	12	15	11	2	0	0	0	0	0	41	0.76%
2:30:00 PM	0	0	0	3	11	26	36	7	4	1	0	0	0	0	88	1.62%
2:45:00 PM	1	0	0	0	2	15	43	14	1	0	0	0	0	0	76	1.40%
3:00:00 PM	4	2	0	5	9	15	19	10	1	0	0	0	0	0	65	1.20%
3:15:00 PM	0	0	0	2	6	17	23	13	3	0	0	0	0	0	64	1.18%
3:30:00 PM	112	30	12	15	35	43	38	14	3	0	0	0	0	1	303	5.59%
3:45:00 PM	182	32	23	14	23	36	23	11	0	0	0	0	0	0	344	6.35%
4:00:00 PM	0	0	0	4	42	60	31	15	0	0	0	0	0	0	152	2.80%
4:15:00 PM	0	0	0	1	18	39	46	16	2	0	0	1	0	0	123	2.27%
4:30:00 PM	0	0	0	1	4	24	33	22	2	1	0	0	0	1	88	1.62%
4:45:00 PM	0	0	0	0	7	15	23	15	5	2	0	0	0	1	68	1.25%
5:00:00 PM	0	0	1	1	8	18	30	10	1	0	0	0	0	0	69	1.27%
5:15:00 PM	0	1	0	2	6	20	19	12	3	0	0	0	0	0	63	1.16%
5:30:00 PM	0	0	0	2	10	28	38	20	0	1	0	0	0	0	99	1.83%
5:45:00 PM	0	0	0	0	17	36	33	15	2	1	0	0	0	0	104	1.92%
6:00:00 PM	0	0	0	3	23	49	23	9	5	0	0	0	0	0	112	2.07%
6:15:00 PM	0	0	0	0	6	30	28	13	1	1	0	0	0	0	79	1.46%
6:30:00 PM	0	0	0	0	6	23	34	8	0	1	0	0	0	0	72	1.33%
6:45:00 PM	0	0	0	2	8	18	22	6	4	0	0	0	0	0	60	1.11%
7:00:00 PM	0	0	0	1	3	11	17	11	1	1	0	0	0	0	45	0.83%
7:15:00 PM	0	0	0	1	4	12	5	10	2	2	0	0	0	0	36	0.66%
7:30:00 PM	0	0	0	0	0	11	25	18	5	2	0	0	0	0	61	1.13%
7:45:00 PM	0	0	0	0	0	6	9	3	4	2	0	0	0	0	24	0.44%
8:00:00 PM	0	0	0	0	0	9	14	4	1	0	0	0	0	0	28	0.52%
8:15:00 PM	0	0	0	1	3	14	16	8	3	0	0	0	0	0	45	0.83%
8:30:00 PM	0	0	0	0	2	26	42	8	6	2	0	0	0	0	86	1.59%
8:45:00 PM	0	0	0	1	3	33	24	9	4	0	0	0	0	0	74	1.37%
9:00:00 PM	0	0	0	0	0	7	11	10	5	0	1	0	0	0	34	0.63%
9:15:00 PM	0	0	0	0	0	0	6	4	4	0	0	0	0	0	14	0.26%
9:30:00 PM	0	0	0	0	1	0	0	3	1	0	0	0	0	0	5	0.09%
9:45:00 PM	0	0	0	0	1	5	6	2	0	0	0	0	0	1	15	0.28%
10:00:00 PM	0	0	0	0	0	1	3	0	0	1	0	0	0	0	5	0.09%
10:15:00 PM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0.06%
10:30:00 PM	0	0	0	0	0	1	4	5	1	1	0	0	0	0	12	0.22%
10:45:00 PM	0	0	0	0	0	3	0	1	0	0	1	0	0	0	5	0.09%
11:00:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	4	0.07%
11:15:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
11:30:00 PM	0	0	0	0	0	2	2	2	2	0	1	0	0	0	9	0.17%
11:45:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0.04%
PM TOTAL	299	65	36	65	306	841	942	446	105	23	3	4	0	5	3,140	57.94%
PERCENTAGE	9.5%	2.1%	1.1%	2.1%	9.7%	26.8%	30.0%	14.2%	3.3%	0.7%	0.1%	0.1%	0.0%	0.2%		
CUMULATIVE	299	364	400	465	771	1,612	2,554	3,000	3,105	3,128	3,131	3,135	3,135	3,140		
PERCENTAGE	9.5%	11.6%	12.7%	14.8%	24.6%	51.3%	81.3%	95.5%	98.9%	99.6%	99.7%	99.8%	99.8%	100.0%		

15th Percentile	11	Mean Speed Average	31
50th Percentile	33	10 MPH Pace Speed	31-40
85th Percentile	44	Number in Pace	304
95th Percentile	49	Percent in Pace	10%

DAY TOTAL	560	214	128	140	559	1,361	1,469	718	201	47	11	5	0	6	5,419	
PERCENTAGE	10.3%	3.9%	2.4%	2.6%	10.3%	25.1%	27.1%	13.2%	3.7%	0.9%	0.2%	0.1%	0.0%	0.11%	5,419	100.00%
	10.3%	14.3%	16.6%	19.2%	29.5%	54.7%	81.8%	95.0%	98.7%	99.6%	99.8%	99.9%	99.9%	100.00%		
85th Percentile	44															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Combined

Project# SC3235

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	1	2	1	2	1	1	0	0	0	8	0.08%
12:15:00 AM	0	0	0	0	0	0	1	3	0	0	0	1	1	0	6	0.06%
12:30:00 AM	0	0	0	0	0	1	1	0	1	0	2	0	0	0	5	0.05%
12:45:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.01%
1:00:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0.02%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.01%
1:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	1	3	0.03%
1:45:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.01%
2:00:00 AM	0	0	0	0	0	1	1	0	0	1	1	0	0	0	4	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.02%
2:30:00 AM	0	0	0	0	0	1	0	1	0	0	1	0	0	0	3	0.03%
2:45:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.02%
3:00:00 AM	0	0	0	0	0	1	0	1	2	0	0	0	0	0	4	0.04%
3:15:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.02%
3:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.02%
3:45:00 AM	0	0	0	0	0	0	2	2	3	3	0	0	0	0	10	0.10%
4:00:00 AM	0	0	0	0	0	0	1	1	2	0	0	1	0	0	5	0.05%
4:15:00 AM	0	0	0	1	1	0	3	3	0	1	0	0	0	0	9	0.09%
4:30:00 AM	0	0	0	0	0	0	2	4	2	1	0	0	1	0	10	0.10%
4:45:00 AM	0	0	0	0	1	2	3	3	10	3	0	1	0	0	23	0.22%
5:00:00 AM	0	0	0	0	0	2	4	4	4	2	4	0	0	0	20	0.19%
5:15:00 AM	0	0	0	0	0	2	2	8	4	5	2	0	0	0	23	0.22%
5:30:00 AM	0	0	0	0	0	1	7	13	6	3	2	0	0	0	32	0.31%
5:45:00 AM	0	0	0	1	3	2	8	22	19	12	3	0	1	1	72	0.69%
6:00:00 AM	0	0	0	0	1	5	10	20	14	6	3	1	1	1	62	0.59%
6:15:00 AM	0	0	0	0	2	10	8	25	18	11	7	2	0	0	83	0.79%
6:30:00 AM	0	0	0	1	12	14	26	25	13	8	1	1	0	1	102	0.98%
6:45:00 AM	0	0	0	0	4	12	34	22	22	10	6	0	0	2	112	1.07%
7:00:00 AM	0	0	0	0	3	23	23	25	16	4	0	1	0	0	95	0.91%
7:15:00 AM	0	0	0	0	5	26	39	32	22	6	8	0	0	0	138	1.32%
7:30:00 AM	2	0	0	4	22	42	64	41	20	14	5	3	0	0	217	2.07%
7:45:00 AM	0	1	0	4	35	94	103	65	21	4	4	0	0	0	331	3.16%
8:00:00 AM	9	14	12	17	82	143	115	35	6	2	0	1	0	0	436	4.17%
8:15:00 AM	270	71	58	24	27	33	48	45	21	10	1	0	0	1	609	5.82%
8:30:00 AM	121	71	23	23	26	23	32	24	7	3	0	0	0	0	353	3.37%
8:45:00 AM	2	0	3	2	13	71	74	52	34	7	3	3	0	0	264	2.52%
9:00:00 AM	0	0	2	2	9	23	36	27	15	5	5	1	0	1	126	1.20%
9:15:00 AM	0	0	0	1	6	23	29	25	23	11	3	1	0	0	122	1.17%
9:30:00 AM	0	0	0	2	12	16	34	22	12	7	1	1	0	0	107	1.02%
9:45:00 AM	0	0	1	2	4	21	36	29	29	5	9	1	0	0	137	1.31%
10:00:00 AM	0	1	1	4	7	18	17	26	33	11	1	1	1	0	121	1.16%
10:15:00 AM	0	0	0	1	4	12	31	18	18	6	2	1	0	0	93	0.89%
10:30:00 AM	0	0	0	1	7	22	34	17	8	2	1	0	0	0	92	0.88%
10:45:00 AM	3	0	0	1	5	13	23	22	18	5	1	0	0	0	91	0.87%
11:00:00 AM	0	0	0	0	5	12	28	18	10	6	3	2	0	0	84	0.80%
11:15:00 AM	0	0	0	1	8	14	13	21	12	5	1	1	0	0	76	0.73%
11:30:00 AM	0	1	2	4	6	20	30	17	9	6	2	0	0	0	97	0.93%
11:45:00 AM	2	0	0	1	1	13	26	22	13	6	2	1	0	0	87	0.83%
AM TOTAL	409	159	102	97	311	717	952	745	473	196	86	25	5	8	4,285	40.97%
PERCENTAGE	9.5%	3.7%	2.4%	2.3%	7.3%	16.7%	22.2%	17.4%	11.0%	4.6%	2.0%	0.6%	0.1%	0.2%		
CUMULATIVE	409	568	670	767	1,078	1,795	2,747	3,492	3,965	4,161	4,247	4,272	4,277	4,285		
PERCENTAGE	9.5%	13.3%	15.6%	17.9%	25.2%	41.9%	64.1%	81.5%	92.5%	97.1%	99.1%	99.7%	99.8%	100.0%		

15th Percentile	13	Mean Speed Average	33
50th Percentile	34	10 MPH Pace Speed	34-43
85th Percentile	52	Number in Pace	277
95th Percentile	57	Percent in Pace	6%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Combined

Project# SC3235

Tuesday, February 08, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	1	8	27	27	22	11	4	2	1	0	1	104	0.99%

12:15:00 PM	0	0	0	0	11	40	34	25	13	7	0	3	0	0	133	1.27%
12:30:00 PM	0	0	0	0	2	26	37	26	12	8	1	0	0	0	112	1.07%
12:45:00 PM	0	0	0	0	8	23	27	20	30	10	3	1	0	0	122	1.17%
1:00:00 PM	0	0	0	0	3	15	35	27	15	4	2	1	0	0	102	0.98%
1:15:00 PM	0	0	0	4	7	22	25	20	21	3	2	2	0	0	106	1.01%
1:30:00 PM	0	0	0	1	8	19	39	36	6	6	3	0	0	0	118	1.13%
1:45:00 PM	0	0	0	1	6	19	25	23	20	10	3	2	0	0	109	1.04%
2:00:00 PM	0	0	0	0	5	13	29	27	14	4	1	2	0	0	95	0.91%
2:15:00 PM	0	0	0	2	4	22	25	30	9	6	3	0	0	0	101	0.97%
2:30:00 PM	0	0	0	3	11	27	46	25	32	6	1	1	0	0	152	1.45%
2:45:00 PM	1	0	0	0	2	21	56	53	22	14	1	0	0	0	170	1.63%
3:00:00 PM	4	2	0	5	10	25	64	73	24	4	3	0	0	0	214	2.05%
3:15:00 PM	0	0	0	2	7	25	75	87	39	11	2	0	1	0	249	2.38%
3:30:00 PM	157	30	12	15	45	87	84	34	15	3	1	0	0	1	484	4.63%
3:45:00 PM	204	34	25	22	45	61	45	22	9	3	0	0	1	0	471	4.50%
4:00:00 PM	4	0	0	4	43	69	61	51	21	10	6	0	0	0	269	2.57%
4:15:00 PM	3	0	0	1	20	50	61	46	25	11	1	1	1	0	220	2.10%
4:30:00 PM	0	0	0	2	4	24	46	47	21	12	3	0	1	1	161	1.54%
4:45:00 PM	0	0	0	0	7	16	30	45	36	15	3	0	2	1	155	1.48%
5:00:00 PM	0	0	2	1	9	22	56	39	19	10	1	3	0	0	162	1.55%
5:15:00 PM	0	1	1	2	6	27	50	65	25	15	1	0	0	0	193	1.85%
5:30:00 PM	2	0	0	2	10	40	70	65	31	6	2	0	0	0	228	2.18%
5:45:00 PM	0	0	0	0	23	65	88	40	13	6	0	0	0	1	236	2.26%
6:00:00 PM	0	0	0	3	23	55	53	50	35	10	3	1	1	1	235	2.25%
6:15:00 PM	0	0	0	0	6	44	85	56	17	7	0	1	0	0	216	2.07%
6:30:00 PM	0	0	0	0	6	27	61	34	28	8	2	1	0	0	167	1.60%
6:45:00 PM	0	0	0	2	8	20	34	34	18	7	5	1	0	0	129	1.23%
7:00:00 PM	0	0	0	1	3	12	21	31	8	16	2	0	0	0	94	0.90%
7:15:00 PM	0	0	0	1	4	12	5	20	16	8	0	2	0	1	69	0.66%
7:30:00 PM	1	0	0	0	0	12	34	24	23	10	3	0	0	0	107	1.02%
7:45:00 PM	0	0	0	3	4	6	16	12	13	7	2	1	0	0	64	0.61%
8:00:00 PM	0	0	0	0	0	9	18	15	11	19	3	0	1	1	77	0.74%
8:15:00 PM	0	0	0	1	3	14	18	15	9	7	1	1	0	0	69	0.66%
8:30:00 PM	0	0	0	0	2	26	44	20	17	7	0	1	0	0	117	1.12%
8:45:00 PM	0	0	0	1	3	33	26	15	8	9	3	2	0	0	100	0.96%
9:00:00 PM	0	0	0	0	0	7	11	14	11	3	5	0	0	0	51	0.49%
9:15:00 PM	0	0	0	0	0	0	7	9	10	3	5	0	0	0	34	0.33%
9:30:00 PM	0	0	0	0	1	1	0	12	2	5	1	3	0	0	25	0.24%
9:45:00 PM	0	0	0	0	1	7	7	6	4	2	2	0	2	1	32	0.31%
10:00:00 PM	0	0	0	0	0	1	4	3	2	6	4	2	1	0	23	0.22%
10:15:00 PM	0	0	0	0	0	0	0	8	8	2	3	0	0	2	23	0.22%
10:30:00 PM	0	0	0	0	0	1	4	6	2	3	1	0	1	0	18	0.17%
10:45:00 PM	0	0	0	0	0	3	0	2	1	2	4	0	0	0	12	0.11%
11:00:00 PM	0	0	0	0	0	1	1	4	2	3	2	4	0	0	17	0.16%
11:15:00 PM	0	0	0	0	0	0	0	1	4	2	0	0	0	1	8	0.08%
11:30:00 PM	0	0	0	0	0	2	2	2	4	3	2	0	0	0	15	0.14%
11:45:00 PM	0	0	0	0	0	0	0	1	0	3	1	2	0	0	7	0.07%
PM TOTAL	376	67	40	80	368	1,078	1,586	1,342	736	340	99	39	12	12	6,175	59.03%
PERCENTAGE	6.1%	1.1%	0.6%	1.3%	6.0%	17.5%	25.7%	21.7%	11.9%	5.5%	1.6%	0.6%	0.2%	0.2%		
CUMULATIVE	376	443	483	563	931	2,009	3,595	4,937	5,673	6,013	6,112	6,151	6,163	6,175		
PERCENTAGE	6.1%	7.2%	7.8%	9.1%	15.1%	32.5%	58.2%	80.0%	91.9%	97.4%	99.0%	99.6%	99.8%	100.0%		

15th Percentile	13	Mean Speed Average	36
50th Percentile	37	10 MPH Pace Speed	31-40
85th Percentile	53	Number in Pace	290
95th Percentile	59	Percent in Pace	5%

DAY TOTAL	785	226	142	177	679	1,795	2,538	2,087	1,209	536	185	64	17	20	10,460	
PERCENTAGE	7.5%	2.2%	1.4%	1.7%	6.5%	17.2%	24.3%	20.0%	11.6%	5.1%	1.8%	0.6%	0.2%	0.2%	10,460	100.00%
	7.5%	9.7%	11.0%	12.7%	19.2%	36.4%	60.6%	80.6%	92.1%	97.3%	99.0%	99.6%	99.8%	100.0%		
85th Percentile	52															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Northbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	4	0.08%
12:15:00 AM	0	0	0	0	0	0	1	0	2	1	0	1	0	0	5	0.10%
12:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.04%
12:45:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	3	0.06%
1:00:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.06%
1:15:00 AM	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0.06%
1:30:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.02%
1:45:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0.04%
2:00:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.04%
2:15:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.02%
2:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
3:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0.04%
3:15:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
3:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
3:45:00 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0.04%
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4:15:00 AM	0	0	0	0	0	0	2	1	2	0	0	0	0	0	5	0.10%
4:30:00 AM	0	0	0	0	0	0	0	1	2	2	1	0	0	0	6	0.12%
4:45:00 AM	0	0	0	0	0	0	1	3	6	4	0	1	0	0	15	0.31%
5:00:00 AM	0	0	0	0	0	0	0	0	4	5	0	1	0	0	10	0.21%
5:15:00 AM	0	0	0	0	0	0	2	2	3	1	1	1	0	1	11	0.23%
5:30:00 AM	0	0	0	0	0	1	0	9	4	1	0	0	0	0	15	0.31%
5:45:00 AM	0	0	0	0	0	1	2	5	10	6	6	2	0	0	32	0.66%
6:00:00 AM	0	0	0	0	0	3	1	7	5	7	3	2	0	0	28	0.58%
6:15:00 AM	0	0	0	0	0	0	6	6	14	11	7	1	1	2	48	0.99%
6:30:00 AM	2	0	0	0	1	0	5	9	6	6	4	1	0	0	34	0.70%
6:45:00 AM	0	0	0	0	0	0	3	12	13	10	1	1	0	0	40	0.82%
7:00:00 AM	0	0	0	0	0	2	4	11	9	4	1	2	2	0	35	0.72%
7:15:00 AM	0	0	0	1	0	2	4	10	17	6	4	0	0	0	44	0.91%
7:30:00 AM	1	0	0	0	1	2	12	20	16	10	5	0	1	0	68	1.40%
7:45:00 AM	4	0	0	0	0	13	43	66	29	7	0	1	0	0	163	3.36%
8:00:00 AM	21	2	15	17	31	68	65	28	6	2	0	0	0	0	255	5.25%
8:15:00 AM	69	0	9	19	43	54	26	12	4	0	0	1	0	0	237	4.88%
8:30:00 AM	46	1	10	24	21	20	35	38	32	11	1	1	0	0	240	4.94%
8:45:00 AM	4	0	0	0	3	5	16	27	30	7	1	3	0	0	96	1.98%
9:00:00 AM	0	0	0	0	0	1	12	20	11	5	2	1	0	0	52	1.07%
9:15:00 AM	0	0	0	0	0	1	7	5	12	4	5	2	0	0	36	0.74%
9:30:00 AM	0	0	0	0	0	0	4	17	9	3	1	0	0	0	34	0.70%
9:45:00 AM	1	3	0	0	0	3	11	9	9	4	0	0	0	0	40	0.82%
10:00:00 AM	0	0	0	0	0	0	5	15	18	6	3	0	0	0	47	0.97%
10:15:00 AM	0	0	0	0	1	0	9	18	15	5	1	0	0	0	49	1.01%
10:30:00 AM	0	0	0	0	0	0	2	11	5	7	2	1	0	0	28	0.58%
10:45:00 AM	0	0	0	0	1	1	8	10	6	2	0	0	0	0	28	0.58%
11:00:00 AM	0	0	0	0	0	1	4	8	13	3	1	0	0	0	30	0.62%
11:15:00 AM	0	0	0	0	1	5	5	13	13	6	1	0	0	0	44	0.91%
11:30:00 AM	1	0	0	1	1	3	13	9	7	2	0	1	0	0	38	0.78%
11:45:00 AM	0	0	0	0	0	0	4	19	14	3	1	0	1	0	42	0.86%
AM TOTAL	149	6	34	62	104	187	316	425	352	160	55	25	5	3	1,883	38.77%
PERCENTAGE	7.9%	0.3%	1.8%	3.3%	5.5%	9.9%	16.8%	22.6%	18.7%	8.5%	2.9%	1.3%	0.3%	0.2%		
CUMULATIVE	149	155	189	251	355	542	858	1,283	1,635	1,795	1,850	1,875	1,880	1,883		
PERCENTAGE	7.9%	8.2%	10.0%	13.3%	18.9%	28.8%	45.6%	68.1%	86.8%	95.3%	98.2%	99.6%	99.8%	100.0%		

15th Percentile	20	Mean Speed Average	37
50th Percentile	39	10 MPH Pace Speed	39-48
85th Percentile	52	Number in Pace	275
95th Percentile	58	Percent in Pace	15%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Northbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	0	3	9	10	17	8	1	0	0	0	48	0.99%

12:15:00 PM	0	0	0	0	0	1	12	13	8	4	0	0	0	0	38	0.78%
12:30:00 PM	0	0	0	0	0	1	4	17	10	7	3	0	1	0	43	0.89%
12:45:00 PM	0	0	0	0	0	2	6	10	9	4	1	0	0	0	32	0.66%
1:00:00 PM	0	0	0	0	2	9	6	10	12	3	3	0	0	1	46	0.95%
1:15:00 PM	0	0	0	0	0	4	5	15	22	5	2	0	1	0	54	1.11%
1:30:00 PM	0	0	0	0	0	1	8	14	17	8	3	0	0	0	51	1.05%
1:45:00 PM	0	0	0	0	0	4	5	8	14	8	2	0	0	0	41	0.84%
2:00:00 PM	0	0	4	1	0	1	6	10	12	6	4	0	0	0	44	0.91%
2:15:00 PM	0	0	0	0	3	4	1	15	14	9	1	2	1	0	50	1.03%
2:30:00 PM	0	0	0	0	0	3	15	25	14	10	1	1	0	0	69	1.42%
2:45:00 PM	0	0	0	0	1	3	13	41	18	7	1	1	0	0	85	1.75%
3:00:00 PM	10	0	0	0	1	7	26	60	22	9	4	0	0	0	139	2.86%
3:15:00 PM	3	2	0	0	4	14	52	71	37	6	0	0	0	0	189	3.89%
3:30:00 PM	14	0	0	7	10	15	42	43	11	4	0	0	0	1	147	3.03%
3:45:00 PM	3	0	4	9	23	49	37	18	3	0	1	0	0	0	147	3.03%
4:00:00 PM	2	0	0	0	0	16	38	33	19	6	2	1	0	0	117	2.41%
4:15:00 PM	0	0	1	0	0	2	11	26	34	13	4	1	0	0	92	1.89%
4:30:00 PM	0	0	0	0	0	3	10	39	23	9	5	1	2	1	93	1.91%
4:45:00 PM	0	0	0	2	1	4	11	23	24	5	4	0	0	0	74	1.52%
5:00:00 PM	0	0	0	0	2	11	17	37	24	6	1	0	0	0	98	2.02%
5:15:00 PM	0	0	0	0	0	6	31	49	30	6	1	2	0	0	125	2.57%
5:30:00 PM	0	0	0	0	1	7	24	44	15	6	4	0	0	1	102	2.10%
5:45:00 PM	0	0	1	2	5	14	38	37	16	2	2	1	0	0	118	2.43%
6:00:00 PM	0	0	1	0	2	13	38	39	19	9	3	0	0	0	124	2.55%
6:15:00 PM	0	0	0	0	10	12	50	41	30	3	0	0	0	0	146	3.01%
6:30:00 PM	0	0	3	0	0	4	25	31	16	11	5	0	0	0	95	1.96%
6:45:00 PM	0	0	0	0	2	2	10	19	12	3	3	0	0	1	52	1.07%
7:00:00 PM	0	0	0	0	0	0	11	18	13	13	2	1	0	0	58	1.19%
7:15:00 PM	0	0	0	0	0	0	6	23	16	7	0	0	0	0	52	1.07%
7:30:00 PM	0	0	0	0	1	1	4	11	14	13	0	0	0	1	45	0.93%
7:45:00 PM	0	0	0	0	0	0	4	14	13	1	1	0	0	0	33	0.68%
8:00:00 PM	0	0	0	1	1	4	4	16	15	13	0	0	1	0	55	1.13%
8:15:00 PM	0	0	0	0	0	1	1	12	10	6	3	0	0	1	34	0.70%
8:30:00 PM	0	0	0	0	0	1	2	9	10	4	0	4	0	0	30	0.62%
8:45:00 PM	0	0	0	0	0	1	1	11	3	10	2	3	1	0	32	0.66%
9:00:00 PM	0	0	0	0	0	0	1	5	9	3	3	3	0	0	24	0.49%
9:15:00 PM	0	0	0	0	0	0	1	4	13	3	1	0	0	0	22	0.45%
9:30:00 PM	0	0	0	0	0	0	1	5	8	5	1	2	0	0	22	0.45%
9:45:00 PM	0	0	0	0	0	0	0	8	5	3	3	1	0	0	20	0.41%
10:00:00 PM	0	0	0	0	0	0	0	1	11	3	0	1	0	0	16	0.33%
10:15:00 PM	0	0	0	0	0	1	0	5	4	9	3	1	0	1	24	0.49%
10:30:00 PM	0	0	0	0	0	0	0	1	1	1	0	1	0	0	4	0.08%
10:45:00 PM	0	0	0	0	0	0	1	3	3	4	3	1	0	0	15	0.31%
11:00:00 PM	0	0	0	0	0	0	0	1	2	3	2	1	0	2	11	0.23%
11:15:00 PM	0	0	0	0	0	1	0	0	1	1	2	0	0	0	5	0.10%
11:30:00 PM	0	0	0	0	0	0	0	1	4	1	1	1	0	0	8	0.16%
11:45:00 PM	0	0	0	0	0	0	0	2	1	2	0	0	0	0	5	0.10%
PM TOTAL	32	2	14	22	69	225	587	948	658	282	88	30	7	10	2,974	61.23%
PERCENTAGE	1.1%	0.1%	0.5%	0.7%	2.3%	7.6%	19.7%	31.9%	22.1%	9.5%	3.0%	1.0%	0.2%	0		
CUMULATIVE	32	34	48	70	139	364	951	1,899	2,557	2,839	2,927	2,957	2,964	2,974		
PERCENTAGE	1.1%	1.1%	1.6%	2.4%	4.7%	12.2%	32.0%	63.9%	86.0%	95.5%	98.4%	99.4%	99.7%	100.0%		

15th Percentile	31	Mean Speed Average	42
50th Percentile	43	10 MPH Pace Speed	36-45
85th Percentile	54	Number in Pace	286
95th Percentile	59	Percent in Pace	10%

DAY TOTAL	181	8	48	84	173	412	903	1,373	1,010	442	143	55	12	13	4,857	
PERCENTAGE	3.7%	0.2%	1.0%	1.7%	3.6%	8.5%	18.6%	28.3%	20.8%	9.1%	2.9%	1.1%	0.2%	0.27%	4,857	100.00%
	3.7%	3.9%	4.9%	6.6%	10.2%	18.7%	37.2%	65.5%	86.3%	95.4%	98.4%	99.5%	99.7%	100.00%		
85th Percentile	53															

#N/A
Southbound

Project# **SC3235**

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
12:15:00 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3	0.05%
12:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12:45:00 AM	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5	0.09%
1:00:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.04%
1:15:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02%
1:30:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.04%
1:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
2:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.02%
2:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
2:30:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.02%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.02%
3:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0.04%
3:15:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.04%
3:30:00 AM	0	0	0	0	0	0	2	1	0	1	0	0	0	0	4	0.07%
3:45:00 AM	0	0	0	0	0	0	1	3	1	0	0	0	0	0	5	0.09%
4:00:00 AM	0	0	0	1	0	0	1	2	0	1	0	0	0	0	5	0.09%
4:15:00 AM	0	0	0	0	0	1	3	0	1	0	0	0	0	0	5	0.09%
4:30:00 AM	0	0	0	0	0	0	3	3	2	1	0	0	0	0	9	0.16%
4:45:00 AM	0	0	0	0	1	1	1	4	3	2	1	0	0	0	13	0.23%
5:00:00 AM	0	0	0	0	2	5	2	3	2	0	1	0	0	0	15	0.27%
5:15:00 AM	0	0	0	0	0	1	7	5	2	0	3	0	0	0	18	0.32%
5:30:00 AM	0	0	0	1	0	2	5	8	7	1	0	0	0	0	24	0.43%
5:45:00 AM	0	0	0	0	0	2	8	5	4	3	0	0	0	0	22	0.39%
6:00:00 AM	0	0	0	1	2	9	11	4	5	1	0	0	0	0	33	0.59%
6:15:00 AM	0	0	0	1	3	7	10	12	3	3	0	0	0	0	39	0.70%
6:30:00 AM	0	0	0	0	0	9	33	18	8	0	0	0	0	0	68	1.22%
6:45:00 AM	0	0	0	2	7	12	20	10	10	2	1	0	0	0	64	1.15%
7:00:00 AM	0	0	0	3	10	19	33	19	9	0	0	0	0	0	93	1.67%
7:15:00 AM	0	0	0	0	18	20	29	16	7	0	0	0	0	1	91	1.63%
7:30:00 AM	1	0	0	3	16	39	57	34	9	0	0	0	0	0	159	2.85%
7:45:00 AM	0	1	9	3	32	56	44	9	0	0	0	0	0	0	154	2.76%
8:00:00 AM	46	24	18	15	43	51	24	1	0	0	0	0	0	0	222	3.98%
8:15:00 AM	299	62	24	10	1	0	0	0	0	0	0	0	0	1	397	7.12%
8:30:00 AM	154	62	11	7	8	13	13	1	0	0	0	0	0	0	269	4.82%
8:45:00 AM	0	0	0	14	37	51	42	4	3	0	0	0	0	0	151	2.71%
9:00:00 AM	0	0	0	7	5	22	18	7	7	1	0	0	0	0	67	1.20%
9:15:00 AM	0	0	0	6	10	16	14	7	4	1	0	0	0	0	58	1.04%
9:30:00 AM	0	0	0	1	6	6	23	9	4	0	1	0	0	0	50	0.90%
9:45:00 AM	0	0	2	5	3	10	28	9	2	0	0	0	0	0	59	1.06%
10:00:00 AM	0	0	0	5	5	9	24	4	4	0	0	0	0	0	51	0.91%
10:15:00 AM	0	0	0	2	4	18	22	13	3	1	1	0	0	0	64	1.15%
10:30:00 AM	0	0	0	1	4	17	13	14	1	0	0	0	0	0	50	0.90%
10:45:00 AM	0	0	0	5	5	15	14	8	3	1	0	0	0	0	51	0.91%
11:00:00 AM	0	0	0	0	2	11	21	14	0	0	0	0	0	0	48	0.86%
11:15:00 AM	0	0	0	1	5	12	3	3	0	0	0	0	0	0	24	0.43%
11:30:00 AM	0	0	0	0	2	15	19	8	0	0	1	0	0	0	45	0.81%
11:45:00 AM	0	0	0	0	0	6	14	9	2	1	0	0	0	0	32	0.57%
AM TOTAL	500	149	64	94	232	458	570	273	108	21	9	1	0	2	2,481	44.49%
PERCENTAGE	20.2%	6.0%	2.6%	3.8%	9.4%	18.5%	23.0%	11.0%	4.4%	0.8%	0.4%	0.0%	0.0%	4.4%		
CUMULATIVE	500	649	713	807	1,039	1,497	2,067	2,340	2,448	2,469	2,478	2,479	2,479	2,481		
PERCENTAGE	20.2%	26.2%	28.7%	32.5%	41.9%	60.3%	83.3%	94.3%	98.7%	99.5%	99.9%	99.9%	99.9%	100.0%		

15th Percentile	11	Mean Speed Average	29
50th Percentile	31	10 MPH Pace Speed	31-40
85th Percentile	44	Number in Pace	291
95th Percentile	48	Percent in Pace	12%

#N/A
Southbound

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 PM	0	0	0	0	4	13	22	12	3	2	0	0	0	0	56	1.00%

12:15:00 PM	0	0	0	0	2	12	13	5	4	1	0	0	0	0	37	0.66%
12:30:00 PM	0	0	0	0	2	9	18	11	1	1	0	0	0	0	42	0.75%
12:45:00 PM	0	0	0	0	1	12	16	10	6	0	0	0	0	0	45	0.81%
1:00:00 PM	0	0	0	1	7	20	23	11	0	1	0	0	0	0	63	1.13%
1:15:00 PM	0	1	0	0	2	15	19	4	0	0	0	0	0	0	41	0.74%
1:30:00 PM	0	0	0	1	7	15	16	7	2	1	0	0	0	0	49	0.88%
1:45:00 PM	0	0	0	0	6	14	20	12	2	0	0	0	0	0	54	0.97%
2:00:00 PM	2	0	0	0	0	5	8	11	8	0	0	0	0	0	34	0.61%
2:15:00 PM	0	0	0	1	0	6	20	5	6	0	0	0	0	0	38	0.68%
2:30:00 PM	1	0	0	1	13	21	21	17	3	0	0	0	0	0	77	1.38%
2:45:00 PM	2	0	0	0	6	15	28	12	5	1	0	0	0	0	69	1.24%
3:00:00 PM	0	0	0	0	1	8	19	16	4	0	3	1	0	0	52	0.93%
3:15:00 PM	0	0	1	1	3	20	34	17	5	1	0	1	0	0	83	1.49%
3:30:00 PM	128	34	39	16	24	54	27	16	1	0	0	0	0	0	339	6.08%
3:45:00 PM	135	23	32	12	34	85	34	21	0	0	0	0	0	0	376	6.74%
4:00:00 PM	1	0	0	1	48	73	36	14	0	0	0	0	1	0	174	3.12%
4:15:00 PM	0	0	0	3	6	38	35	13	3	1	0	0	0	0	99	1.78%
4:30:00 PM	0	0	0	1	1	26	33	10	4	0	0	0	0	0	75	1.34%
4:45:00 PM	1	0	1	0	1	26	24	14	10	0	0	0	0	0	77	1.38%
5:00:00 PM	0	0	0	1	4	17	33	11	4	0	0	0	0	0	70	1.26%
5:15:00 PM	0	0	0	1	3	30	38	19	4	0	0	0	0	0	95	1.70%
5:30:00 PM	3	0	0	0	16	39	34	14	1	0	0	0	0	0	107	1.92%
5:45:00 PM	4	0	0	1	33	34	30	11	6	0	0	0	0	0	119	2.13%
6:00:00 PM	0	0	0	4	22	34	40	8	2	3	1	0	0	0	114	2.04%
6:15:00 PM	0	0	0	1	7	20	23	19	3	2	0	0	0	1	76	1.36%
6:30:00 PM	0	0	0	0	1	11	22	11	6	1	0	0	0	0	52	0.93%
6:45:00 PM	0	0	0	0	6	9	19	12	4	1	0	0	0	0	51	0.91%
7:00:00 PM	0	0	0	0	2	18	12	13	3	1	0	0	0	0	49	0.88%
7:15:00 PM	0	0	0	0	1	5	19	7	6	3	0	1	0	0	42	0.75%
7:30:00 PM	0	0	0	0	0	5	6	6	4	0	1	0	0	0	22	0.39%
7:45:00 PM	0	0	0	0	2	6	13	2	5	0	0	0	0	0	28	0.50%
8:00:00 PM	0	0	0	3	18	53	41	6	2	0	1	0	0	0	124	2.22%
8:15:00 PM	0	0	0	0	4	19	51	9	2	1	0	1	0	0	87	1.56%
8:30:00 PM	0	0	0	0	0	7	16	9	3	1	0	0	0	0	36	0.65%
8:45:00 PM	0	0	0	0	0	1	7	10	4	1	0	0	0	0	23	0.41%
9:00:00 PM	1	0	0	0	0	2	8	2	3	0	0	0	0	0	16	0.29%
9:15:00 PM	0	0	0	0	0	2	5	8	4	1	0	0	0	0	20	0.36%
9:30:00 PM	0	0	0	0	0	2	7	4	1	1	0	0	0	0	15	0.27%
9:45:00 PM	0	0	0	0	0	2	5	3	1	0	0	0	0	0	11	0.20%
10:00:00 PM	0	0	0	0	0	1	5	11	1	0	0	0	0	0	18	0.32%
10:15:00 PM	0	0	0	0	0	1	3	4	0	1	0	0	0	0	9	0.16%
10:30:00 PM	0	0	0	0	0	2	2	3	1	0	0	0	0	0	8	0.14%
10:45:00 PM	0	0	0	0	0	0	2	0	3	1	0	0	0	0	6	0.11%
11:00:00 PM	0	0	0	0	0	1	1	0	2	1	0	0	0	0	5	0.09%
11:15:00 PM	0	0	0	0	1	1	2	1	0	1	0	0	0	0	6	0.11%
11:30:00 PM	0	0	0	0	0	0	0	3	1	2	0	0	0	0	6	0.11%
11:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02%
PM TOTAL	278	58	73	49	288	809	911	444	143	31	6	4	1	1	3,096	55.51%
PERCENTAGE	9.0%	1.9%	2.4%	1.6%	9.3%	26.1%	29.4%	14.3%	4.6%	1.0%	0.2%	0.1%	0.0%	0		
CUMULATIVE	278	336	409	458	746	1,555	2,466	2,910	3,053	3,084	3,090	3,094	3,095	3,096		
PERCENTAGE	9.0%	10.9%	13.2%	14.8%	24.1%	50.2%	79.7%	94.0%	98.6%	99.6%	99.8%	99.9%	100.0%	100.0%		

15th Percentile	12	Mean Speed Average	31	
50th Percentile	34	10 MPH Pace Speed	31-40	
85th Percentile	45	Number in Pace	308	
95th Percentile	49	Percent in Pace	10%	

DAY TOTAL	778	207	137	143	520	1,267	1,481	717	251	52	15	5	1	3	5,577	
PERCENTAGE	14.0%	3.7%	2.5%	2.6%	9.3%	22.7%	26.6%	12.9%	4.5%	0.9%	0.3%	0.1%	0.0%	0.05%	5,577	100.00%
	14.0%	17.7%	20.1%	22.7%	32.0%	54.7%	81.3%	94.1%	98.6%	99.6%	99.8%	99.9%	99.9%	100.00%		
85th Percentile	45															

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Combined

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES
12:00:00 AM	0	0	0	0	0	1	2	0	0	2	0	0	0	0	5	0.05%
12:15:00 AM	0	0	0	0	0	0	3	0	3	1	0	1	0	0	8	0.08%
12:30:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0.02%
12:45:00 AM	0	0	0	0	0	1	3	3	0	1	0	0	0	0	8	0.08%
1:00:00 AM	0	0	0	0	0	0	0	1	3	1	0	0	0	0	5	0.05%
1:15:00 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	0.04%
1:30:00 AM	0	0	0	0	0	1	1	0	0	1	0	0	0	0	3	0.03%
1:45:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0.02%
2:00:00 AM	0	0	0	0	0	1	1	0	0	0	1	0	0	0	3	0.03%
2:15:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0.02%
2:30:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0.02%
2:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.01%
3:00:00 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4	0.04%
3:15:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0.03%
3:30:00 AM	0	0	0	0	0	0	2	1	1	1	0	0	0	0	5	0.05%
3:45:00 AM	0	0	0	0	0	0	1	3	2	0	1	0	0	0	7	0.07%
4:00:00 AM	0	0	0	1	0	0	1	2	0	1	0	0	0	0	5	0.05%
4:15:00 AM	0	0	0	0	0	1	5	1	3	0	0	0	0	0	10	0.10%
4:30:00 AM	0	0	0	0	0	0	3	4	4	3	1	0	0	0	15	0.14%
4:45:00 AM	0	0	0	0	1	1	2	7	9	6	1	1	0	0	28	0.27%
5:00:00 AM	0	0	0	0	2	5	2	3	6	5	1	1	0	0	25	0.24%
5:15:00 AM	0	0	0	0	0	1	9	7	5	1	4	1	0	1	29	0.28%
5:30:00 AM	0	0	0	1	0	3	5	17	11	2	0	0	0	0	39	0.37%
5:45:00 AM	0	0	0	0	0	3	10	10	14	9	6	2	0	0	54	0.52%
6:00:00 AM	0	0	0	1	2	12	12	11	10	8	3	2	0	0	61	0.58%
6:15:00 AM	0	0	0	1	3	7	16	18	17	14	7	1	1	2	87	0.83%
6:30:00 AM	2	0	0	0	1	9	38	27	14	6	4	1	0	0	102	0.98%
6:45:00 AM	0	0	0	2	7	12	23	22	23	12	2	1	0	0	104	1.00%
7:00:00 AM	0	0	0	3	10	21	37	30	18	4	1	2	2	0	128	1.23%
7:15:00 AM	0	0	0	1	18	22	33	26	24	6	4	0	0	1	135	1.29%
7:30:00 AM	2	0	0	3	17	41	69	54	25	10	5	0	1	0	227	2.18%
7:45:00 AM	4	1	9	3	32	69	87	75	29	7	0	1	0	0	317	3.04%
8:00:00 AM	67	26	33	32	74	119	89	29	6	2	0	0	0	0	477	4.57%
8:15:00 AM	368	62	33	29	44	54	26	12	4	0	0	1	0	1	634	6.08%
8:30:00 AM	200	63	21	31	29	33	48	39	32	11	1	1	0	0	509	4.88%
8:45:00 AM	4	0	0	14	40	56	58	31	33	7	1	3	0	0	247	2.37%
9:00:00 AM	0	0	0	7	5	23	30	27	18	6	2	1	0	0	119	1.14%
9:15:00 AM	0	0	0	6	10	17	21	12	16	5	5	2	0	0	94	0.90%
9:30:00 AM	0	0	0	1	6	6	27	26	13	3	2	0	0	0	84	0.81%
9:45:00 AM	1	3	2	5	3	13	39	18	11	4	0	0	0	0	99	0.95%
10:00:00 AM	0	0	0	5	5	9	29	19	22	6	3	0	0	0	98	0.94%
10:15:00 AM	0	0	0	2	5	18	31	31	18	6	2	0	0	0	113	1.08%
10:30:00 AM	0	0	0	1	4	17	15	25	6	7	2	1	0	0	78	0.75%
10:45:00 AM	0	0	0	5	6	16	22	18	9	3	0	0	0	0	79	0.76%
11:00:00 AM	0	0	0	0	2	12	25	22	13	3	1	0	0	0	78	0.75%
11:15:00 AM	0	0	0	1	6	17	8	16	13	6	1	0	0	0	68	0.65%
11:30:00 AM	1	0	0	1	3	18	32	17	7	2	1	1	0	0	83	0.80%
11:45:00 AM	0	0	0	0	0	6	18	28	16	4	1	0	1	0	74	0.71%
AM TOTAL	649	155	98	156	336	645	886	698	460	181	64	26	5	5	4,364	41.82%
PERCENTAGE	14.9%	3.6%	2.2%	3.6%	7.7%	14.8%	20.3%	16.0%	10.5%	4.1%	1.5%	0.6%	0.1%	0.1%		
CUMULATIVE	649	804	902	1,058	1,394	2,039	2,925	3,623	4,083	4,264	4,328	4,354	4,359	4,364		
PERCENTAGE	14.9%	18.4%	20.7%	24.2%	31.9%	46.7%	67.0%	83.0%	93.6%	97.7%	99.2%	99.8%	99.9%	100.0%		

15th Percentile	12	Mean Speed Average	33
50th Percentile	34	10 MPH Pace Speed	33-42
85th Percentile	51	Number in Pace	280
95th Percentile	57	Percent in Pace	6%

SPEED4 Jefferson between Avenue 39 and Avenue 40 .08-09. Combined

Project# SC3235

Wednesday, February 09, 2022

PREPARED BY: AimTD 714 253 7888 cs@aimtd.com

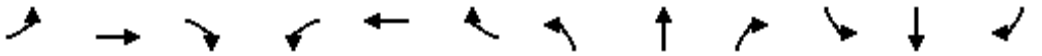
Time	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	TOTAL	%VEHICLES

12:00:00 PM	0	0	0	0	4	16	31	22	20	10	1	0	0	0	104	1.00%
12:15:00 PM	0	0	0	0	2	13	25	18	12	5	0	0	0	0	75	0.72%
12:30:00 PM	0	0	0	0	2	10	22	28	11	8	3	0	1	0	85	0.81%
12:45:00 PM	0	0	0	0	1	14	22	20	15	4	1	0	0	0	77	0.74%
1:00:00 PM	0	0	0	1	9	29	29	21	12	4	3	0	0	1	109	1.04%
1:15:00 PM	0	1	0	0	2	19	24	19	22	5	2	0	1	0	95	0.91%
1:30:00 PM	0	0	0	1	7	16	24	21	19	9	3	0	0	0	100	0.96%
1:45:00 PM	0	0	0	0	6	18	25	20	16	8	2	0	0	0	95	0.91%
2:00:00 PM	2	0	4	1	0	6	14	21	20	6	4	0	0	0	78	0.75%
2:15:00 PM	0	0	0	1	3	10	21	20	20	9	1	2	1	0	88	0.84%
2:30:00 PM	1	0	0	1	13	24	36	42	17	10	1	1	0	0	146	1.40%
2:45:00 PM	2	0	0	0	7	18	41	53	23	8	1	1	0	0	154	1.48%
3:00:00 PM	10	0	0	0	2	15	45	76	26	9	7	1	0	0	191	1.83%
3:15:00 PM	3	2	1	1	7	34	86	88	42	7	0	1	0	0	272	2.61%
3:30:00 PM	142	34	39	23	34	69	69	59	12	4	0	0	0	1	486	4.66%
3:45:00 PM	138	23	36	21	57	134	71	39	3	0	1	0	0	0	523	5.01%
4:00:00 PM	3	0	0	1	48	89	74	47	19	6	2	1	1	0	291	2.79%
4:15:00 PM	0	0	1	3	6	40	46	39	37	14	4	1	0	0	191	1.83%
4:30:00 PM	0	0	0	1	1	29	43	49	27	9	5	1	2	1	168	1.61%
4:45:00 PM	1	0	1	2	2	30	35	37	34	5	4	0	0	0	151	1.45%
5:00:00 PM	0	0	0	1	6	28	50	48	28	6	1	0	0	0	168	1.61%
5:15:00 PM	0	0	0	1	3	36	69	68	34	6	1	2	0	0	220	2.11%
5:30:00 PM	3	0	0	0	17	46	58	58	16	6	4	0	0	1	209	2.00%
5:45:00 PM	4	0	1	3	38	48	68	48	22	2	2	1	0	0	237	2.27%
6:00:00 PM	0	0	1	4	24	47	78	47	21	12	4	0	0	0	238	2.28%
6:15:00 PM	0	0	0	1	17	32	73	60	33	5	0	0	0	1	222	2.13%
6:30:00 PM	0	0	3	0	1	15	47	42	22	12	5	0	0	0	147	1.41%
6:45:00 PM	0	0	0	0	8	11	29	31	16	4	3	0	0	1	103	0.99%
7:00:00 PM	0	0	0	0	2	18	23	31	16	14	2	1	0	0	107	1.03%
7:15:00 PM	0	0	0	0	1	5	25	30	22	10	0	1	0	0	94	0.90%
7:30:00 PM	0	0	0	0	1	6	10	17	18	13	1	0	0	1	67	0.64%
7:45:00 PM	0	0	0	0	2	6	17	16	18	1	1	0	0	0	61	0.58%
8:00:00 PM	0	0	0	4	19	57	45	22	17	13	1	0	1	0	179	1.72%
8:15:00 PM	0	0	0	0	4	20	52	21	12	7	3	1	0	1	121	1.16%
8:30:00 PM	0	0	0	0	0	8	18	18	13	5	0	4	0	0	66	0.63%
8:45:00 PM	0	0	0	0	0	2	8	21	7	11	2	3	1	0	55	0.53%
9:00:00 PM	1	0	0	0	0	2	9	7	12	3	3	3	0	0	40	0.38%
9:15:00 PM	0	0	0	0	0	2	6	12	17	4	1	0	0	0	42	0.40%
9:30:00 PM	0	0	0	0	0	2	8	9	9	6	1	2	0	0	37	0.35%
9:45:00 PM	0	0	0	0	0	2	5	11	6	3	3	1	0	0	31	0.30%
10:00:00 PM	0	0	0	0	0	1	5	12	12	3	0	1	0	0	34	0.33%
10:15:00 PM	0	0	0	0	0	2	3	9	4	10	3	1	0	1	33	0.32%
10:30:00 PM	0	0	0	0	0	2	2	4	2	1	0	1	0	0	12	0.12%
10:45:00 PM	0	0	0	0	0	0	3	3	6	5	3	1	0	0	21	0.20%
11:00:00 PM	0	0	0	0	0	1	1	1	4	4	2	1	0	2	16	0.15%
11:15:00 PM	0	0	0	0	1	2	2	1	1	2	2	0	0	0	11	0.11%
11:30:00 PM	0	0	0	0	0	0	0	4	5	3	1	1	0	0	14	0.13%
11:45:00 PM	0	0	0	0	0	0	1	2	1	2	0	0	0	0	6	0.06%
PM TOTAL	310	60	87	71	357	1,034	1,498	1,392	801	313	94	34	8	11	6,070	58.18%
PERCENTAGE	5.1%	1.0%	1.4%	1.2%	5.9%	17.0%	24.7%	22.9%	13.2%	5.2%	1.5%	0.6%	0.1%	0.2%		
CUMULATIVE	310	370	457	528	885	1,919	3,417	4,809	5,610	5,923	6,017	6,051	6,059	6,070		
PERCENTAGE	5.1%	6.1%	7.5%	8.7%	14.6%	31.6%	56.3%	79.2%	92.4%	97.6%	99.1%	99.7%	99.8%	100.0%		

15th Percentile	15	Mean Speed Average	35
50th Percentile	37	10 MPH Pace Speed	36-45
85th Percentile	53	Number in Pace	282
95th Percentile	59	Percent in Pace	5%

DAY TOTAL	959	215	185	227	693	1,679	2,384	2,090	1,261	494	158	60	13	16	10,434	100.00%
PERCENTAGE	9.2%	2.1%	1.8%	2.2%	6.6%	16.1%	22.8%	20.0%	12.1%	4.7%	1.5%	0.6%	0.1%	0.2%	10,434	100.00%
	9.2%	11.3%	13.0%	15.2%	21.8%	37.9%	60.8%	80.8%	92.9%	97.6%	99.1%	99.7%	99.8%	100.0%		
85th Percentile	51															

Appendix B: Intersection LOS

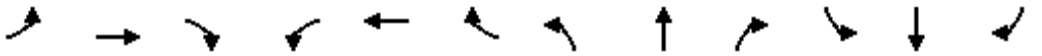


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	41	12	30	89	80	3	303	51	24	274	69
Future Volume (vph)	51	41	12	30	89	80	3	303	51	24	274	69
Satd. Flow (prot)	1752	1776	0	1752	1845	1568	1752	3417	0	1752	1789	0
Flt Permitted	0.684			0.713			0.497			0.492		
Satd. Flow (perm)	1262	1776	0	1313	1845	1568	917	3417	0	908	1789	0
Satd. Flow (RTOR)		15				101		33			22	
Lane Group Flow (vph)	65	67	0	38	113	101	4	449	0	30	434	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	29.7	29.7		29.7	29.7	29.7	25.2	25.2		25.2	25.2	
Total Split (s)	34.7	34.7		34.7	34.7	34.7	51.2	51.2		51.2	51.2	
Total Split (%)	40.4%	40.4%		40.4%	40.4%	40.4%	59.6%	59.6%		59.6%	59.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	45.0	45.0		45.0	45.0	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	5.2	5.2		5.2	5.2	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7	4.7	6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0	18.0	12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	2	2		0	0	0	0	0		0	0	
Act Effct Green (s)	12.6	12.6		12.6	12.6	12.6	19.7	19.7		19.7	19.7	
Actuated g/C Ratio	0.33	0.33		0.33	0.33	0.33	0.51	0.51		0.51	0.51	
v/c Ratio	0.16	0.11		0.09	0.19	0.18	0.01	0.26		0.06	0.47	
Control Delay	11.3	8.9		10.7	11.1	3.9	9.0	8.2		9.3	11.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.3	8.9		10.7	11.1	3.9	9.0	8.2		9.3	11.4	
LOS	B	A		B	B	A	A	A		A	B	
Approach Delay		10.1			8.1			8.2			11.2	
Approach LOS		B			A			A			B	
90th %ile Green (s)	25.0	25.0		25.0	25.0	25.0	25.5	25.5		25.5	25.5	
90th %ile Term Code	Ped	Ped		Hold	Hold	Hold	Hold	Hold		Gap	Gap	
70th %ile Green (s)	10.0	10.0		10.0	10.0	10.0	14.5	14.5		14.5	14.5	
70th %ile Term Code	Min	Min		Min	Min	Min	Hold	Hold		Gap	Gap	
50th %ile Green (s)	10.0	10.0		10.0	10.0	10.0	12.6	12.6		12.6	12.6	
50th %ile Term Code	Min	Min		Min	Min	Min	Hold	Hold		Gap	Gap	
30th %ile Green (s)	0.0	0.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
30th %ile Term Code	Skip	Skip		Min	Min	Min	Hold	Hold		Gap	Gap	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	25.0	25.0		25.0	25.0	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Dwell	Dwell		Dwell	Dwell	
Stops (vph)	35	28		21	57	15	3	187		15	221	
Fuel Used(gal)	1	1		1	4	3	0	4		0	7	
CO Emissions (g/hr)	74	69		94	276	208	3	291		33	492	
NOx Emissions (g/hr)	14	13		18	54	41	1	57		6	96	
VOC Emissions (g/hr)	17	16		22	64	48	1	67		8	114	
Dilemma Vehicles (#)	0	5		0	9	0	0	31		0	32	

Intersection Summary	
Cycle Length: 85.9	
Actuated Cycle Length: 38.7	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 39.7%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 61.4	
70th %ile Actuated Cycle: 35.4	
50th %ile Actuated Cycle: 33.5	
30th %ile Actuated Cycle: 31.9	
10th %ile Actuated Cycle: 31.2	

Splits and Phases: 3: Avenue 40 & Adams St

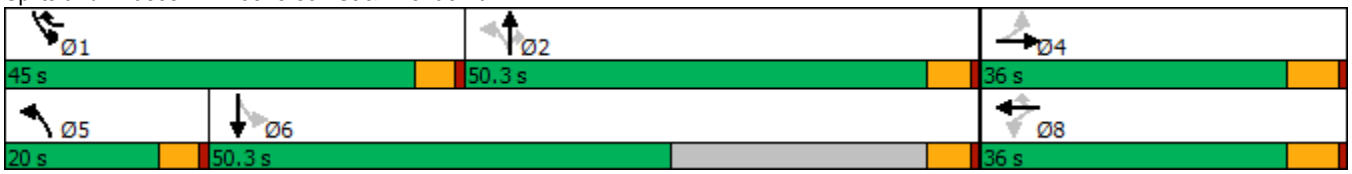


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	33	41	88	85	288	52	635	77	189	722	68
Future Volume (vph)	19	33	41	88	85	288	52	635	77	189	722	68
Satd. Flow (prot)	1752	1692	0	1752	1845	1568	1752	1845	1568	1752	1821	0
Flt Permitted	0.697			0.704			0.171			0.210		
Satd. Flow (perm)	1286	1692	0	1299	1845	1568	315	1845	1568	387	1821	0
Satd. Flow (RTOR)		44				75			108		6	
Lane Group Flow (vph)	21	81	0	96	92	313	57	690	84	205	859	0
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	34.0	34.0		25.0	25.0	15.0	15.0	34.3	34.3	15.0	24.3	
Total Split (s)	36.0	36.0		36.0	36.0	45.0	20.0	50.3	50.3	45.0	50.3	
Total Split (%)	27.4%	27.4%		27.4%	27.4%	34.3%	15.2%	38.3%	38.3%	34.3%	38.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0	40.0	15.0	45.0	45.0	40.0	45.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	4.3	4.3	4.0	4.3	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	5.0	5.0	5.3	5.3	5.0	5.3	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	9.0	9.0		7.0	7.0			9.0	9.0		7.0	
Flash Dont Walk (s)	19.0	19.0		12.0	12.0			20.0	20.0		12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	11.9	11.9		11.9	11.9	30.2	55.5	45.2	45.2	60.6	50.7	
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.35	0.65	0.53	0.53	0.71	0.59	
v/c Ratio	0.12	0.30		0.53	0.36	0.52	0.15	0.71	0.10	0.44	0.80	
Control Delay	34.3	21.1		46.2	38.0	19.4	5.4	21.9	2.0	7.0	22.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	34.3	21.1		46.2	38.0	19.4	5.4	21.9	2.0	7.0	22.8	
LOS	C	C		D	D	B	A	C	A	A	C	
Approach Delay		23.8			28.0			18.7			19.8	
Approach LOS		C			C			B			B	
90th %ile Green (s)	17.3	17.3		17.3	17.3	17.5	10.0	45.0	45.0	17.5	52.5	
90th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Max	Max	Gap	Hold	
70th %ile Green (s)	13.7	13.7		13.7	13.7	13.4	10.0	45.0	45.0	13.4	48.4	
70th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Max	Max	Gap	Hold	
50th %ile Green (s)	11.6	11.6		11.6	11.6	11.1	10.0	45.0	45.0	11.1	46.1	
50th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Max	Max	Gap	Hold	
30th %ile Green (s)	9.6	9.6		9.6	9.6	10.0	10.0	45.0	45.0	10.0	45.0	
30th %ile Term Code	Hold	Hold		Gap	Gap	Min	Min	Max	Max	Min	Hold	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	8.0	8.0		8.0	8.0	10.0	0.0	45.0	45.0	10.0	60.0	
10th %ile Term Code	Hold	Hold		Min	Min	Min	Skip	Max	Max	Min	Hold	
Stops (vph)	18	33		79	73	164	17	464	6	53	582	
Fuel Used(gal)	1	3		5	4	12	1	18	1	11	52	
CO Emissions (g/hr)	70	230		325	300	852	71	1233	84	757	3617	
NOx Emissions (g/hr)	14	45		63	58	166	14	240	16	147	704	
VOC Emissions (g/hr)	16	53		75	70	197	16	286	19	176	838	
Dilemma Vehicles (#)	0	3		0	4	0	0	36	0	0	34	

Intersection Summary	
Cycle Length: 131.3	
Actuated Cycle Length: 85.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	
90th %ile Actuated Cycle: 96.1	
70th %ile Actuated Cycle: 88.4	
50th %ile Actuated Cycle: 84	
30th %ile Actuated Cycle: 80.9	
10th %ile Actuated Cycle: 79.3	

Splits and Phases: 4: Jefferson St & Avenue 40

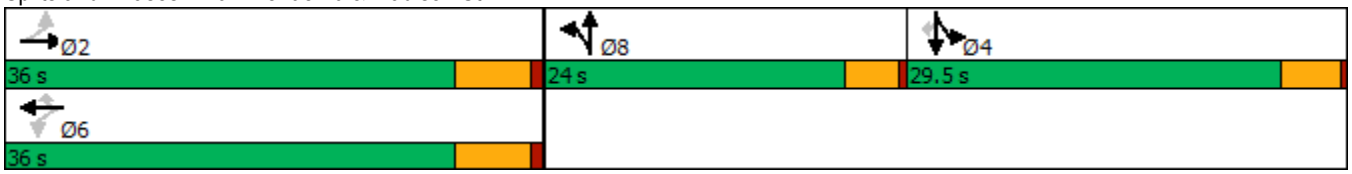


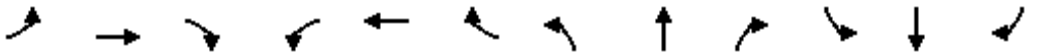
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	291	0	0	419	173	0	0	0	99	0	53
Future Volume (vph)	24	291	0	0	419	173	0	0	0	99	0	53
Satd. Flow (prot)	1752	1845	0	1845	1845	1568	0	1845	0	1752	1845	1568
Flt Permitted	0.428									0.950		
Satd. Flow (perm)	790	1845	0	1845	1845	1568	0	1845	0	1752	1845	1568
Satd. Flow (RTOR)						225						513
Lane Group Flow (vph)	31	378	0	0	544	225	0	0	0	129	0	69
Turn Type	Perm	NA		Perm	NA	Perm				Split		Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	23.0	23.0		30.0	30.0	30.0	14.0	14.0		31.5	31.5	31.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	24.0	24.0		29.5	29.5	29.5
Total Split (%)	40.2%	40.2%		40.2%	40.2%	40.2%	26.8%	26.8%		33.0%	33.0%	33.0%
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	20.0	20.0		25.0	25.0	25.0
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	3.5	3.5		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		4.0		4.5	4.5	4.5
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		17.0	17.0	17.0				20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0		0	0	0				0	0	0
Act Effct Green (s)	29.3	29.3			29.3	29.3				10.5		10.5
Actuated g/C Ratio	0.65	0.65			0.65	0.65				0.23		0.23
v/c Ratio	0.06	0.32			0.45	0.21				0.32		0.09
Control Delay	5.2	6.4			7.6	1.5				18.8		0.2
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0
Total Delay	5.2	6.4			7.6	1.5				18.8		0.2
LOS	A	A			A	A				B		A
Approach Delay		6.3			5.8						12.3	
Approach LOS		A			A						B	
90th %ile Green (s)	30.0	30.0		30.0	30.0	30.0	0.0	0.0		11.7	11.7	11.7
90th %ile Term Code	Hold	Hold		Max	Max	Max	Skip	Skip		Gap	Gap	Gap
70th %ile Green (s)	28.5	28.5		28.5	28.5	28.5	0.0	0.0		10.0	10.0	10.0
70th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Skip	Skip		Min	Min	Min
50th %ile Green (s)	24.2	24.2		24.2	24.2	24.2	0.0	0.0		10.0	10.0	10.0
50th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Skip	Skip		Min	Min	Min
30th %ile Green (s)	24.8	24.8		24.8	24.8	24.8	0.0	0.0		10.0	10.0	10.0
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell	Dwell	Skip	Skip		Min	Min	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	28.1	28.1		28.1	28.1	28.1	0.0	0.0		0.0	0.0	0.0
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell	Dwell	Skip	Skip		Skip	Skip	Skip
Stops (vph)	11	132			216	15				79		0
Fuel Used(gal)	0	4			25	9				3		1
CO Emissions (g/hr)	21	255			1722	623				223		69
NOx Emissions (g/hr)	4	50			335	121				43		13
VOC Emissions (g/hr)	5	59			399	144				52		16
Dilemma Vehicles (#)	0	24			36	0				0		0

Intersection Summary	
Cycle Length: 89.5	
Actuated Cycle Length: 45.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 39.1%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 52.2	
70th %ile Actuated Cycle: 49	
50th %ile Actuated Cycle: 44.7	
30th %ile Actuated Cycle: 45.3	
10th %ile Actuated Cycle: 34.1	

Splits and Phases: 6: Avenue 40 & Madison St



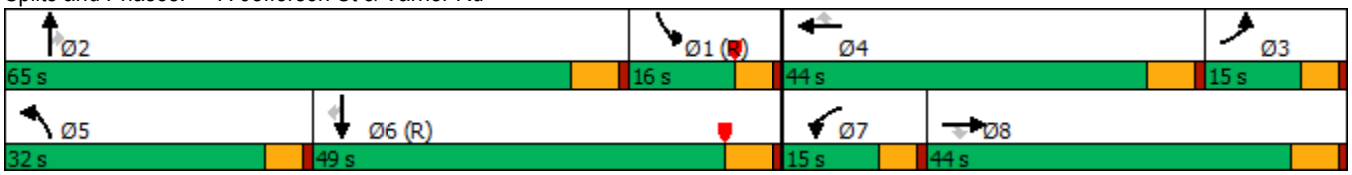


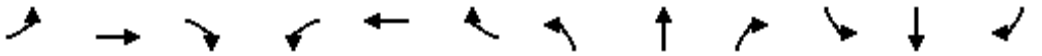
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	73	166	71	123	92	433	629	58	81	744	117
Future Volume (vph)	63	73	166	71	123	92	433	629	58	81	744	117
Satd. Flow (prot)	3400	3505	2760	3400	3505	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	2760	3400	3505	1568	3400	5036	1547	3398	5036	1568
Satd. Flow (RTOR)			187			156			156			148
Lane Group Flow (vph)	71	82	187	80	138	103	487	707	65	91	836	131
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8			4			2			6
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	9.0	10.0	9.0	9.0
Minimum Split (s)	15.0	16.0	16.0	15.0	44.0	44.0	15.0	37.0	37.0	15.0	15.0	15.0
Total Split (s)	15.0	44.0	44.0	15.0	44.0	44.0	32.0	65.0	65.0	16.0	49.0	49.0
Total Split (%)	10.7%	31.4%	31.4%	10.7%	31.4%	31.4%	22.9%	46.4%	46.4%	11.4%	35.0%	35.0%
Maximum Green (s)	10.0	38.0	38.0	10.0	38.0	38.0	27.0	59.0	59.0	11.0	43.0	43.0
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5	3.5	1.5	4.0	4.0	1.5	4.0	4.0
Minimum Gap (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	C-Max	C-Min	C-Min
Walk Time (s)					7.0	7.0		7.0	7.0			
Flash Dont Walk (s)					31.0	31.0		24.0	24.0			
Pedestrian Calls (#/hr)					0	0		1	1			
Act Effct Green (s)	10.0	11.7	11.7	10.0	14.7	14.7	23.3	27.6	27.6	68.7	73.0	73.0
Actuated g/C Ratio	0.07	0.08	0.08	0.07	0.10	0.10	0.17	0.20	0.20	0.49	0.52	0.52
v/c Ratio	0.29	0.28	0.47	0.33	0.38	0.34	0.86	0.71	0.15	0.05	0.32	0.15
Control Delay	65.1	62.2	11.7	65.8	62.7	4.4	67.3	53.1	3.2	20.3	20.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	62.2	11.7	65.8	62.7	4.4	67.3	53.1	3.2	20.3	20.3	2.5
LOS	E	E	B	E	E	A	E	D	A	C	C	A
Approach Delay		35.0			44.8			56.0			18.1	
Approach LOS		C			D			E			B	
90th %ile Green (s)	10.0	14.4	14.4	10.0	14.4	14.4	27.0	33.1	33.1	60.5	66.6	66.6
90th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Max	Gap	Gap	Coord	Coord	Coord
70th %ile Green (s)	10.0	12.6	12.6	10.0	12.6	12.6	26.2	30.2	30.2	65.2	69.2	69.2
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Coord
50th %ile Green (s)	10.0	11.4	11.4	10.0	11.4	11.4	23.9	28.1	28.1	68.5	72.7	72.7
50th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Coord
30th %ile Green (s)	10.0	10.1	10.1	10.0	10.1	10.1	21.5	25.2	25.2	72.7	76.4	76.4
30th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	0.0	10.0	10.0	10.0	25.0	25.0	18.1	21.4	21.4	76.6	79.9	79.9
10th %ile Term Code	Skip	Min	Min	Max	Hold	Hold	Gap	Gap	Gap	Coord	Coord	Coord
Stops (vph)	59	67	21	66	114	2	414	582	8	43	416	6
Fuel Used(gal)	2	2	2	2	4	1	13	17	0	2	19	2
CO Emissions (g/hr)	133	150	131	150	254	41	921	1193	29	141	1317	126
NOx Emissions (g/hr)	26	29	26	29	49	8	179	232	6	28	256	24
VOC Emissions (g/hr)	31	35	30	35	59	10	213	277	7	33	305	29
Dilemma Vehicles (#)	0	2	0	0	4	0	0	12	0	0	27	0

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 1:SBL and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 38.9	Intersection LOS: D
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Jefferson St & Varner Rd



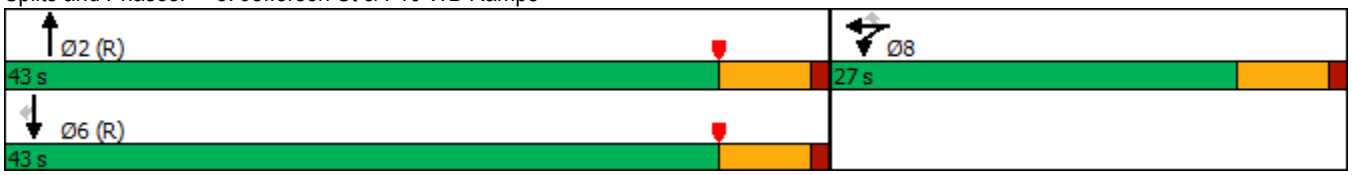


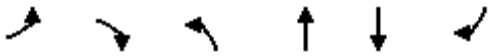
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	329	2	134	0	1002	917	0	738	141
Future Volume (vph)	0	0	0	329	2	134	0	1002	917	0	738	141
Satd. Flow (prot)	0	0	0	1665	1586	1490	0	5036	1568	0	5036	1568
Flt Permitted				0.950	0.956							
Satd. Flow (perm)	0	0	0	1665	1586	1490	0	5036	1568	0	5036	1568
Satd. Flow (RTOR)					6	78			965			148
Lane Group Flow (vph)	0	0	0	183	179	127	0	1055	965	0	777	148
Turn Type				Split	NA	Perm		NA	Free		NA	Perm
Protected Phases				8	8			2			6	
Permitted Phases						8			Free			6
Detector Phase				8	8	8		2			6	6
Switch Phase												
Minimum Initial (s)				6.0	6.0	6.0		7.0			7.0	7.0
Minimum Split (s)				11.8	11.8	11.8		35.8			12.8	12.8
Total Split (s)				27.0	27.0	27.0		43.0			43.0	43.0
Total Split (%)				38.6%	38.6%	38.6%		61.4%			61.4%	61.4%
Maximum Green (s)				21.2	21.2	21.2		37.2			37.2	37.2
Yellow Time (s)				4.8	4.8	4.8		4.8			4.8	4.8
All-Red Time (s)				1.0	1.0	1.0		1.0			1.0	1.0
Lost Time Adjust (s)				0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)				5.8	5.8	5.8		5.8			5.8	5.8
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.5	2.5	2.5		2.5			2.5	2.5
Minimum Gap (s)				2.5	2.5	2.5		2.5			2.5	2.5
Time Before Reduce (s)				0.0	0.0	0.0		0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0		0.0			0.0	0.0
Recall Mode				None	None	None		C-Max			C-Max	C-Max
Walk Time (s)								7.0				
Flash Dont Walk (s)								23.0				
Pedestrian Calls (#/hr)								0				
Act Effct Green (s)				12.9	12.9	12.9		45.5	70.0		45.5	45.5
Actuated g/C Ratio				0.18	0.18	0.18		0.65	1.00		0.65	0.65
v/c Ratio				0.60	0.60	0.38		0.32	0.62		0.24	0.14
Control Delay				33.6	33.2	13.7		3.6	4.4		4.4	1.0
Queue Delay				0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay				33.6	33.2	13.7		3.6	4.4		4.4	1.0
LOS				C	C	B		A	A		A	A
Approach Delay					28.3			4.0			3.9	
Approach LOS					C			A			A	
90th %ile Green (s)				18.6	18.6	18.6		39.8			39.8	39.8
90th %ile Term Code				Gap	Gap	Gap		Coord			Coord	Coord
70th %ile Green (s)				15.5	15.5	15.5		42.9			42.9	42.9
70th %ile Term Code				Gap	Gap	Gap		Coord			Coord	Coord
50th %ile Green (s)				12.5	12.5	12.5		45.9			45.9	45.9
50th %ile Term Code				Gap	Gap	Gap		Coord			Coord	Coord
30th %ile Green (s)				10.4	10.4	10.4		48.0			48.0	48.0
30th %ile Term Code				Gap	Gap	Gap		Coord			Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)				7.4	7.4	7.4		51.0			51.0	51.0
10th %ile Term Code				Gap	Gap	Gap		Coord			Coord	Coord
Stops (vph)				150	143	46		263	291		347	16
Fuel Used(gal)				4	4	1		9	9		9	1
CO Emissions (g/hr)				264	254	99		606	609		597	64
NOx Emissions (g/hr)				51	49	19		118	119		116	12
VOC Emissions (g/hr)				61	59	23		140	141		138	15
Dilemma Vehicles (#)				0	9	0		69	0		28	0

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 59 (84%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 39.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Jefferson St & I-10 WB Ramps



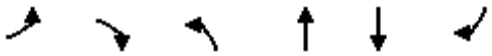


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	715	101	1852	957	110
Future Volume (vph)	67	715	101	1852	957	110
Satd. Flow (prot)	3400	2760	3400	5036	5036	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3400	2760	3400	5036	5036	1568
Satd. Flow (RTOR)		39				118
Lane Group Flow (vph)	72	769	109	1991	1029	118
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	7.0	7.0	7.0
Minimum Split (s)	11.8	10.7	10.7	12.8	12.8	12.8
Total Split (s)	20.0	19.0	19.0	50.0	31.0	31.0
Total Split (%)	28.6%	27.1%	27.1%	71.4%	44.3%	44.3%
Maximum Green (s)	14.2	14.3	14.3	44.2	25.2	25.2
Yellow Time (s)	4.8	3.7	3.7	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.7	4.7	5.8	5.8	5.8
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.5	2.5	2.5	2.5	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	6.7	24.2	14.1	55.3	35.3	35.3
Actuated g/C Ratio	0.10	0.35	0.20	0.79	0.50	0.50
v/c Ratio	0.22	0.79	0.16	0.50	0.40	0.14
Control Delay	30.7	25.4	23.8	4.0	8.1	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	25.4	23.8	4.0	8.1	2.2
LOS	C	C	C	A	A	A
Approach Delay	25.9			5.1	7.5	
Approach LOS	C			A	A	
90th %ile Green (s)	7.9	14.3	14.3	50.5	31.5	31.5
90th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
70th %ile Green (s)	7.0	14.3	14.3	51.4	32.4	32.4
70th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
50th %ile Green (s)	6.4	14.3	14.3	52.0	33.0	33.0
50th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
30th %ile Green (s)	6.0	13.1	13.1	52.4	34.6	34.6
30th %ile Term Code	Min	Gap	Gap	Coord	Coord	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
10th %ile Green (s)	0.0	14.3	14.3	64.2	45.2	45.2
10th %ile Term Code	Skip	Max	Max	Coord	Coord	Coord
Stops (vph)	60	576	80	604	528	13
Fuel Used(gal)	1	12	3	41	13	1
CO Emissions (g/hr)	86	840	227	2889	881	51
NOx Emissions (g/hr)	17	164	44	562	171	10
VOC Emissions (g/hr)	20	195	53	669	204	12
Dilemma Vehicles (#)	0	0	0	111	27	0

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 56 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 10.0	Intersection LOS: B
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: I-10 EB Ramps & Jefferson St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1133	217	439	820	477	1195
Future Volume (vph)	1133	217	439	820	477	1195
Satd. Flow (prot)	3400	2760	3400	3505	3505	2760
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3400	2760	3400	3505	3505	2760
Satd. Flow (RTOR)		97				169
Lane Group Flow (vph)	1218	233	472	882	513	1285
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	8	1	1	6	2	8
Permitted Phases		8				2
Detector Phase	8	1	1	6	2	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.2	8.0	8.0	9.5	9.5	9.2
Total Split (s)	41.7	29.8	29.8	58.3	28.5	41.7
Total Split (%)	41.7%	29.8%	29.8%	58.3%	28.5%	41.7%
Maximum Green (s)	36.5	25.8	25.8	52.8	23.0	36.5
Yellow Time (s)	4.7	3.5	3.5	5.0	5.0	4.7
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	4.0	4.0	5.5	5.5	5.2
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	4.0	1.5	1.5	5.0	5.0	4.0
Minimum Gap (s)	2.0	1.5	1.5	2.0	2.0	2.0
Time Before Reduce (s)	1.0	0.0	0.0	1.0	1.0	1.0
Time To Reduce (s)	0.1	0.0	0.0	0.1	0.1	0.1
Recall Mode	C-Max	None	None	None	None	C-Max
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	46.8	69.8	17.8	42.5	20.7	73.0
Actuated g/C Ratio	0.47	0.70	0.18	0.42	0.21	0.73
v/c Ratio	0.77	0.12	0.78	0.59	0.71	0.62
Control Delay	19.3	1.0	48.4	23.3	42.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	1.0	48.4	23.3	42.4	7.7
LOS	B	A	D	C	D	A
Approach Delay	16.3			32.1	17.6	
Approach LOS	B			C	B	
90th %ile Green (s)	39.6	22.7	22.7	49.7	23.0	39.6
90th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
70th %ile Green (s)	42.5	19.8	19.8	46.8	23.0	42.5
70th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
50th %ile Green (s)	46.1	17.8	17.8	43.2	21.4	46.1
50th %ile Term Code	Coord	Gap	Gap	Hold	Gap	Coord
30th %ile Green (s)	50.0	15.8	15.8	39.3	19.5	50.0
30th %ile Term Code	Coord	Gap	Gap	Hold	Gap	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
10th %ile Green (s)	55.7	12.9	12.9	33.6	16.7	55.7
10th %ile Term Code	Coord	Gap	Gap	Hold	Gap	Coord
Stops (vph)	659	28	406	593	429	498
Fuel Used(gal)	21	2	13	18	18	29
CO Emissions (g/hr)	1452	116	918	1244	1242	2021
NOx Emissions (g/hr)	283	23	179	242	242	393
VOC Emissions (g/hr)	337	27	213	288	288	468
Dilemma Vehicles (#)	0	0	0	34	22	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 8:EBL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

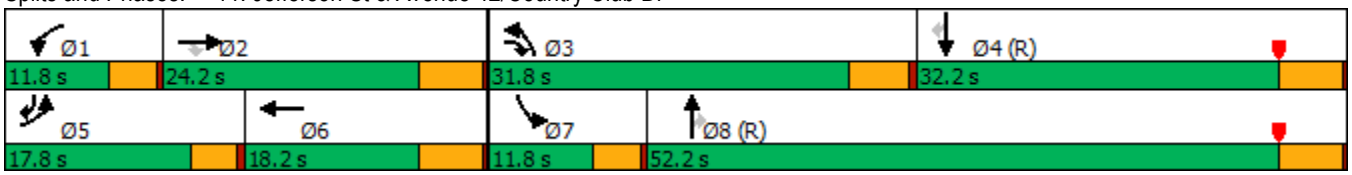
Splits and Phases: 10: Indio Blvd & Jefferson St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	266	172	461	44	151	26	563	1030	17	46	1106	482
Future Volume (vph)	266	172	461	44	151	26	563	1030	17	46	1106	482
Satd. Flow (prot)	3400	3505	1568	3400	3428	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	3400	3428	0	3400	5036	1568	3400	5036	1568
Satd. Flow (RTOR)			108		16				155			122
Lane Group Flow (vph)	302	195	524	50	202	0	640	1170	19	52	1257	548
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2						8			4
Detector Phase	5	2	3	1	6		3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	37.2	9.0	8.0	38.2		9.0	27.2	27.2	8.0	31.2	8.0
Total Split (s)	17.8	24.2	31.8	11.8	18.2		31.8	52.2	52.2	11.8	32.2	17.8
Total Split (%)	17.8%	24.2%	31.8%	11.8%	18.2%		31.8%	52.2%	52.2%	11.8%	32.2%	17.8%
Maximum Green (s)	13.8	19.0	26.8	7.8	13.0		26.8	47.0	47.0	7.8	27.0	13.8
Yellow Time (s)	3.5	4.7	4.5	3.5	4.7		4.5	4.7	4.7	3.5	4.7	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.2	5.0	4.0	5.2		5.0	5.2	5.2	4.0	5.2	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.1	0.1	0.0	0.1	0.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		4.0			4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		28.0			29.0			18.0	18.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	12.3	17.9	46.1	5.9	9.8		23.0	55.2	55.2	6.0	35.4	53.0
Actuated g/C Ratio	0.12	0.18	0.46	0.06	0.10		0.23	0.55	0.55	0.06	0.35	0.53
v/c Ratio	0.72	0.31	0.67	0.25	0.58		0.82	0.42	0.02	0.26	0.70	0.62
Control Delay	52.3	37.2	20.6	47.5	46.0		58.7	6.7	0.0	46.5	30.9	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	37.2	20.6	47.5	46.0		58.7	6.7	0.0	46.5	30.9	19.5
LOS	D	D	C	D	D		E	A	A	D	C	B
Approach Delay		33.2			46.3			24.8			27.9	
Approach LOS		C			D			C			C	
90th %ile Green (s)	13.8	19.2	26.8	7.5	12.9		26.8	47.4	47.4	7.5	27.1	13.8
90th %ile Term Code	Max	Hold	Max	Gap	Gap		Max	Coord	Coord	Gap	Coord	Max
70th %ile Green (s)	13.8	18.4	26.1	6.5	11.1		26.1	50.1	50.1	6.6	29.6	13.8
70th %ile Term Code	Max	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Max
50th %ile Green (s)	13.2	17.1	23.9	5.9	9.8		23.9	52.6	52.6	6.0	33.7	13.2
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Gap
30th %ile Green (s)	11.6	14.8	20.8	5.3	8.5		20.8	56.2	56.2	5.3	39.7	11.6
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Gap

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	9.3	20.0	17.5	0.0	6.7		17.5	69.6	69.6	0.0	47.1	9.3
10th %ile Term Code	Gap	Hold	Gap	Skip	Gap		Gap	Coord	Coord	Skip	Coord	Gap
Stops (vph)	249	145	283	40	152		557	277	0	42	954	408
Fuel Used(gal)	6	3	7	1	4		31	35	0	1	28	11
CO Emissions (g/hr)	450	243	470	72	281		2197	2461	34	93	1934	756
NOx Emissions (g/hr)	88	47	91	14	55		428	479	7	18	376	147
VOC Emissions (g/hr)	104	56	109	17	65		509	570	8	22	448	175
Dilemma Vehicles (#)	0	6	0	0	7		0	32	0	0	40	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 90 (90%), Referenced to phase 4:SBT and 8:NBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Jefferson St & Avenue 42/Country Club Dr

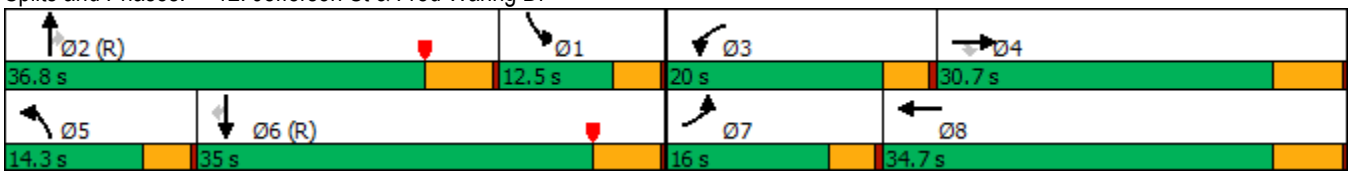


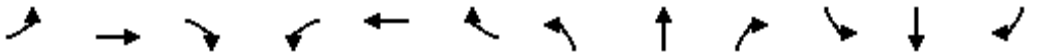
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	422	138	236	892	109	280	1168	147	76	1152	372
Future Volume (vph)	302	422	138	236	892	109	280	1168	147	76	1152	372
Satd. Flow (prot)	3400	5036	1568	3400	4947	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1568	3400	4947	0	3400	5036	1545	3400	5036	1568
Satd. Flow (RTOR)			175		21				144			287
Lane Group Flow (vph)	328	459	150	257	1088	0	304	1270	160	83	1252	404
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	33.7	33.7	8.0	34.7		8.0	29.5	29.5	8.0	34.5	34.5
Total Split (s)	16.0	30.7	30.7	20.0	34.7		14.3	36.8	36.8	12.5	35.0	35.0
Total Split (%)	16.0%	30.7%	30.7%	20.0%	34.7%		14.3%	36.8%	36.8%	12.5%	35.0%	35.0%
Maximum Green (s)	12.0	25.0	25.0	16.0	29.0		10.3	31.3	31.3	8.5	29.5	29.5
Yellow Time (s)	3.5	5.2	5.2	3.5	5.2		3.5	5.0	5.0	3.5	5.0	5.0
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.7	5.7	4.0	5.7		4.0	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0		2.0	5.0	5.0	2.0	5.0	5.0
Minimum Gap (s)	2.0	2.5	2.5	2.0	2.5		2.0	2.5	2.5	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	1.0	1.0	0.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		24.0	24.0		25.0			20.0	20.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		4			2	2		0	0
Act Effct Green (s)	11.7	27.6	27.6	11.9	27.8		10.3	35.4	35.4	7.8	31.1	31.1
Actuated g/C Ratio	0.12	0.28	0.28	0.12	0.28		0.10	0.35	0.35	0.08	0.31	0.31
v/c Ratio	0.83	0.33	0.27	0.64	0.78		0.87	0.71	0.25	0.31	0.80	0.59
Control Delay	61.5	29.8	4.3	49.1	37.1		69.3	31.9	6.8	34.7	25.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	29.8	4.3	49.1	37.1		69.3	31.9	6.8	34.7	25.0	8.0
LOS	E	C	A	D	D		E	C	A	C	C	A
Approach Delay		36.8			39.4			36.1			21.6	
Approach LOS		D			D			D			C	
90th %ile Green (s)	12.0	25.6	25.6	15.4	29.0		10.3	31.3	31.3	8.5	29.5	29.5
90th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	12.0	27.7	27.7	13.3	29.0		10.3	31.3	31.3	8.5	29.5	29.5
70th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Coord	Coord	Hold	Coord	Coord
50th %ile Green (s)	12.0	29.1	29.1	11.9	29.0		10.3	31.3	31.3	8.5	29.5	29.5
50th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Coord	Coord	Hold	Coord	Coord
30th %ile Green (s)	12.0	29.3	29.3	10.4	27.7		10.3	32.6	32.6	8.5	30.8	30.8
30th %ile Term Code	Max	Hold	Hold	Gap	Gap		Max	Coord	Coord	Hold	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	10.3	26.2	26.2	8.3	24.2		10.3	50.3	50.3	0.0	36.0	36.0
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap		Max	Coord	Coord	Skip	Coord	Coord
Stops (vph)	279	326	12	219	878		253	991	25	60	744	78
Fuel Used(gal)	13	14	3	6	24		13	45	3	4	50	12
CO Emissions (g/hr)	911	1013	180	454	1700		925	3154	215	254	3520	872
NOx Emissions (g/hr)	177	197	35	88	331		180	614	42	49	685	170
VOC Emissions (g/hr)	211	235	42	105	394		214	731	50	59	816	202
Dilemma Vehicles (#)	0	17	0	0	47		0	58	0	0	93	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 32.6	Intersection LOS: C
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Jefferson St & Fred Waring Dr



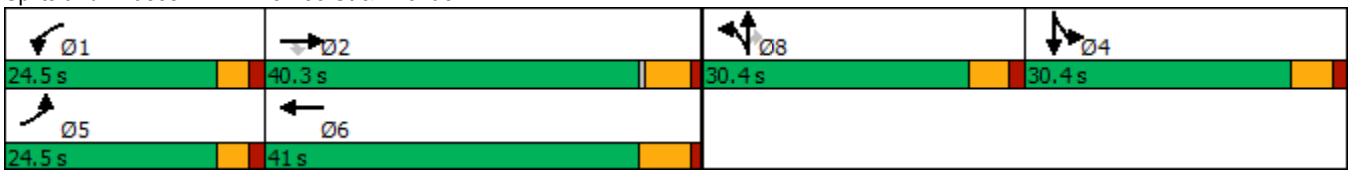


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	140	35	315	172	70	93	236	158	114	358	49
Future Volume (vph)	14	140	35	315	172	70	93	236	158	114	358	49
Satd. Flow (prot)	1752	5036	1568	3400	1765	0	1752	1845	1568	0	3418	0
Flt Permitted	0.950			0.950			0.950				0.989	
Satd. Flow (perm)	1752	5036	1568	3400	1765	0	1752	1845	1568	0	3418	0
Satd. Flow (RTOR)			106		16				172		8	
Lane Group Flow (vph)	15	152	38	342	263	0	101	257	172	0	566	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.5	40.3	40.3	14.5	16.0		15.4	15.4	15.4	15.4	15.4	
Total Split (s)	24.5	40.3	40.3	24.5	41.0		30.4	30.4	30.4	30.4	30.4	
Total Split (%)	19.4%	31.9%	31.9%	19.4%	32.5%		24.1%	24.1%	24.1%	24.1%	24.1%	
Maximum Green (s)	20.0	35.0	35.0	20.0	35.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.0	4.3	4.3	3.0	5.0		3.9	3.9	3.9	3.9	3.9	
All-Red Time (s)	1.5	1.0	1.0	1.5	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	5.3	5.3	4.5	6.0		5.4	5.4	5.4		5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None		Min	Min	Min	None	None	
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		30.0	30.0									
Pedestrian Calls (#/hr)		0	0									
Act Effct Green (s)	10.3	13.1	13.1	14.1	26.3		19.2	19.2	19.2		21.3	
Actuated g/C Ratio	0.12	0.15	0.15	0.16	0.30		0.22	0.22	0.22		0.24	
v/c Ratio	0.07	0.21	0.12	0.63	0.49		0.27	0.65	0.36		0.69	
Control Delay	43.6	36.3	0.7	42.7	31.6		33.4	41.7	7.7		36.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	43.6	36.3	0.7	42.7	31.6		33.4	41.7	7.7		36.8	
LOS	D	D	A	D	C		C	D	A		D	
Approach Delay		30.3			37.9			29.1			36.8	
Approach LOS		C			D			C			D	
90th %ile Green (s)	10.0	19.1	19.1	19.6	28.0		25.0	25.0	25.0	25.0	25.0	
90th %ile Term Code	Min	Hold	Hold	Gap	Gap		Max	Max	Max	Max	Max	
70th %ile Green (s)	10.0	17.6	17.6	16.3	23.2		24.9	24.9	24.9	25.0	25.0	
70th %ile Term Code	Min	Hold	Hold	Gap	Gap		Gap	Gap	Gap	Max	Max	
50th %ile Green (s)	0.0	10.0	10.0	13.7	27.5		19.6	19.6	19.6	22.4	22.4	
50th %ile Term Code	Skip	Min	Min	Gap	Hold		Gap	Gap	Gap	Gap	Gap	
30th %ile Green (s)	0.0	10.0	10.0	11.7	25.5		15.9	15.9	15.9	19.3	19.3	
30th %ile Term Code	Skip	Min	Min	Gap	Hold		Gap	Gap	Gap	Gap	Gap	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	0.0	10.0	10.0	10.0	23.8		12.1	12.1	12.1	14.9	14.9	
10th %ile Term Code	Skip	Min	Min	Min	Hold		Gap	Gap	Gap	Gap	Gap	
Stops (vph)	15	114	0	278	181		71	203	20		443	
Fuel Used(gal)	1	5	1	9	6		2	5	1		18	
CO Emissions (g/hr)	41	360	42	600	388		123	355	81		1284	
NOx Emissions (g/hr)	8	70	8	117	75		24	69	16		250	
VOC Emissions (g/hr)	10	83	10	139	90		28	82	19		297	
Dilemma Vehicles (#)	0	6	0	0	11		0	10	0		26	

Intersection Summary	
Cycle Length: 126.3	
Actuated Cycle Length: 89	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 34.3	Intersection LOS: C
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 109.3	
70th %ile Actuated Cycle: 104.4	
50th %ile Actuated Cycle: 86.3	
30th %ile Actuated Cycle: 77.5	
10th %ile Actuated Cycle: 67.6	

Splits and Phases: 14: Monroe St & Avenue 42

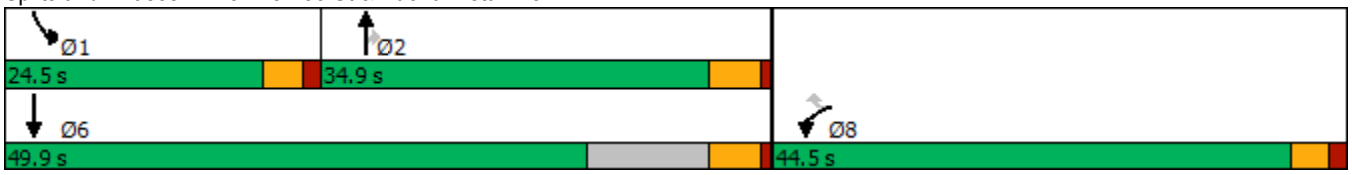


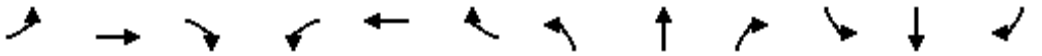
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	219	22	484	165	6	702
Future Volume (vph)	219	22	484	165	6	702
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3400	1568	3505	1568	3400	3505
Satd. Flow (RTOR)		23		170		
Lane Group Flow (vph)	226	23	499	170	6	724
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	42.5	42.5	28.9	28.9	14.5	28.9
Total Split (s)	44.5	44.5	34.9	34.9	24.5	49.9
Total Split (%)	42.8%	42.8%	33.6%	33.6%	23.6%	48.0%
Maximum Green (s)	40.0	40.0	30.0	30.0	20.0	45.0
Yellow Time (s)	3.0	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	1.5	1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.9	4.9	4.5	4.9
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	4.0	4.0	2.0	4.0
Minimum Gap (s)	0.5	0.5	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.5	0.5	0.0	0.9
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	33.0	33.0	19.0	19.0		19.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	10.4	10.4	14.8	14.8	10.3	16.9
Actuated g/C Ratio	0.28	0.28	0.40	0.40	0.28	0.46
v/c Ratio	0.24	0.05	0.36	0.23	0.01	0.45
Control Delay	12.6	7.6	9.6	3.3	13.2	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	7.6	9.6	3.3	13.2	7.5
LOS	B	A	A	A	B	A
Approach Delay	12.2		8.0			7.6
Approach LOS	B		A			A
90th %ile Green (s)	10.3	10.3	17.4	17.4	10.0	31.9
90th %ile Term Code	Gap	Gap	Gap	Gap	Min	Hold
70th %ile Green (s)	10.0	10.0	14.1	14.1	0.0	14.1
70th %ile Term Code	Min	Min	Hold	Hold	Skip	Gap
50th %ile Green (s)	10.0	10.0	13.2	13.2	0.0	13.2
50th %ile Term Code	Min	Min	Hold	Hold	Skip	Gap
30th %ile Green (s)	10.0	10.0	11.4	11.4	0.0	11.4
30th %ile Term Code	Min	Min	Hold	Hold	Skip	Gap

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
10th %ile Green (s)	10.0	10.0	17.2	17.2	0.0	17.2
10th %ile Term Code	Min	Min	Dwell	Dwell	Skip	Dwell
Stops (vph)	154	11	305	25	8	400
Fuel Used(gal)	3	0	6	1	0	8
CO Emissions (g/hr)	201	17	414	72	9	573
NOx Emissions (g/hr)	39	3	81	14	2	112
VOC Emissions (g/hr)	47	4	96	17	2	133
Dilemma Vehicles (#)	0	0	51	0	0	75

Intersection Summary	
Cycle Length: 103.9	
Actuated Cycle Length: 37	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 35.6%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 51.6	
70th %ile Actuated Cycle: 33.5	
50th %ile Actuated Cycle: 32.6	
30th %ile Actuated Cycle: 30.8	
10th %ile Actuated Cycle: 36.6	

Splits and Phases: 15: Monroe St & Buena Vista Ave



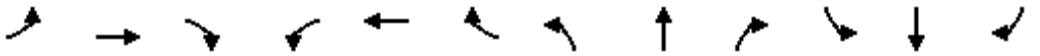


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	114	0	93	391	556	0	0	540	381
Future Volume (vph)	0	0	0	114	0	93	391	556	0	0	540	381
Satd. Flow (prot)	0	0	0	0	1752	1568	1752	1845	0	0	1845	1568
Flt Permitted					0.950		0.950					
Satd. Flow (perm)	0	0	0	0	1752	1568	1752	1845	0	0	1845	1568
Satd. Flow (RTOR)						109						389
Lane Group Flow (vph)	0	0	0	0	116	95	399	567	0	0	551	389
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	6.0			6.0	6.0
Minimum Split (s)				10.3	10.3	10.3	9.7	11.3			28.3	28.3
Total Split (s)				20.0	20.0	20.0	20.0	50.0			30.0	30.0
Total Split (%)				28.6%	28.6%	28.6%	28.6%	71.4%			42.9%	42.9%
Maximum Green (s)				14.7	14.7	14.7	15.3	44.7			24.7	24.7
Yellow Time (s)				4.8	4.8	4.8	3.7	4.8			4.8	4.8
All-Red Time (s)				0.5	0.5	0.5	1.0	0.5			0.5	0.5
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					5.3	5.3	4.7	5.3			5.3	5.3
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				2.5	2.5	2.5	2.5	2.5			2.5	2.5
Minimum Gap (s)				2.5	2.5	2.5	2.5	2.5			2.5	2.5
Time Before Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											16.0	16.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)					9.5	9.5	15.3	53.2			32.1	32.1
Actuated g/C Ratio					0.14	0.14	0.22	0.76			0.46	0.46
v/c Ratio					0.49	0.31	1.04	0.40			0.65	0.42
Control Delay					34.4	7.7	77.6	2.3			21.8	3.4
Queue Delay					0.0	0.0	0.0	0.0			0.0	0.0
Total Delay					34.4	7.7	77.6	2.3			21.8	3.4
LOS					C	A	E	A			C	A
Approach Delay					22.4			33.4			14.2	
Approach LOS					C			C			B	
90th %ile Green (s)				13.3	13.3	13.3	15.3	46.1			26.1	26.1
90th %ile Term Code				Gap	Gap	Gap	Max	Coord			Coord	Coord
70th %ile Green (s)				11.0	11.0	11.0	15.3	48.4			28.4	28.4
70th %ile Term Code				Gap	Gap	Gap	Max	Coord			Coord	Coord
50th %ile Green (s)				9.5	9.5	9.5	15.3	49.9			29.9	29.9
50th %ile Term Code				Gap	Gap	Gap	Max	Coord			Coord	Coord
30th %ile Green (s)				7.9	7.9	7.9	15.3	51.5			31.5	31.5
30th %ile Term Code				Gap	Gap	Gap	Max	Coord			Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)				0.0	0.0	0.0	15.3	64.7			44.7	44.7
10th %ile Term Code				Skip	Skip	Skip	Max	Coord			Coord	Coord
Stops (vph)					101	17	306	118			401	37
Fuel Used(gal)					3	1	11	4			9	2
CO Emissions (g/hr)					186	59	775	288			597	153
NOx Emissions (g/hr)					36	12	151	56			116	30
VOC Emissions (g/hr)					43	14	180	67			138	35
Dilemma Vehicles (#)					6	0	0	6			37	0

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 28 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Monroe St & I-10 WB Ramps

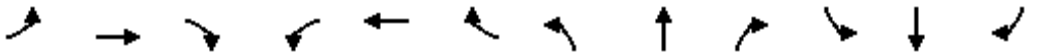


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	3	262	0	0	0	0	804	93	57	597	0
Future Volume (vph)	143	3	262	0	0	0	0	804	93	57	597	0
Satd. Flow (prot)	0	1758	1568	0	0	0	0	1815	0	1752	1845	0
Flt Permitted		0.953								0.104		
Satd. Flow (perm)	0	1758	1568	0	0	0	0	1815	0	192	1845	0
Satd. Flow (RTOR)			267					11				
Lane Group Flow (vph)	0	149	267	0	0	0	0	915	0	58	609	0
Turn Type	Split	NA	Perm					NA		pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4							6		
Detector Phase	4	4	4					2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					8.0		5.0	8.0	
Minimum Split (s)	10.3	10.3	10.3					13.3		9.7	30.3	
Total Split (s)	22.0	22.0	22.0					36.0		12.0	48.0	
Total Split (%)	31.4%	31.4%	31.4%					51.4%		17.1%	68.6%	
Maximum Green (s)	16.7	16.7	16.7					30.7		7.3	42.7	
Yellow Time (s)	4.8	4.8	4.8					4.8		3.7	4.8	
All-Red Time (s)	0.5	0.5	0.5					0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0					0.0		0.0	0.0	
Total Lost Time (s)		5.3	5.3					5.3		4.7	5.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	2.5	2.5	2.5					2.5		2.5	2.5	
Minimum Gap (s)	2.5	2.5	2.5					2.5		2.5	2.5	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					C-Max		None	C-Max	
Walk Time (s)											7.0	
Flash Dont Walk (s)											18.0	
Pedestrian Calls (#/hr)											1	
Act Effct Green (s)		10.9	10.9					41.9		49.1	48.5	
Actuated g/C Ratio		0.16	0.16					0.60		0.70	0.69	
v/c Ratio		0.55	0.57					0.84		0.22	0.48	
Control Delay		34.1	8.8					24.6		3.6	7.9	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		34.1	8.8					24.6		3.6	7.9	
LOS		C	A					C		A	A	
Approach Delay		17.8						24.6			7.5	
Approach LOS		B						C			A	
90th %ile Green (s)	15.9	15.9	15.9					31.8		7.0	43.5	
90th %ile Term Code	Gap	Gap	Gap					Coord		Gap	Coord	
70th %ile Green (s)	12.5	12.5	12.5					36.1		6.1	46.9	
70th %ile Term Code	Gap	Gap	Gap					Coord		Gap	Coord	
50th %ile Green (s)	10.7	10.7	10.7					38.3		5.7	48.7	
50th %ile Term Code	Gap	Gap	Gap					Coord		Gap	Coord	
30th %ile Green (s)	8.9	8.9	8.9					50.5		0.0	50.5	
30th %ile Term Code	Gap	Gap	Gap					Coord		Skip	Coord	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	6.4	6.4	6.4					53.0		0.0	53.0	
10th %ile Term Code	Gap	Gap	Gap					Coord		Skip	Coord	
Stops (vph)		128	38					573		18	452	
Fuel Used(gal)		3	2					19		0	8	
CO Emissions (g/hr)		227	146					1350		35	581	
NOx Emissions (g/hr)		44	28					263		7	113	
VOC Emissions (g/hr)		53	34					313		8	135	
Dilemma Vehicles (#)		8	0					58		0	24	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 68 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Monroe St & I-10 EB Ramps

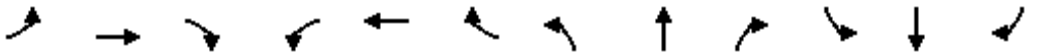


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	45	16	23	83	15	11	89	53	24	129	29
Future Volume (vph)	32	45	16	23	83	15	11	89	53	24	129	29
Satd. Flow (prot)	1752	1764	0	1752	1845	1568	1752	3280	0	1752	1795	0
Flt Permitted	0.697			0.713			0.647			0.652		
Satd. Flow (perm)	1286	1764	0	1314	1845	1546	1193	3280	0	1201	1795	0
Satd. Flow (RTOR)		18				41		59			20	
Lane Group Flow (vph)	36	68	0	26	92	17	12	158	0	27	175	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	29.7	29.7		29.7	29.7	29.7	25.2	25.2		25.2	25.2	
Total Split (s)	34.7	34.7		34.7	34.7	34.7	51.2	51.2		51.2	51.2	
Total Split (%)	40.4%	40.4%		40.4%	40.4%	40.4%	59.6%	59.6%		59.6%	59.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	45.0	45.0		45.0	45.0	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	5.2	5.2		5.2	5.2	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7	4.7	6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0	18.0	12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		0	0	0	1	1		0	0	
Act Effct Green (s)	12.6	12.6		12.6	12.6	12.6	20.7	20.7		20.7	20.7	
Actuated g/C Ratio	0.37	0.37		0.37	0.37	0.37	0.60	0.60		0.60	0.60	
v/c Ratio	0.08	0.10		0.05	0.14	0.03	0.02	0.08		0.04	0.16	
Control Delay	8.3	6.7		8.2	8.3	1.5	10.0	6.4		10.0	8.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.3	6.7		8.2	8.3	1.5	10.0	6.4		10.0	8.6	
LOS	A	A		A	A	A	A	A		A	A	
Approach Delay		7.2			7.4			6.6			8.8	
Approach LOS		A			A			A			A	
90th %ile Green (s)	25.0	25.0		25.0	25.0	25.0	19.0	19.0		19.0	19.0	
90th %ile Term Code	Ped	Ped		Hold	Hold	Hold	Ped	Ped		Hold	Hold	
70th %ile Green (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
70th %ile Term Code	Min	Min		Min	Min	Min	Min	Min		Min	Min	
50th %ile Green (s)	0.0	0.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
50th %ile Term Code	Skip	Skip		Min	Min	Min	Min	Min		Min	Min	
30th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	18.2	18.2		18.2	18.2	
30th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Dwell	Dwell		Dwell	Dwell	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	25.0	25.0		25.0	25.0	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Dwell	Dwell		Dwell	Dwell	
Stops (vph)	20	30		15	48	2	9	56		17	82	
Fuel Used(gal)	1	1		1	4	1	0	1		1	3	
CO Emissions (g/hr)	44	76		71	250	38	12	100		36	199	
NOx Emissions (g/hr)	8	15		14	49	7	2	19		7	39	
VOC Emissions (g/hr)	10	18		16	58	9	3	23		8	46	
Dilemma Vehicles (#)	0	7		0	9	0	0	13		0	14	

Intersection Summary	
Cycle Length: 85.9	
Actuated Cycle Length: 34.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.16	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 54.9	
70th %ile Actuated Cycle: 30.9	
50th %ile Actuated Cycle: 30.9	
30th %ile Actuated Cycle: 24.4	
10th %ile Actuated Cycle: 31.2	

Splits and Phases: 3: Avenue 40 & Adams St

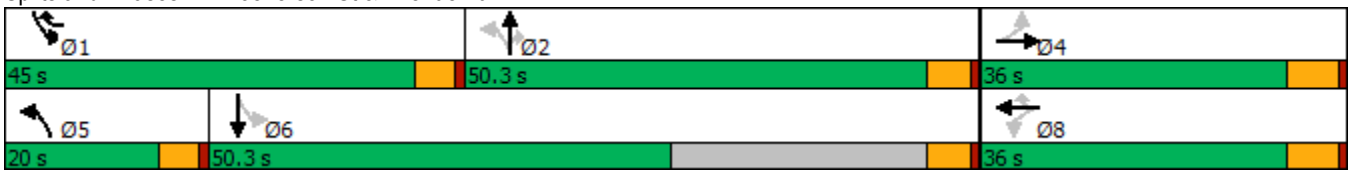


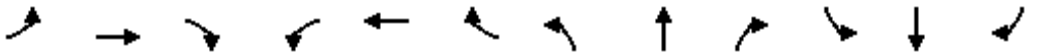
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	74	82	96	70	129	72	561	121	211	647	41
Future Volume (vph)	27	74	82	96	70	129	72	561	121	211	647	41
Satd. Flow (prot)	1752	1699	0	1752	1845	1568	1752	1845	1568	1752	1828	0
Flt Permitted	0.708			0.600			0.226			0.209		
Satd. Flow (perm)	1306	1699	0	1107	1845	1568	417	1845	1568	386	1828	0
Satd. Flow (RTOR)		40				103			108		4	
Lane Group Flow (vph)	29	169	0	104	76	140	78	610	132	229	748	0
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	34.0	34.0		25.0	25.0	15.0	15.0	34.3	34.3	15.0	24.3	
Total Split (s)	36.0	36.0		36.0	36.0	45.0	20.0	50.3	50.3	45.0	50.3	
Total Split (%)	27.4%	27.4%		27.4%	27.4%	34.3%	15.2%	38.3%	38.3%	34.3%	38.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0	40.0	15.0	45.0	45.0	40.0	45.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	4.0	4.0	4.3	4.3	4.0	4.3	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	5.0	5.0	5.3	5.3	5.0	5.3	
Lead/Lag						Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	9.0	9.0		7.0	7.0			9.0	9.0		7.0	
Flash Dont Walk (s)	19.0	19.0		12.0	12.0			20.0	20.0		12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	14.4	14.4		14.4	14.4	34.4	48.0	37.3	37.3	55.0	44.8	
Actuated g/C Ratio	0.17	0.17		0.17	0.17	0.42	0.58	0.45	0.45	0.67	0.54	
v/c Ratio	0.13	0.51		0.54	0.24	0.20	0.19	0.73	0.17	0.47	0.75	
Control Delay	33.0	30.9		44.7	33.7	6.3	7.0	26.0	5.5	8.5	22.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	30.9		44.7	33.7	6.3	7.0	26.0	5.5	8.5	22.4	
LOS	C	C		D	C	A	A	C	A	A	C	
Approach Delay		31.2			25.3			20.9			19.2	
Approach LOS		C			C			C			B	
90th %ile Green (s)	22.8	22.8		22.8	22.8	21.0	10.0	45.0	45.0	21.0	56.0	
90th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Max	Max	Gap	Hold	
70th %ile Green (s)	17.5	17.5		17.5	17.5	15.7	10.0	44.6	44.6	15.7	50.3	
70th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Gap	Gap	Gap	Hold	
50th %ile Green (s)	14.3	14.3		14.3	14.3	12.8	10.0	38.1	38.1	12.8	40.9	
50th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Gap	Gap	Gap	Hold	
30th %ile Green (s)	11.5	11.5		11.5	11.5	10.3	10.0	33.3	33.3	10.3	33.6	
30th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Min	Gap	Gap	Gap	Hold	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	8.0	8.0		8.0	8.0	10.0	0.0	25.4	25.4	10.0	40.4	
10th %ile Term Code	Min	Min		Min	Min	Min	Skip	Gap	Gap	Min	Hold	
Stops (vph)	22	98		80	54	25	27	433	19	68	513	
Fuel Used(gal)	1	7		5	3	4	1	16	2	12	45	
CO Emissions (g/hr)	96	523		346	236	306	102	1142	146	857	3151	
NOx Emissions (g/hr)	19	102		67	46	59	20	222	28	167	613	
VOC Emissions (g/hr)	22	121		80	55	71	24	265	34	199	730	
Dilemma Vehicles (#)	0	7		0	3	0	0	28	0	0	31	

Intersection Summary	
Cycle Length: 131.3	
Actuated Cycle Length: 82.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 79.0%	ICU Level of Service D
Analysis Period (min) 15	
90th %ile Actuated Cycle: 105.1	
70th %ile Actuated Cycle: 94.1	
50th %ile Actuated Cycle: 81.5	
30th %ile Actuated Cycle: 71.4	
10th %ile Actuated Cycle: 59.7	

Splits and Phases: 4: Jefferson St & Avenue 40



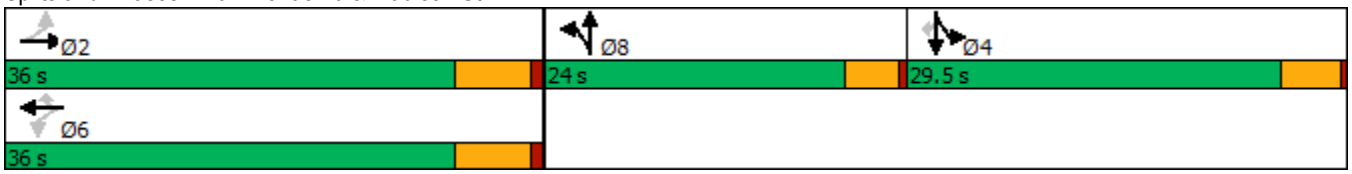


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	371	0	1	255	106	1	0	0	176	0	46
Future Volume (vph)	50	371	0	1	255	106	1	0	0	176	0	46
Satd. Flow (prot)	1752	1845	0	1752	1845	1568	0	1752	0	1752	1845	1568
Flt Permitted	0.549			0.392				0.950		0.950		
Satd. Flow (perm)	1013	1845	0	723	1845	1568	0	1752	0	1752	1845	1568
Satd. Flow (RTOR)						138						616
Lane Group Flow (vph)	65	482	0	1	331	138	0	1	0	229	0	60
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split		Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	23.0	23.0		30.0	30.0	30.0	14.0	14.0		31.5	31.5	31.5
Total Split (s)	36.0	36.0		36.0	36.0	36.0	24.0	24.0		29.5	29.5	29.5
Total Split (%)	40.2%	40.2%		40.2%	40.2%	40.2%	26.8%	26.8%		33.0%	33.0%	33.0%
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	20.0	20.0		25.0	25.0	25.0
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	3.5	3.5		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		4.0		4.5	4.5	4.5
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)	10.0	10.0		17.0	17.0	17.0				20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0		0	0	0				0	0	0
Act Effct Green (s)	22.9	22.9		22.9	22.9	22.9		10.6		13.1		13.1
Actuated g/C Ratio	0.47	0.47		0.47	0.47	0.47		0.22		0.27		0.27
v/c Ratio	0.14	0.56		0.00	0.38	0.17		0.00		0.49		0.07
Control Delay	10.7	14.1		10.0	11.7	3.3		23.0		20.9		0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	10.7	14.1		10.0	11.7	3.3		23.0		20.9		0.2
LOS	B	B		A	B	A		C		C		A
Approach Delay		13.7			9.2			23.0			16.6	
Approach LOS		B			A			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0	30.0	10.0	10.0		19.8	19.8	19.8
90th %ile Term Code	Max	Max		Hold	Hold	Hold	Min	Min		Gap	Gap	Gap
70th %ile Green (s)	24.6	24.6		24.6	24.6	24.6	0.0	0.0		13.6	13.6	13.6
70th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Skip	Skip		Gap	Gap	Gap
50th %ile Green (s)	20.2	20.2		20.2	20.2	20.2	0.0	0.0		11.9	11.9	11.9
50th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Skip	Skip		Gap	Gap	Gap
30th %ile Green (s)	16.6	16.6		16.6	16.6	16.6	0.0	0.0		10.0	10.0	10.0
30th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Skip	Skip		Min	Min	Min

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	21.2	21.2		21.2	21.2	21.2	0.0	0.0		10.0	10.0	10.0
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell	Dwell	Skip	Skip		Min	Min	Min
Stops (vph)	28	246		2	149	14		3		134		0
Fuel Used(gal)	1	6		0	15	6		0		6		1
CO Emissions (g/hr)	53	450		6	1080	389		1		396		60
NOx Emissions (g/hr)	10	88		1	210	76		0		77		12
VOC Emissions (g/hr)	12	104		1	250	90		0		92		14
Dilemma Vehicles (#)	0	33		0	22	0		0		0		0

Intersection Summary	
Cycle Length: 89.5	
Actuated Cycle Length: 48.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 74.3	
70th %ile Actuated Cycle: 48.7	
50th %ile Actuated Cycle: 42.6	
30th %ile Actuated Cycle: 37.1	
10th %ile Actuated Cycle: 41.7	

Splits and Phases: 6: Avenue 40 & Madison St

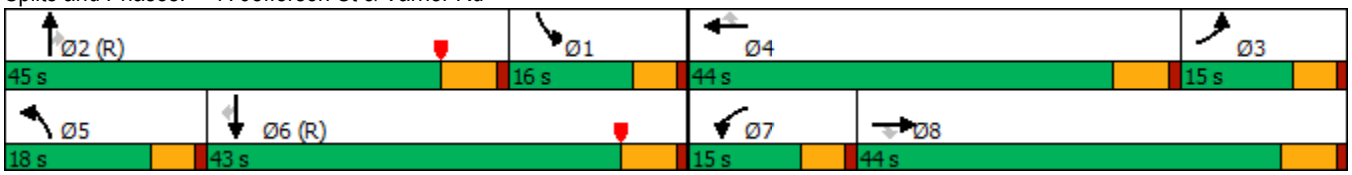


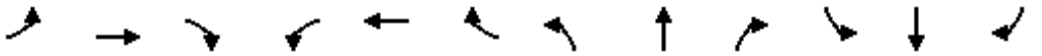
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	140	308	40	76	60	203	566	108	60	580	83
Future Volume (vph)	103	140	308	40	76	60	203	566	108	60	580	83
Satd. Flow (prot)	3400	3505	2760	3400	3505	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	2760	3400	3505	1548	3400	5036	1547	3400	5036	1568
Satd. Flow (RTOR)			362			182			182			173
Lane Group Flow (vph)	121	165	362	47	89	71	239	666	127	71	682	98
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8			4			2			6
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	9.0	10.0	9.0	9.0
Minimum Split (s)	15.0	16.0	16.0	15.0	44.0	44.0	15.0	37.0	37.0	15.0	15.0	15.0
Total Split (s)	15.0	44.0	44.0	15.0	44.0	44.0	18.0	45.0	45.0	16.0	43.0	43.0
Total Split (%)	12.5%	36.7%	36.7%	12.5%	36.7%	36.7%	15.0%	37.5%	37.5%	13.3%	35.8%	35.8%
Maximum Green (s)	10.0	38.0	38.0	10.0	38.0	38.0	13.0	39.0	39.0	11.0	37.0	37.0
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.5	3.5	1.5	3.5	3.5	1.5	4.0	4.0	1.5	4.0	4.0
Minimum Gap (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0		7.0	7.0			
Flash Dont Walk (s)					31.0	31.0		24.0	24.0			
Pedestrian Calls (#/hr)					1	1		1	1			
Act Effct Green (s)	11.1	19.7	19.7	10.0	15.6	15.6	11.8	62.5	62.5	11.8	59.5	59.5
Actuated g/C Ratio	0.09	0.16	0.16	0.08	0.13	0.13	0.10	0.52	0.52	0.10	0.50	0.50
v/c Ratio	0.39	0.29	0.48	0.17	0.20	0.20	0.71	0.25	0.14	0.21	0.27	0.11
Control Delay	55.0	44.7	5.8	52.7	44.9	1.2	64.6	15.3	3.4	51.6	20.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	44.7	5.8	52.7	44.9	1.2	64.6	15.3	3.4	51.6	20.0	0.3
LOS	E	D	A	D	D	A	E	B	A	D	C	A
Approach Delay		24.9			31.7			25.3			20.4	
Approach LOS		C			C			C			C	
90th %ile Green (s)	10.0	38.0	38.0	10.0	38.0	38.0	13.0	40.0	40.0	10.0	37.0	37.0
90th %ile Term Code	Max	Hold	Hold	Max	Ped	Ped	Max	Coord	Coord	Min	Coord	Coord
70th %ile Green (s)	13.7	13.7	13.7	10.0	10.0	10.0	13.0	61.2	61.2	13.1	61.3	61.3
70th %ile Term Code	Hold	Gap	Gap	Max	Min	Min	Max	Coord	Coord	Hold	Coord	Coord
50th %ile Green (s)	11.5	11.5	11.5	10.0	10.0	10.0	12.3	63.5	63.5	13.0	64.2	64.2
50th %ile Term Code	Hold	Gap	Gap	Max	Min	Min	Gap	Coord	Coord	Hold	Coord	Coord
30th %ile Green (s)	10.2	10.2	10.2	10.0	10.0	10.0	10.8	65.0	65.0	12.8	67.0	67.0
30th %ile Term Code	Hold	Gap	Gap	Max	Min	Min	Gap	Coord	Coord	Hold	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	10.0	25.0	25.0	0.0	10.0	10.0	10.0	83.0	83.0	0.0	68.0	68.0
10th %ile Term Code	Max	Hold	Hold	Skip	Min	Min	Min	Coord	Coord	Skip	Coord	Coord
Stops (vph)	95	118	26	37	62	0	194	287	14	54	336	0
Fuel Used(gal)	3	4	3	1	2	0	6	8	1	2	15	1
CO Emissions (g/hr)	201	245	209	77	130	23	424	564	54	151	1034	83
NOx Emissions (g/hr)	39	48	41	15	25	4	82	110	10	29	201	16
VOC Emissions (g/hr)	47	57	48	18	30	5	98	131	12	35	240	19
Dilemma Vehicles (#)	0	4	0	0	3	0	0	22	0	0	24	0

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Jefferson St & Varner Rd



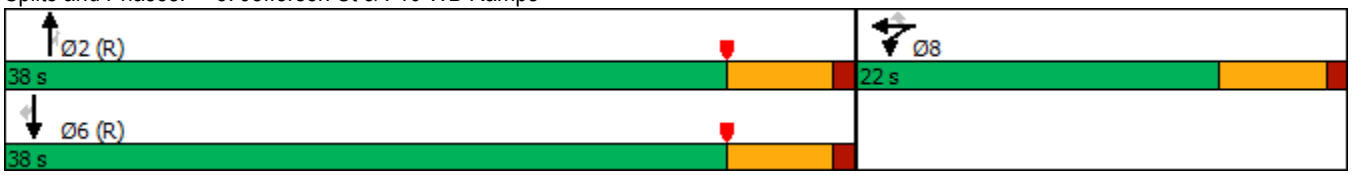


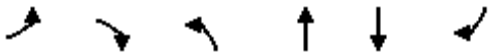
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	216	0	101	0	776	724	0	834	94
Future Volume (vph)	0	0	0	216	0	101	0	776	724	0	834	94
Satd. Flow (prot)	0	0	0	1665	1584	1490	0	5036	1568	0	5036	1568
Flt Permitted				0.950	0.956							
Satd. Flow (perm)	0	0	0	1665	1584	1490	0	5036	1568	0	5036	1568
Satd. Flow (RTOR)					51	102			813			106
Lane Group Flow (vph)	0	0	0	129	125	102	0	872	813	0	937	106
Turn Type				Split	NA	Perm		NA	Perm		NA	Perm
Protected Phases				8	8			2			6	
Permitted Phases						8			2			6
Detector Phase				8	8	8		2	2		6	6
Switch Phase												
Minimum Initial (s)				6.0	6.0	6.0		7.0	7.0		7.0	7.0
Minimum Split (s)				11.8	11.8	11.8		35.8	35.8		12.8	12.8
Total Split (s)				22.0	22.0	22.0		38.0	38.0		38.0	38.0
Total Split (%)				36.7%	36.7%	36.7%		63.3%	63.3%		63.3%	63.3%
Maximum Green (s)				16.2	16.2	16.2		32.2	32.2		32.2	32.2
Yellow Time (s)				4.8	4.8	4.8		4.8	4.8		4.8	4.8
All-Red Time (s)				1.0	1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)				0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)				5.8	5.8	5.8		5.8	5.8		5.8	5.8
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.5	2.5	2.5		2.5	2.5		2.5	2.5
Minimum Gap (s)				2.5	2.5	2.5		2.5	2.5		2.5	2.5
Time Before Reduce (s)				0.0	0.0	0.0		0.0	0.0		0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0		0.0	0.0		0.0	0.0
Recall Mode				None	None	None		C-Max	C-Max		C-Max	C-Max
Walk Time (s)								7.0	7.0			
Flash Dont Walk (s)								23.0	23.0			
Pedestrian Calls (#/hr)								0	0			
Act Effct Green (s)				9.7	9.7	9.7		42.2	42.2		42.2	42.2
Actuated g/C Ratio				0.16	0.16	0.16		0.70	0.70		0.70	0.70
v/c Ratio				0.48	0.42	0.31		0.25	0.60		0.26	0.09
Control Delay				28.0	18.0	7.8		3.2	4.1		6.1	3.1
Queue Delay				0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay				28.0	18.0	7.8		3.2	4.1		6.1	3.1
LOS				C	B	A		A	A		A	A
Approach Delay					18.7			3.6			5.8	
Approach LOS					B			A			A	
90th %ile Green (s)				14.2	14.2	14.2		34.2	34.2		34.2	34.2
90th %ile Term Code				Gap	Gap	Gap		Coord	Coord		Coord	Coord
70th %ile Green (s)				11.1	11.1	11.1		37.3	37.3		37.3	37.3
70th %ile Term Code				Gap	Gap	Gap		Coord	Coord		Coord	Coord
50th %ile Green (s)				9.5	9.5	9.5		38.9	38.9		38.9	38.9
50th %ile Term Code				Gap	Gap	Gap		Coord	Coord		Coord	Coord
30th %ile Green (s)				7.8	7.8	7.8		40.6	40.6		40.6	40.6
30th %ile Term Code				Gap	Gap	Gap		Coord	Coord		Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)				0.0	0.0	0.0		54.2	54.2		54.2	54.2
10th %ile Term Code				Skip	Skip	Skip		Coord	Coord		Coord	Coord
Stops (vph)				98	60	21		156	205		380	17
Fuel Used(gal)				2	2	1		6	7		10	1
CO Emissions (g/hr)				164	113	55		424	456		685	51
NOx Emissions (g/hr)				32	22	11		82	89		133	10
VOC Emissions (g/hr)				38	26	13		98	106		159	12
Dilemma Vehicles (#)				0	7	0		52	0		62	0

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 47 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Jefferson St & I-10 WB Ramps



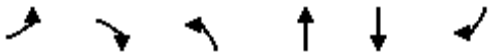


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	125	894	122	1375	929	121
Future Volume (vph)	125	894	122	1375	929	121
Satd. Flow (prot)	3400	2760	3400	5036	5036	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3400	2760	3400	5036	5036	1568
Satd. Flow (RTOR)		3				132
Lane Group Flow (vph)	136	972	133	1495	1010	132
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	7.0	7.0	7.0
Minimum Split (s)	11.8	10.7	10.7	12.8	12.8	12.8
Total Split (s)	20.0	21.0	21.0	40.0	19.0	19.0
Total Split (%)	33.3%	35.0%	35.0%	66.7%	31.7%	31.7%
Maximum Green (s)	14.2	16.3	16.3	34.2	13.2	13.2
Yellow Time (s)	4.8	3.7	3.7	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.7	4.7	5.8	5.8	5.8
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.5	2.5	2.5	2.5	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	7.4	27.2	16.3	44.5	22.3	22.3
Actuated g/C Ratio	0.12	0.45	0.27	0.74	0.37	0.37
v/c Ratio	0.32	0.78	0.14	0.40	0.54	0.20
Control Delay	25.7	18.2	17.1	4.3	16.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	18.2	17.1	4.3	16.1	3.5
LOS	C	B	B	A	B	A
Approach Delay	19.1			5.4	14.6	
Approach LOS	B			A	B	
90th %ile Green (s)	9.2	16.3	16.3	39.2	18.2	18.2
90th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
70th %ile Green (s)	8.1	16.3	16.3	40.3	19.3	19.3
70th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
50th %ile Green (s)	7.3	16.3	16.3	41.1	20.1	20.1
50th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord
30th %ile Green (s)	6.5	16.3	16.3	41.9	20.9	20.9
30th %ile Term Code	Gap	Max	Max	Coord	Coord	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
10th %ile Green (s)	0.0	16.3	16.3	54.2	33.2	33.2
10th %ile Term Code	Skip	Max	Max	Coord	Coord	Coord
Stops (vph)	107	682	87	480	828	38
Fuel Used(gal)	2	14	4	31	18	1
CO Emissions (g/hr)	150	944	254	2178	1235	79
NOx Emissions (g/hr)	29	184	49	424	240	15
VOC Emissions (g/hr)	35	219	59	505	286	18
Dilemma Vehicles (#)	0	0	0	98	37	0

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 46 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 58.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: I-10 EB Ramps & Jefferson St

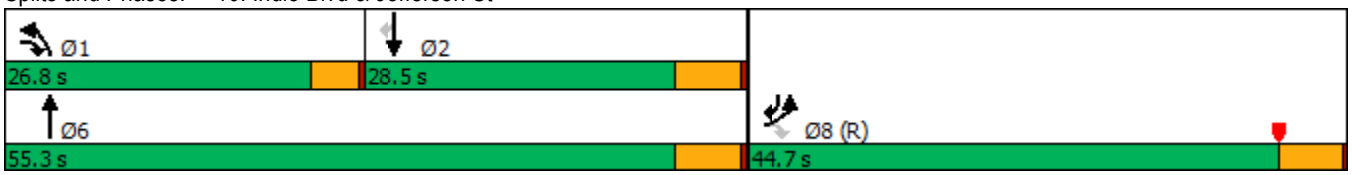


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1001	311	233	496	728	1095
Future Volume (vph)	1001	311	233	496	728	1095
Satd. Flow (prot)	3400	2760	3400	3505	3505	2760
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3400	2760	3400	3505	3505	2760
Satd. Flow (RTOR)		19				466
Lane Group Flow (vph)	1065	331	248	528	774	1165
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	8	1	1	6	2	8
Permitted Phases		8				2
Detector Phase	8	1	1	6	2	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.2	8.0	8.0	9.5	9.5	9.2
Total Split (s)	44.7	26.8	26.8	55.3	28.5	44.7
Total Split (%)	44.7%	26.8%	26.8%	55.3%	28.5%	44.7%
Maximum Green (s)	39.5	22.8	22.8	49.8	23.0	39.5
Yellow Time (s)	4.7	3.5	3.5	5.0	5.0	4.7
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	4.0	4.0	5.5	5.5	5.2
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	4.0	1.5	1.5	5.0	5.0	4.0
Minimum Gap (s)	2.0	1.5	1.5	2.0	2.0	2.0
Time Before Reduce (s)	1.0	0.0	0.0	1.0	1.0	1.0
Time To Reduce (s)	0.1	0.0	0.0	0.1	0.1	0.1
Recall Mode	C-Max	None	None	None	None	C-Max
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	51.1	67.5	11.2	38.2	23.0	79.6
Actuated g/C Ratio	0.51	0.68	0.11	0.38	0.23	0.80
v/c Ratio	0.61	0.18	0.65	0.39	0.96	0.51
Control Delay	13.9	6.3	50.4	23.1	62.3	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	6.3	50.4	23.1	62.3	2.9
LOS	B	A	D	C	E	A
Approach Delay	12.1			31.9	26.6	
Approach LOS	B			C	C	
90th %ile Green (s)	47.5	14.8	14.8	41.8	23.0	47.5
90th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
70th %ile Green (s)	49.6	12.7	12.7	39.7	23.0	49.6
70th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
50th %ile Green (s)	51.1	11.2	11.2	38.2	23.0	51.1
50th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
30th %ile Green (s)	52.6	9.7	9.7	36.7	23.0	52.6
30th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
10th %ile Green (s)	54.6	7.7	7.7	34.7	23.0	54.6
10th %ile Term Code	Coord	Gap	Gap	Hold	Max	Coord
Stops (vph)	490	106	217	344	649	199
Fuel Used(gal)	16	4	7	11	30	22
CO Emissions (g/hr)	1107	261	496	736	2097	1552
NOx Emissions (g/hr)	215	51	96	143	408	302
VOC Emissions (g/hr)	257	61	115	170	486	360
Dilemma Vehicles (#)	0	0	0	20	34	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 1 (1%), Referenced to phase 8:EBL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Indio Blvd & Jefferson St

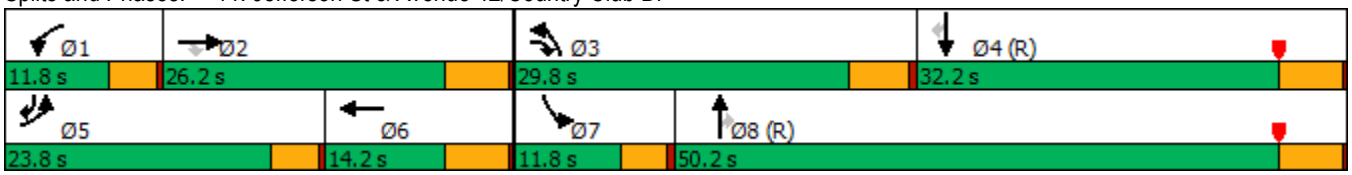


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	282	506	47	63	23	315	909	12	47	1009	272
Future Volume (vph)	375	282	506	47	63	23	315	909	12	47	1009	272
Satd. Flow (prot)	3400	3505	1568	3400	3365	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	3400	3365	0	3400	5036	1568	3400	5036	1568
Satd. Flow (RTOR)			112		24				155			259
Lane Group Flow (vph)	395	297	533	49	90	0	332	957	13	49	1062	286
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2						8			4
Detector Phase	5	2	3	1	6		3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	37.2	9.0	8.0	38.2		9.0	27.2	27.2	8.0	31.2	8.0
Total Split (s)	23.8	26.2	29.8	11.8	14.2		29.8	50.2	50.2	11.8	32.2	23.8
Total Split (%)	23.8%	26.2%	29.8%	11.8%	14.2%		29.8%	50.2%	50.2%	11.8%	32.2%	23.8%
Maximum Green (s)	19.8	21.0	24.8	7.8	9.0		24.8	45.0	45.0	7.8	27.0	19.8
Yellow Time (s)	3.5	4.7	4.5	3.5	4.7		4.5	4.7	4.7	3.5	4.7	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.2	5.0	4.0	5.2		5.0	5.2	5.2	4.0	5.2	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.1	0.1	0.0	0.1	0.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	None
Walk Time (s)		4.0			4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		28.0			29.0			18.0	18.0		22.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	15.8	16.1	38.7	5.9	6.4		17.4	57.1	57.1	5.9	42.9	63.9
Actuated g/C Ratio	0.16	0.16	0.39	0.06	0.06		0.17	0.57	0.57	0.06	0.43	0.64
v/c Ratio	0.74	0.53	0.79	0.24	0.38		0.56	0.33	0.01	0.24	0.49	0.26
Control Delay	48.4	41.3	29.0	47.4	37.6		57.0	7.6	0.0	44.4	26.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	41.3	29.0	47.4	37.6		57.0	7.6	0.0	44.4	26.3	6.1
LOS	D	D	C	D	D		E	A	A	D	C	A
Approach Delay		38.2			41.1			20.2			22.8	
Approach LOS		D			D			C			C	
90th %ile Green (s)	19.8	20.9	24.7	7.4	8.5		24.7	45.9	45.9	7.4	27.6	19.8
90th %ile Term Code	Max	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Max
70th %ile Green (s)	17.7	18.5	21.3	6.5	7.3		21.3	50.1	50.1	6.5	34.3	17.7
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Gap
50th %ile Green (s)	15.9	16.4	17.5	5.9	6.4		17.5	53.4	53.4	5.9	40.8	15.9
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Gap
30th %ile Green (s)	14.1	14.4	13.9	5.2	5.5		13.9	56.8	56.8	5.2	47.1	14.1
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap		Gap	Coord	Coord	Gap	Coord	Gap

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	11.5	10.3	9.6	0.0	0.0		9.6	79.3	79.3	0.0	64.7	11.5
10th %ile Term Code	Gap	Hold	Gap	Skip	Skip		Gap	Coord	Coord	Skip	Coord	Gap
Stops (vph)	347	248	346	44	60		294	236	0	42	789	72
Fuel Used(gal)	9	6	9	1	2		17	31	0	1	23	3
CO Emissions (g/hr)	611	422	600	78	116		1203	2175	24	93	1611	205
NOx Emissions (g/hr)	119	82	117	15	23		234	423	5	18	313	40
VOC Emissions (g/hr)	142	98	139	18	27		279	504	6	22	373	48
Dilemma Vehicles (#)	0	10	0	0	3		0	0	0	0	42	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 97 (97%), Referenced to phase 4:SBT and 8:NBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Jefferson St & Avenue 42/Country Club Dr

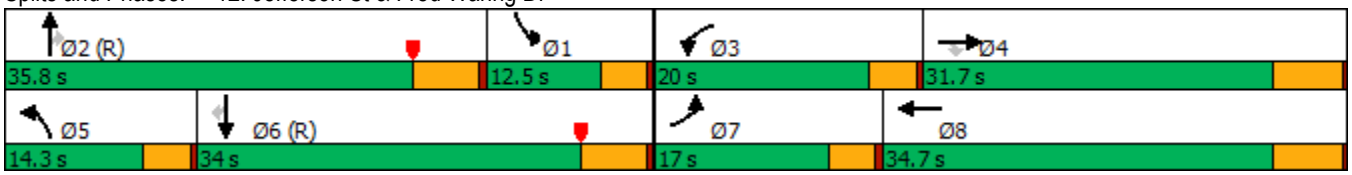


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	730	236	204	435	86	235	893	199	100	1133	212
Future Volume (vph)	250	730	236	204	435	86	235	893	199	100	1133	212
Satd. Flow (prot)	3400	5036	1568	3400	4910	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1568	3400	4910	0	3400	5036	1547	3400	5036	1568
Satd. Flow (RTOR)			257		41				216			230
Lane Group Flow (vph)	272	793	257	222	566	0	255	971	216	109	1232	230
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	33.7	33.7	8.0	34.7		8.0	29.5	29.5	8.0	34.5	34.5
Total Split (s)	17.0	31.7	31.7	20.0	34.7		14.3	35.8	35.8	12.5	34.0	34.0
Total Split (%)	17.0%	31.7%	31.7%	20.0%	34.7%		14.3%	35.8%	35.8%	12.5%	34.0%	34.0%
Maximum Green (s)	13.0	26.0	26.0	16.0	29.0		10.3	30.3	30.3	8.5	28.5	28.5
Yellow Time (s)	3.5	5.2	5.2	3.5	5.2		3.5	5.0	5.0	3.5	5.0	5.0
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.7	5.7	4.0	5.7		4.0	5.5	5.5	4.0	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0		2.0	5.0	5.0	2.0	5.0	5.0
Minimum Gap (s)	2.0	2.5	2.5	2.0	2.5		2.0	2.5	2.5	2.0	2.5	2.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	1.0	1.0	0.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		24.0	24.0		25.0			20.0	20.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0			1	1		0	0
Act Effct Green (s)	11.5	23.6	23.6	10.9	22.9		9.9	37.8	37.8	8.5	36.4	36.4
Actuated g/C Ratio	0.12	0.24	0.24	0.11	0.23		0.10	0.38	0.38	0.08	0.36	0.36
v/c Ratio	0.69	0.67	0.45	0.60	0.49		0.75	0.51	0.30	0.38	0.67	0.32
Control Delay	52.1	37.4	6.6	49.2	32.0		58.8	26.0	4.7	39.7	23.6	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	37.4	6.6	49.2	32.0		58.8	26.0	4.7	39.7	23.6	5.9
LOS	D	D	A	D	C		E	C	A	D	C	A
Approach Delay		34.5			36.8			28.6			22.2	
Approach LOS		C			D			C			C	
90th %ile Green (s)	13.0	26.0	26.0	14.2	27.2		10.3	32.1	32.1	8.5	30.3	30.3
90th %ile Term Code	Max	Max	Max	Gap	Hold		Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	13.0	26.0	26.0	12.2	25.2		10.3	34.1	34.1	8.5	32.3	32.3
70th %ile Term Code	Max	Max	Max	Gap	Hold		Max	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	12.3	24.2	24.2	10.9	22.8		10.3	37.2	37.2	8.5	35.4	35.4
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold		Max	Coord	Coord	Hold	Coord	Coord
30th %ile Green (s)	10.8	22.5	22.5	9.5	21.2		10.3	40.3	40.3	8.5	38.5	38.5
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold		Max	Coord	Coord	Hold	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	8.6	19.3	19.3	7.5	18.2		8.5	45.5	45.5	8.5	45.5	45.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold		Gap	Coord	Coord	Hold	Coord	Coord
Stops (vph)	234	638	27	189	402		219	671	21	84	661	49
Fuel Used(gal)	10	27	5	6	11		11	32	4	5	48	7
CO Emissions (g/hr)	724	1912	322	392	788		750	2224	268	347	3363	496
NOx Emissions (g/hr)	141	372	63	76	153		146	433	52	68	654	96
VOC Emissions (g/hr)	168	443	75	91	183		174	515	62	80	779	115
Dilemma Vehicles (#)	0	33	0	0	21		0	45	0	0	89	0

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Jefferson St & Fred Waring Dr

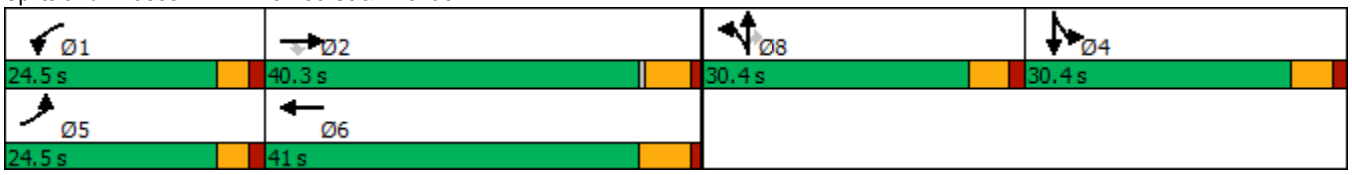


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	223	49	151	104	61	50	261	226	158	212	23
Future Volume (vph)	53	223	49	151	104	61	50	261	226	158	212	23
Satd. Flow (prot)	1752	5036	1568	3400	1741	0	1752	1845	1568	0	3404	0
Flt Permitted	0.950			0.950			0.950				0.980	
Satd. Flow (perm)	1752	5036	1547	3400	1741	0	1752	1845	1568	0	3404	0
Satd. Flow (RTOR)			106		23				254		4	
Lane Group Flow (vph)	60	251	55	170	186	0	56	293	254	0	442	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.5	40.3	40.3	14.5	16.0		15.4	15.4	15.4	15.4	15.4	
Total Split (s)	24.5	40.3	40.3	24.5	41.0		30.4	30.4	30.4	30.4	30.4	
Total Split (%)	19.4%	31.9%	31.9%	19.4%	32.5%		24.1%	24.1%	24.1%	24.1%	24.1%	
Maximum Green (s)	20.0	35.0	35.0	20.0	35.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.0	4.3	4.3	3.0	5.0		3.9	3.9	3.9	3.9	3.9	
All-Red Time (s)	1.5	1.0	1.0	1.5	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	5.3	5.3	4.5	6.0		5.4	5.4	5.4		5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None		Min	Min	Min	None	None	
Walk Time (s)		5.0	5.0									
Flash Dont Walk (s)		30.0	30.0									
Pedestrian Calls (#/hr)		1	1									
Act Effct Green (s)	10.7	17.5	17.5	11.0	20.9		21.0	21.0	21.0		18.1	
Actuated g/C Ratio	0.12	0.20	0.20	0.12	0.23		0.24	0.24	0.24		0.20	
v/c Ratio	0.29	0.25	0.14	0.41	0.44		0.14	0.67	0.45		0.64	
Control Delay	45.8	31.3	0.9	43.2	31.7		31.6	41.8	7.4		38.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	45.8	31.3	0.9	43.2	31.7		31.6	41.8	7.4		38.4	
LOS	D	C	A	D	C		C	D	A		D	
Approach Delay		29.1			37.2			26.4			38.4	
Approach LOS		C			D			C			D	
90th %ile Green (s)	12.0	35.0	35.0	13.4	35.7		25.0	25.0	25.0	25.0	25.0	
90th %ile Term Code	Gap	Ped	Ped	Gap	Hold		Max	Max	Max	Max	Max	
70th %ile Green (s)	10.0	17.9	17.9	10.4	17.6		25.0	25.0	25.0	20.8	20.8	
70th %ile Term Code	Min	Hold	Hold	Gap	Gap		Max	Max	Max	Gap	Gap	
50th %ile Green (s)	10.0	15.6	15.6	10.0	14.9		22.9	22.9	22.9	17.6	17.6	
50th %ile Term Code	Min	Hold	Hold	Min	Gap		Gap	Gap	Gap	Gap	Gap	
30th %ile Green (s)	10.0	13.2	13.2	10.0	12.5		18.6	18.6	18.6	15.5	15.5	
30th %ile Term Code	Min	Hold	Hold	Min	Gap		Gap	Gap	Gap	Gap	Gap	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	0.0	10.0	10.0	10.0	23.8		13.6	13.6	13.6	12.3	12.3	
10th %ile Term Code	Skip	Min	Min	Min	Hold		Gap	Gap	Gap	Gap	Gap	
Stops (vph)	47	172	0	131	118		38	218	26		335	
Fuel Used(gal)	2	8	1	4	4		1	6	2		14	
CO Emissions (g/hr)	147	547	58	286	260		65	388	114		978	
NOx Emissions (g/hr)	29	106	11	56	51		13	76	22		190	
VOC Emissions (g/hr)	34	127	14	66	60		15	90	26		227	
Dilemma Vehicles (#)	0	10	0	0	7		0	12	0		18	

Intersection Summary	
Cycle Length: 126.3	
Actuated Cycle Length: 89	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 32.1	Intersection LOS: C
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	
90th %ile Actuated Cycle: 119	
70th %ile Actuated Cycle: 94.7	
50th %ile Actuated Cycle: 86.7	
30th %ile Actuated Cycle: 77.9	
10th %ile Actuated Cycle: 66.5	

Splits and Phases: 14: Monroe St & Avenue 42

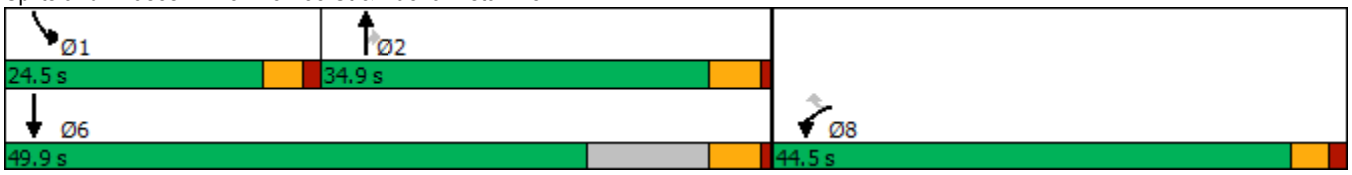


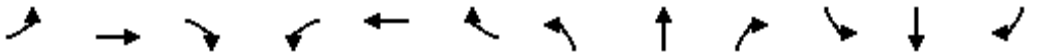
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	301	24	591	273	4	389
Future Volume (vph)	301	24	591	273	4	389
Satd. Flow (prot)	3400	1568	3505	1568	3400	3505
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3400	1545	3505	1545	3400	3505
Satd. Flow (RTOR)		25		287		
Lane Group Flow (vph)	317	25	622	287	4	409
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	42.5	42.5	28.9	28.9	14.5	28.9
Total Split (s)	44.5	44.5	34.9	34.9	24.5	49.9
Total Split (%)	42.8%	42.8%	33.6%	33.6%	23.6%	48.0%
Maximum Green (s)	40.0	40.0	30.0	30.0	20.0	45.0
Yellow Time (s)	3.0	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	1.5	1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.9	4.9	4.5	4.9
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	4.0	4.0	2.0	4.0
Minimum Gap (s)	0.5	0.5	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	1.0	1.0	0.5	0.5	0.0	0.9
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	33.0	33.0	19.0	19.0		19.0
Pedestrian Calls (#/hr)	3	3	2	2		0
Act Effct Green (s)	14.7	14.7	16.1	16.1	12.0	17.5
Actuated g/C Ratio	0.34	0.34	0.37	0.37	0.28	0.40
v/c Ratio	0.28	0.05	0.48	0.38	0.00	0.29
Control Delay	11.9	6.2	14.0	4.2	23.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	6.2	14.0	4.2	23.0	9.5
LOS	B	A	B	A	C	A
Approach Delay	11.5		10.9			9.6
Approach LOS	B		B			A
90th %ile Green (s)	38.0	38.0	28.8	28.8	10.0	43.3
90th %ile Term Code	Ped	Ped	Gap	Gap	Min	Hold
70th %ile Green (s)	10.0	10.0	14.6	14.6	0.0	14.6
70th %ile Term Code	Min	Min	Gap	Gap	Skip	Hold
50th %ile Green (s)	10.0	10.0	12.5	12.5	0.0	12.5
50th %ile Term Code	Min	Min	Gap	Gap	Skip	Hold
30th %ile Green (s)	10.0	10.0	11.5	11.5	0.0	11.5
30th %ile Term Code	Min	Min	Gap	Gap	Skip	Hold

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
10th %ile Green (s)	10.0	10.0	10.0	10.0	0.0	10.0
10th %ile Term Code	Min	Min	Min	Min	Skip	Min
Stops (vph)	187	8	391	29	5	217
Fuel Used(gal)	4	0	8	2	0	5
CO Emissions (g/hr)	264	16	555	114	6	326
NOx Emissions (g/hr)	51	3	108	22	1	63
VOC Emissions (g/hr)	61	4	129	26	1	75
Dilemma Vehicles (#)	0	0	58	0	0	37

Intersection Summary	
Cycle Length: 103.9	
Actuated Cycle Length: 43.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 35.2%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 90.7	
70th %ile Actuated Cycle: 34	
50th %ile Actuated Cycle: 31.9	
30th %ile Actuated Cycle: 30.9	
10th %ile Actuated Cycle: 29.4	

Splits and Phases: 15: Monroe St & Buena Vista Ave



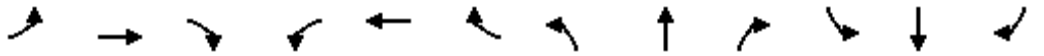


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	157	0	102	228	762	0	0	518	172
Future Volume (vph)	0	0	0	157	0	102	228	762	0	0	518	172
Satd. Flow (prot)	0	0	0	0	1752	1568	1752	1845	0	0	1845	1568
Flt Permitted					0.950		0.292					
Satd. Flow (perm)	0	0	0	0	1752	1568	538	1845	0	0	1845	1530
Satd. Flow (RTOR)						109						179
Lane Group Flow (vph)	0	0	0	0	164	106	238	794	0	0	540	179
Turn Type				Split	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8	2					6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	6.0			6.0	6.0
Minimum Split (s)				10.3	10.3	10.3	9.7	11.3			28.3	28.3
Total Split (s)				20.0	20.0	20.0	20.0	50.0			30.0	30.0
Total Split (%)				28.6%	28.6%	28.6%	28.6%	71.4%			42.9%	42.9%
Maximum Green (s)				14.7	14.7	14.7	15.3	44.7			24.7	24.7
Yellow Time (s)				4.8	4.8	4.8	3.7	4.8			4.8	4.8
All-Red Time (s)				0.5	0.5	0.5	1.0	0.5			0.5	0.5
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					5.3	5.3	4.7	5.3			5.3	5.3
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Vehicle Extension (s)				2.5	2.5	2.5	2.5	2.5			2.5	2.5
Minimum Gap (s)				2.5	2.5	2.5	2.5	2.5			2.5	2.5
Time Before Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Recall Mode				None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											16.0	16.0
Pedestrian Calls (#/hr)											3	3
Act Effct Green (s)					11.1	11.1	48.9	48.3			34.7	34.7
Actuated g/C Ratio					0.16	0.16	0.70	0.69			0.50	0.50
v/c Ratio					0.59	0.31	0.45	0.62			0.59	0.21
Control Delay					35.8	8.0	2.9	4.1			18.3	3.2
Queue Delay					0.0	0.0	0.0	0.0			0.0	0.0
Total Delay					35.8	8.0	2.9	4.1			18.3	3.2
LOS					D	A	A	A			B	A
Approach Delay					24.9			3.8			14.5	
Approach LOS					C			A			B	
90th %ile Green (s)				14.7	14.7	14.7	13.6	44.7			26.4	26.4
90th %ile Term Code				Max	Max	Max	Gap	Coord			Coord	Coord
70th %ile Green (s)				13.2	13.2	13.2	9.7	46.2			31.8	31.8
70th %ile Term Code				Gap	Gap	Gap	Gap	Coord			Coord	Coord
50th %ile Green (s)				11.3	11.3	11.3	8.3	48.1			35.1	35.1
50th %ile Term Code				Gap	Gap	Gap	Gap	Coord			Coord	Coord
30th %ile Green (s)				9.5	9.5	9.5	7.2	49.9			38.0	38.0
30th %ile Term Code				Gap	Gap	Gap	Gap	Coord			Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)				6.7	6.7	6.7	5.9	52.7			42.1	42.1
10th %ile Term Code				Gap	Gap	Gap	Gap	Coord			Coord	Coord
Stops (vph)					139	20	26	237			360	20
Fuel Used(gal)					4	1	2	7			8	1
CO Emissions (g/hr)					259	67	105	467			530	71
NOx Emissions (g/hr)					50	13	20	91			103	14
VOC Emissions (g/hr)					60	15	24	108			123	16
Dilemma Vehicles (#)					10	0	0	46			36	0

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 28 (40%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: Monroe St & I-10 WB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	2	326	0	0	0	0	680	126	89	586	0
Future Volume (vph)	310	2	326	0	0	0	0	680	126	89	586	0
Satd. Flow (prot)	0	1758	1568	0	0	0	0	1806	0	1752	1845	0
Flt Permitted		0.953								0.103		
Satd. Flow (perm)	0	1758	1568	0	0	0	0	1806	0	190	1845	0
Satd. Flow (RTOR)			309					17				
Lane Group Flow (vph)	0	315	329	0	0	0	0	814	0	90	592	0
Turn Type	Split	NA	Perm					NA		pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4							6		
Detector Phase	4	4	4					2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					8.0		5.0	8.0	
Minimum Split (s)	10.3	10.3	10.3					13.3		9.7	30.3	
Total Split (s)	22.0	22.0	22.0					36.0		12.0	48.0	
Total Split (%)	31.4%	31.4%	31.4%					51.4%		17.1%	68.6%	
Maximum Green (s)	16.7	16.7	16.7					30.7		7.3	42.7	
Yellow Time (s)	4.8	4.8	4.8					4.8		3.7	4.8	
All-Red Time (s)	0.5	0.5	0.5					0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0					0.0		0.0	0.0	
Total Lost Time (s)		5.3	5.3					5.3		4.7	5.3	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	2.5	2.5	2.5					2.5		2.5	2.5	
Minimum Gap (s)	2.5	2.5	2.5					2.5		2.5	2.5	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					C-Max		None	C-Max	
Walk Time (s)											7.0	
Flash Dont Walk (s)											18.0	
Pedestrian Calls (#/hr)											3	
Act Effct Green (s)		15.3	15.3					35.0		44.7	44.1	
Actuated g/C Ratio		0.22	0.22					0.50		0.64	0.63	
v/c Ratio		0.82	0.56					0.89		0.34	0.51	
Control Delay		44.6	8.0					33.1		8.8	12.0	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		44.6	8.0					33.1		8.8	12.0	
LOS		D	A					C		A	B	
Approach Delay		25.9						33.1			11.6	
Approach LOS		C						C			B	
90th %ile Green (s)	16.7	16.7	16.7					30.7		7.3	42.7	
90th %ile Term Code	Max	Max	Max					Coord		Max	Coord	
70th %ile Green (s)	16.7	16.7	16.7					31.0		7.0	42.7	
70th %ile Term Code	Max	Max	Max					Coord		Gap	Coord	
50th %ile Green (s)	16.7	16.7	16.7					31.6		6.4	42.7	
50th %ile Term Code	Max	Max	Max					Coord		Gap	Coord	
30th %ile Green (s)	15.1	15.1	15.1					33.9		5.7	44.3	
30th %ile Term Code	Gap	Gap	Gap					Coord		Gap	Coord	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
10th %ile Green (s)	11.4	11.4	11.4					48.0		0.0	48.0	
10th %ile Term Code	Gap	Gap	Gap					Coord		Skip	Coord	
Stops (vph)		274	54					592		46	451	
Fuel Used(gal)		8	3					20		1	9	
CO Emissions (g/hr)		532	184					1364		73	610	
NOx Emissions (g/hr)		103	36					265		14	119	
VOC Emissions (g/hr)		123	43					316		17	141	
Dilemma Vehicles (#)		20	0					52		0	13	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 68 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 17: Monroe St & I-10 EB Ramps

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	76	0	0	182	13	0	0	0	32	0	22
Future Vol, veh/h	9	76	0	0	182	13	0	0	0	32	0	22
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	14	121	0	0	289	21	0	0	0	51	0	35
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	7.4	11.5	0	9.2
HCM LOS	A	B	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	59%
Vol Thru, %	100%	0%	100%	100%	100%	93%	0%
Vol Right, %	0%	0%	0%	0%	0%	7%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	9	38	38	0	195	54
LT Vol	0	9	0	0	0	0	32
Through Vol	0	0	38	38	0	182	0
RT Vol	0	0	0	0	0	13	22
Lane Flow Rate	0	14	60	60	0	310	86
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0	0.022	0.085	0.055	0	0.431	0.133
Departure Headway (Hd)	5.715	5.567	5.064	3.302	5.063	5.016	5.597
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	644	708	1083	0	718	641
Service Time	3.457	3.292	2.789	1.026	2.786	2.739	3.33
HCM Lane V/C Ratio	0	0.022	0.085	0.055	0	0.432	0.134
HCM Control Delay	8.5	8.4	8.3	6.2	7.8	11.5	9.2
HCM Lane LOS	N	A	A	A	N	B	A
HCM 95th-tile Q	0	0.1	0.3	0.2	0	2.2	0.5

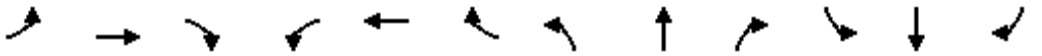
Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	1	190	14	1	113
Future Vol, veh/h	48	1	190	14	1	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	62	1	247	18	1	147

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	405	133	0	0	265	0
Stage 1	256	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	585	889	-	-	1291	-
Stage 1	761	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	584	889	-	-	1291	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	874	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	584	889	1291	-
HCM Lane V/C Ratio	-	-	0.107	0.001	0.001	-
HCM Control Delay (s)	-	-	11.9	9.1	7.8	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	41	12	30	89	80	3	303	51	24	274	69
Future Volume (veh/h)	51	41	12	30	89	80	3	303	51	24	274	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	65	52	4	38	113	26	4	384	47	30	347	76
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	519	454	35	573	495	419	401	1130	137	503	528	116
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1238	1701	131	1334	1856	1570	956	3156	383	949	1474	323
Grp Volume(v), veh/h	65	0	56	38	113	26	4	213	218	30	0	423
Grp Sat Flow(s),veh/h/ln	1238	0	1832	1334	1856	1570	956	1763	1777	949	0	1797
Q Serve(g_s), s	1.3	0.0	0.7	0.6	1.4	0.4	0.1	2.6	2.6	0.7	0.0	5.7
Cycle Q Clear(g_c), s	2.6	0.0	0.7	1.3	1.4	0.4	5.8	2.6	2.6	3.3	0.0	5.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.22	1.00		0.18
Lane Grp Cap(c), veh/h	519	0	488	573	495	419	401	631	636	503	0	644
V/C Ratio(X)	0.13	0.00	0.11	0.07	0.23	0.06	0.01	0.34	0.34	0.06	0.00	0.66
Avail Cap(c_a), veh/h	1468	0	1892	1595	1917	1622	1541	2731	2753	1634	0	2785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	8.1	8.6	8.3	7.9	10.3	6.8	6.8	8.0	0.0	7.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.3	0.3	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.1	0.3	0.1	0.0	0.5	0.5	0.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	0.0	8.2	8.6	8.5	8.0	10.3	7.1	7.1	8.1	0.0	9.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		121			177			435			453	
Approach Delay, s/veh		8.9			8.5			7.2			8.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.6		12.4		16.6		12.4				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		7.8		4.6		7.7		3.4				
Green Ext Time (p_c), s		2.6		0.4		2.6		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	73	166	71	123	92	433	629	58	81	744	117
Future Volume (veh/h)	63	73	166	71	123	92	433	629	58	81	744	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	71	82	17	80	138	11	487	707	0	91	836	67
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	229	272	214	234	252	112	542	2835		448	2732	848
Arrive On Green	0.07	0.08	0.08	0.07	0.07	0.07	0.05	0.18	0.00	0.13	0.54	0.54
Sat Flow, veh/h	3428	3526	2768	3428	3526	1572	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	71	82	17	80	138	11	487	707	0	91	836	67
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1572	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	2.8	3.1	0.6	3.1	5.3	0.7	19.8	16.7	0.0	3.3	12.7	2.9
Cycle Q Clear(g_c), s	2.8	3.1	0.6	3.1	5.3	0.7	19.8	16.7	0.0	3.3	12.7	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	272	214	234	252	112	542	2835		448	2732	848
V/C Ratio(X)	0.31	0.30	0.08	0.34	0.55	0.10	0.90	0.25		0.20	0.31	0.08
Avail Cap(c_a), veh/h	245	957	751	245	957	427	661	2835		448	2732	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	61.0	35.1	62.2	62.8	33.8	65.2	31.9	0.0	54.3	17.8	15.5
Incr Delay (d2), s/veh	0.3	0.7	0.2	0.3	2.2	0.5	11.5	0.1	0.0	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.4	0.3	1.3	2.4	0.4	10.0	7.6	0.0	1.4	4.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	61.8	35.3	62.5	65.1	34.2	76.7	32.0	0.0	54.4	18.1	15.7
LnGrp LOS	E	E	D	E	E	C	E	C		D	B	B
Approach Vol, veh/h		170			229			1194	A		994	
Approach Delay, s/veh		59.4			62.7			50.3			21.3	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	84.3	15.4	16.0	27.1	81.5	14.6	16.8
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	4.0	* 59	10.0	* 38	27.0	43.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	5.3	18.7	4.8	7.3	21.8	14.7	5.1	5.1
Green Ext Time (p_c), s	0.0	7.4	0.0	1.0	0.4	8.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	329	2	134	0	1002	917	0	738	141
Future Volume (veh/h)	0	0	0	329	2	134	0	1002	917	0	738	141
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				369	0	48	0	1055	0	0	777	96
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				499	0	222	0	3511		0	3511	1090
Arrive On Green				0.14	0.00	0.14	0.00	1.00	0.00	0.00	0.69	0.69
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				369	0	48	0	1055	0	0	777	96
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				7.0	0.0	1.9	0.0	0.0	0.0	0.0	3.9	1.4
Cycle Q Clear(g_c), s				7.0	0.0	1.9	0.0	0.0	0.0	0.0	3.9	1.4
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				499	0	222	0	3511		0	3511	1090
V/C Ratio(X)				0.74	0.00	0.22	0.00	0.30		0.00	0.22	0.09
Avail Cap(c_a), veh/h				1070	0	476	0	3511		0	3511	1090
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.86	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				28.8	0.0	26.6	0.0	0.0	0.0	0.0	3.9	3.5
Incr Delay (d2), s/veh				1.6	0.0	0.4	0.0	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	0.7	0.0	0.1	0.0	0.0	0.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				30.5	0.0	27.0	0.0	0.2	0.0	0.0	4.0	3.7
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					417			1055	A		873	
Approach Delay, s/veh					30.1			0.2			4.0	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	54.3		54.3		15.7			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	37.2		37.2		21.2			
Max Q Clear Time (g_c+I1), s	2.0		5.9		9.0			
Green Ext Time (p_c), s	6.5		4.6		0.9			

Intersection Summary		
HCM 6th Ctrl Delay	6.9	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	715	101	1852	957	110
Future Volume (veh/h)	67	715	101	1852	957	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	72	741	109	1991	1029	57
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	770	259	3199	2476	769
Arrive On Green	0.20	0.20	0.08	0.63	0.98	0.98
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	72	741	109	1991	1029	57
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	1.2	14.2	2.1	16.7	0.5	0.1
Cycle Q Clear(g_c), s	1.2	14.2	2.1	16.7	0.5	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	695	770	259	3199	2476	769
V/C Ratio(X)	0.10	0.96	0.42	0.62	0.42	0.07
Avail Cap(c_a), veh/h	695	770	700	3199	2476	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.96	0.96
Uniform Delay (d), s/veh	22.7	24.9	30.9	7.8	0.4	0.4
Incr Delay (d2), s/veh	0.0	23.4	0.8	0.9	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	14.9	0.8	4.2	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.8	48.3	31.7	8.8	0.9	0.6
LnGrp LOS	C	D	C	A	A	A
Approach Vol, veh/h	813			2100	1086	
Approach Delay, s/veh	46.1			9.9	0.9	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.0		20.0	10.0	40.0
Change Period (Y+Rc), s		5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s		44.2		14.2	* 14	25.2
Max Q Clear Time (g_c+I1), s		18.7		16.2	4.1	2.5
Green Ext Time (p_c), s		14.0		0.0	0.1	5.9

Intersection Summary	
HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1133	217	439	820	477	1195
Future Volume (veh/h)	1133	217	439	820	477	1195
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1218	199	472	882	513	1230
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1251	1450	544	1512	811	1647
Arrive On Green	0.12	0.12	0.16	0.43	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1218	199	472	882	513	1230
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	35.4	4.9	13.4	19.1	13.1	23.0
Cycle Q Clear(g_c), s	35.4	4.9	13.4	19.1	13.1	23.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1251	1450	544	1512	811	1647
V/C Ratio(X)	0.97	0.14	0.87	0.58	0.63	0.75
Avail Cap(c_a), veh/h	1251	1450	885	1861	811	1647
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	17.3	41.0	21.8	34.7	12.9
Incr Delay (d2), s/veh	18.2	0.2	2.9	0.8	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.1	1.5	5.6	7.3	5.6	15.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.7	17.5	43.9	22.5	37.0	15.2
LnGrp LOS	E	B	D	C	D	B
Approach Vol, veh/h	1417			1354	1743	
Approach Delay, s/veh	55.5			30.0	21.6	
Approach LOS	E			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	89.9	28.5			48.4	41.7
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	25.8	23.0			52.8	36.5
Max Q Clear Time (g_c+I1), s	15.4	25.0			21.1	37.4
Green Ext Time (p_c), s	0.4	0.0			12.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	172	461	44	151	26	563	1030	17	46	1106	482
Future Volume (veh/h)	266	172	461	44	151	26	563	1030	17	46	1106	482
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	302	195	460	50	172	16	640	1170	10	52	1257	483
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	370	670	628	103	365	34	718	2864	889	105	1907	762
Arrive On Green	0.11	0.19	0.19	0.03	0.11	0.11	0.21	0.57	0.57	0.01	0.12	0.12
Sat Flow, veh/h	3428	3526	1572	3428	3264	300	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	302	195	460	50	92	96	640	1170	10	52	1257	483
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1801	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	8.6	4.7	19.0	1.4	4.9	5.0	18.1	13.1	0.3	1.5	23.7	24.7
Cycle Q Clear(g_c), s	8.6	4.7	19.0	1.4	4.9	5.0	18.1	13.1	0.3	1.5	23.7	24.7
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	670	628	103	197	202	718	2864	889	105	1907	762
V/C Ratio(X)	0.82	0.29	0.73	0.49	0.47	0.48	0.89	0.41	0.01	0.50	0.66	0.63
Avail Cap(c_a), veh/h	473	670	628	267	229	234	919	2864	889	267	1907	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	43.6	34.7	25.5	47.7	41.6	41.6	38.4	12.3	9.5	48.7	37.7	27.6
Incr Delay (d2), s/veh	6.6	0.1	3.9	1.3	0.6	0.6	7.8	0.4	0.0	0.9	1.2	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	2.0	9.1	0.6	2.1	2.2	7.9	4.3	0.1	0.6	10.8	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	34.8	29.3	49.1	42.2	42.3	46.2	12.7	9.5	49.7	38.9	30.4
LnGrp LOS	D	C	C	D	D	D	D	B	A	D	D	C
Approach Vol, veh/h		957			238			1820			1792	
Approach Delay, s/veh		37.1			43.7			24.5			36.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	24.2	26.0	42.8	14.8	16.4	7.1	61.7
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	19.0	26.8	27.0	13.8	13.0	7.8	47.0
Max Q Clear Time (g_c+I1), s	3.4	21.0	20.1	26.7	10.6	7.0	3.5	15.1
Green Ext Time (p_c), s	0.0	0.0	0.8	0.2	0.2	0.3	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	422	138	236	892	109	280	1168	147	76	1152	372
Future Volume (veh/h)	302	422	138	236	892	109	280	1168	147	76	1152	372
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	328	459	41	257	970	103	304	1270	67	83	1252	206
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	391	1451	450	328	1246	132	353	1586	491	335	1635	508
Arrive On Green	0.11	0.29	0.29	0.10	0.27	0.27	0.10	0.31	0.31	0.10	0.32	0.32
Sat Flow, veh/h	3428	5066	1572	3428	4649	492	3428	5066	1569	3428	5066	1572
Grp Volume(v), veh/h	328	459	41	257	704	369	304	1270	67	83	1252	206
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1764	1714	1689	1569	1714	1689	1572
Q Serve(g_s), s	9.4	7.1	1.9	7.3	19.3	19.4	8.7	23.0	2.2	2.2	22.2	10.2
Cycle Q Clear(g_c), s	9.4	7.1	1.9	7.3	19.3	19.4	8.7	23.0	2.2	2.2	22.2	10.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	1451	450	328	905	473	353	1586	491	335	1635	508
V/C Ratio(X)	0.84	0.32	0.09	0.78	0.78	0.78	0.86	0.80	0.14	0.25	0.77	0.41
Avail Cap(c_a), veh/h	411	1451	450	549	979	512	353	1586	491	335	1635	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	28.0	26.1	44.2	33.8	33.9	44.1	31.5	12.9	41.7	30.5	26.4
Incr Delay (d2), s/veh	12.7	0.3	0.2	1.6	4.6	8.7	18.2	4.4	0.6	0.1	3.5	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.7	0.7	3.0	7.9	8.9	4.4	9.1	1.1	0.9	8.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	28.3	26.3	45.8	38.5	42.6	62.3	35.9	13.4	41.9	33.9	28.8
LnGrp LOS	E	C	C	D	D	D	E	D	B	D	C	C
Approach Vol, veh/h		828			1330			1641			1541	
Approach Delay, s/veh		39.2			41.0			39.8			33.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	36.8	13.6	34.3	14.3	37.8	15.4	32.5
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	9.5	* 31	16.0	25.0	10.3	29.5	12.0	29.0
Max Q Clear Time (g_c+I1), s	11.4	25.0	9.3	9.1	10.7	24.2	11.4	21.4
Green Ext Time (p_c), s	0.0	5.1	0.3	4.5	0.0	4.5	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

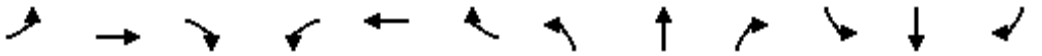
Intersection	
Int Delay, s/veh	7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	274	291	50	132	301
Future Vol, veh/h	111	274	291	50	132	301
Conflicting Peds, #/hr	0	1	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	134	330	351	60	159	363

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	883	209	0	0	413	0
Stage 1	383	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	283	794	-	-	1135	-
Stage 1	656	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	243	792	-	-	1133	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	492	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.7	0	2.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	243	792	1133	-
HCM Lane V/C Ratio	-	-	0.55	0.417	0.14	-
HCM Control Delay (s)	-	-	36.6	12.8	8.7	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	3	2.1	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	140	35	315	172	70	93	236	158	114	358	49
Future Volume (veh/h)	14	140	35	315	172	70	93	236	158	114	358	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	15	152	6	342	187	65	101	257	36	124	389	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	718	223	485	325	113	334	351	297	173	572	70
Arrive On Green	0.04	0.14	0.14	0.14	0.25	0.25	0.19	0.19	0.19	0.23	0.23	0.23
Sat Flow, veh/h	1767	5066	1572	3428	1316	457	1767	1856	1572	767	2537	312
Grp Volume(v), veh/h	15	152	6	342	0	252	101	257	36	294	0	265
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1714	0	1773	1767	1856	1572	1817	0	1799
Q Serve(g_s), s	0.6	1.9	0.2	6.7	0.0	8.8	3.5	9.2	1.3	10.5	0.0	9.4
Cycle Q Clear(g_c), s	0.6	1.9	0.2	6.7	0.0	8.8	3.5	9.2	1.3	10.5	0.0	9.4
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	0.42		0.17
Lane Grp Cap(c), veh/h	64	718	223	485	0	438	334	351	297	410	0	406
V/C Ratio(X)	0.24	0.21	0.03	0.70	0.00	0.57	0.30	0.73	0.12	0.72	0.00	0.65
Avail Cap(c_a), veh/h	501	2514	780	972	0	880	626	658	557	644	0	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	26.8	26.1	28.9	0.0	23.3	24.6	26.9	23.7	25.2	0.0	24.8
Incr Delay (d2), s/veh	0.7	0.2	0.1	0.7	0.0	1.7	0.7	4.2	0.3	3.3	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.1	2.5	0.0	3.4	1.4	4.1	0.5	4.4	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	27.0	26.1	29.6	0.0	25.0	25.3	31.1	24.0	28.6	0.0	27.3
LnGrp LOS	C	C	C	C	A	C	C	C	C	C	A	C
Approach Vol, veh/h		173			594			394			559	
Approach Delay, s/veh		27.5			27.6			29.0			28.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	16.0		21.3	7.0	23.4		18.7				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	8.7	3.9		12.5	2.6	10.8		11.2				
Green Ext Time (p_c), s	0.5	1.2		3.4	0.0	1.8		2.1				

Intersection Summary			
HCM 6th Ctrl Delay		28.0	
HCM 6th LOS		C	

Notes

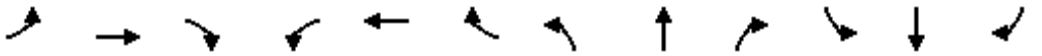
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	219	22	484	165	6	702
Future Volume (veh/h)	219	22	484	165	6	702
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	226	7	499	62	6	724
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	897	411	1105	493	56	1629
Arrive On Green	0.26	0.26	0.31	0.31	0.02	0.46
Sat Flow, veh/h	3428	1572	3618	1572	3428	3618
Grp Volume(v), veh/h	226	7	499	62	6	724
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1572	1714	1763
Q Serve(g_s), s	1.8	0.1	3.8	1.0	0.1	4.7
Cycle Q Clear(g_c), s	1.8	0.1	3.8	1.0	0.1	4.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	897	411	1105	493	56	1629
V/C Ratio(X)	0.25	0.02	0.45	0.13	0.11	0.44
Avail Cap(c_a), veh/h	4034	1850	3111	1388	2017	4666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	9.3	9.3	8.3	16.5	6.2
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.0	0.2	0.0	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	9.3	9.7	8.5	16.8	6.5
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	233		561			730
Approach Delay, s/veh	10.0		9.6			6.5
Approach LOS	A		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.1	15.6			20.6	13.4
Change Period (Y+Rc), s	4.5	4.9			4.9	4.5
Max Green Setting (Gmax), s	20.6	30.0			45.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	5.8			6.7	3.8
Green Ext Time (p_c), s	0.0	4.8			7.8	0.4

Intersection Summary	
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	114	0	93	391	556	0	0	540	381
Future Volume (veh/h)	0	0	0	114	0	93	391	556	0	0	540	381
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				116	0	0	399	567	0	0	551	188
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				152	0		386	1415	0	0	885	750
Arrive On Green				0.09	0.00	0.00	0.22	0.76	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1767	0	1572	1767	1856	0	0	1856	1572
Grp Volume(v), veh/h				116	0	0	399	567	0	0	551	188
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1767	1856	0	0	1856	1572
Q Serve(g_s), s				4.5	0.0	0.0	15.3	7.3	0.0	0.0	15.5	5.0
Cycle Q Clear(g_c), s				4.5	0.0	0.0	15.3	7.3	0.0	0.0	15.5	5.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				152	0		386	1415	0	0	885	750
V/C Ratio(X)				0.76	0.00		1.03	0.40	0.00	0.00	0.62	0.25
Avail Cap(c_a), veh/h				371	0		386	1415	0	0	885	750
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.43	0.43	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				31.3	0.0	0.0	27.3	2.8	0.0	0.0	13.6	10.9
Incr Delay (d2), s/veh				5.9	0.0	0.0	38.8	0.4	0.0	0.0	3.0	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	0.0	10.0	1.2	0.0	0.0	6.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.2	0.0	0.0	66.2	3.2	0.0	0.0	16.6	11.6
LnGrp LOS				D	A		F	A	A	A	B	B
Approach Vol, veh/h					116			966			739	
Approach Delay, s/veh					37.2			29.2			15.4	
Approach LOS					D			C			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	58.7		20.0	38.7		11.3						
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3						
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7						
Max Q Clear Time (g_c+I1), s	9.3		17.3	17.5		6.5						
Green Ext Time (p_c), s	3.0		0.0	2.0		0.2						

Intersection Summary		
HCM 6th Ctrl Delay	24.1	
HCM 6th LOS	C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	3	262	0	0	0	0	804	93	57	597	0
Future Volume (veh/h)	143	3	262	0	0	0	0	804	93	57	597	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	146	3	41				0	820	90	58	609	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	196	4	178				0	1016	112	334	1365	0
Arrive On Green	0.11	0.11	0.11				0.00	0.62	0.62	0.06	0.98	0.00
Sat Flow, veh/h	1733	36	1572				0	1639	180	1767	1856	0
Grp Volume(v), veh/h	149	0	41				0	0	910	58	609	0
Grp Sat Flow(s),veh/h/ln	1769	0	1572				0	0	1819	1767	1856	0
Q Serve(g_s), s	5.7	0.0	1.7				0.0	0.0	26.6	0.7	0.9	0.0
Cycle Q Clear(g_c), s	5.7	0.0	1.7				0.0	0.0	26.6	0.7	0.9	0.0
Prop In Lane	0.98		1.00				0.00		0.10	1.00		0.00
Lane Grp Cap(c), veh/h	200	0	178				0	0	1128	334	1365	0
V/C Ratio(X)	0.74	0.00	0.23				0.00	0.00	0.81	0.17	0.45	0.00
Avail Cap(c_a), veh/h	422	0	375				0	0	1128	433	1365	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	0.77	0.77	0.00
Uniform Delay (d), s/veh	30.1	0.0	28.3				0.0	0.0	10.1	9.6	0.2	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.5				0.0	0.0	6.2	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.6				0.0	0.0	9.4	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	0.0	28.7				0.0	0.0	16.3	9.8	1.0	0.0
LnGrp LOS	C	A	C				A	A	B	A	A	A
Approach Vol, veh/h		190						910			667	
Approach Delay, s/veh		33.0						16.3			1.8	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.1	48.7	13.2	56.8
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	2.7	28.6	7.7	2.9
Green Ext Time (p_c), s	0.0	1.1	0.4	3.3

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	42	0	0	27	29	0	0	0	24	0	10
Future Vol, veh/h	31	42	0	0	27	29	0	0	0	24	0	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	49	0	0	32	34	0	0	0	28	0	12
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	7.3	7.6	0	8
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	71%
Vol Thru, %	100%	0%	100%	100%	100%	48%	0%
Vol Right, %	0%	0%	0%	0%	0%	52%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	31	21	21	0	56	34
LT Vol	0	31	0	0	0	0	24
Through Vol	0	0	21	21	0	27	0
RT Vol	0	0	0	0	0	29	10
Lane Flow Rate	0	36	25	25	0	66	40
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0	0.052	0.032	0.02	0	0.08	0.055
Departure Headway (Hd)	4.927	5.156	4.656	2.903	4.743	4.38	4.947
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	692	765	1220	0	808	716
Service Time	2.627	2.907	2.406	0.652	2.527	2.164	2.735
HCM Lane V/C Ratio	0	0.052	0.033	0.02	0	0.082	0.056
HCM Control Delay	7.6	8.2	7.6	5.7	7.5	7.6	8
HCM Lane LOS	N	A	A	A	N	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1	0	0.3	0.2

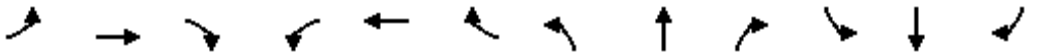
Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	1	69	35	3	73
Future Vol, veh/h	33	1	69	35	3	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	39	1	82	42	4	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	198	62	0	0	124	0
Stage 1	103	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	779	987	-	-	1455	-
Stage 1	907	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	777	987	-	-	1455	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	922	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	777	987	1455	-
HCM Lane V/C Ratio	-	-	0.051	0.001	0.002	-
HCM Control Delay (s)	-	-	9.9	8.7	7.5	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	45	16	23	83	15	11	89	53	24	129	29
Future Volume (veh/h)	32	45	16	23	83	15	11	89	53	24	129	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	36	50	4	26	92	4	12	99	29	27	143	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	503	380	30	535	417	348	641	1006	282	701	585	90
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1288	1693	135	1338	1856	1550	1210	2703	759	1251	1570	242
Grp Volume(v), veh/h	36	0	54	26	92	4	12	63	65	27	0	165
Grp Sat Flow(s),veh/h/ln	1288	0	1829	1338	1856	1550	1210	1763	1699	1251	0	1812
Q Serve(g_s), s	0.6	0.0	0.6	0.4	1.1	0.1	0.2	0.6	0.7	0.4	0.0	1.7
Cycle Q Clear(g_c), s	1.7	0.0	0.6	1.1	1.1	0.1	1.9	0.6	0.7	1.1	0.0	1.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.45	1.00		0.13
Lane Grp Cap(c), veh/h	503	0	411	535	417	348	641	656	632	701	0	675
V/C Ratio(X)	0.07	0.00	0.13	0.05	0.22	0.01	0.02	0.10	0.10	0.04	0.00	0.24
Avail Cap(c_a), veh/h	1643	0	2029	1719	2059	1719	2203	2933	2827	2317	0	3015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	8.4	8.8	8.6	8.2	6.5	5.5	5.5	5.9	0.0	5.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	0.0	8.5	8.8	8.8	8.2	6.5	5.6	5.6	5.9	0.0	6.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		90			122			140			192	
Approach Delay, s/veh		8.8			8.8			5.7			6.0	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		10.8		16.3		10.8				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		3.9		3.7		3.7		3.1				
Green Ext Time (p_c), s		0.7		0.3		0.9		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	140	308	40	76	60	203	566	108	60	580	83
Future Volume (veh/h)	103	140	308	40	76	60	203	566	108	60	580	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	121	165	61	47	89	9	239	666	0	71	682	47
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	281	393	309	226	308	137	293	945		1523	2805	871
Arrive On Green	0.08	0.11	0.11	0.07	0.09	0.09	0.11	0.25	0.00	0.44	0.55	0.55
Sat Flow, veh/h	3428	3526	2768	3428	3526	1567	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	121	165	61	47	89	9	239	666	0	71	682	47
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1567	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	4.0	5.2	0.9	1.6	2.8	0.5	8.2	14.4	0.0	1.4	8.3	1.6
Cycle Q Clear(g_c), s	4.0	5.2	0.9	1.6	2.8	0.5	8.2	14.4	0.0	1.4	8.3	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	281	393	309	226	308	137	293	945		1523	2805	871
V/C Ratio(X)	0.43	0.42	0.20	0.21	0.29	0.07	0.82	0.70		0.05	0.24	0.05
Avail Cap(c_a), veh/h	286	1116	876	286	1116	496	371	1646		1523	2805	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	49.7	7.3	53.1	51.3	32.7	52.3	42.1	0.0	18.9	13.8	12.3
Incr Delay (d2), s/veh	0.4	0.9	0.4	0.2	0.6	0.2	8.3	4.3	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.3	0.8	0.7	1.3	0.3	3.7	5.9	0.0	0.5	3.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	50.6	7.6	53.2	51.9	32.9	60.6	46.4	0.0	18.9	14.0	12.4
LnGrp LOS	D	D	A	D	D	C	E	D		B	B	B
Approach Vol, veh/h		347			145			905	A		800	
Approach Delay, s/veh		43.8			51.2			50.1			14.4	
Approach LOS		D			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	28.4	15.8	16.5	15.3	72.5	12.9	19.4
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	3.3	* 39	10.0	* 38	13.0	37.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	3.4	16.4	6.0	4.8	10.2	10.3	3.6	7.2
Green Ext Time (p_c), s	0.0	5.9	0.0	0.6	0.1	6.7	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	216	0	101	0	776	724	0	834	94
Future Volume (veh/h)	0	0	0	216	0	101	0	776	724	0	834	94
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				243	0	0	0	872	0	0	937	70
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				370	0	164	0	3556		0	3556	1104
Arrive On Green				0.10	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				243	0	0	0	872	0	0	937	70
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				370	0	164	0	3556		0	3556	1104
V/C Ratio(X)				0.66	0.00	0.00	0.00	0.25		0.00	0.26	0.06
Avail Cap(c_a), veh/h				954	0	425	0	3556		0	3556	1104
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	0.93	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.5	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.3	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1
LnGrp LOS				C	A	A	A	A		A	A	A
Approach Vol, veh/h					243			872	A		1007	
Approach Delay, s/veh					27.3			0.2			0.2	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	47.9		47.9		12.1			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	32.2		32.2		16.2			
Max Q Clear Time (g_c+I1), s	2.0		2.0		6.0			
Green Ext Time (p_c), s	5.0		5.6		0.4			

Intersection Summary		
HCM 6th Ctrl Delay	3.3	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	125	894	122	1375	929	121
Future Volume (veh/h)	125	894	122	1375	929	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	136	970	133	1495	1010	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	811	902	305	2887	2039	633
Arrive On Green	0.24	0.24	0.09	0.57	0.40	0.40
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	136	970	133	1495	1010	47
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	1.9	14.2	2.2	10.8	8.9	1.1
Cycle Q Clear(g_c), s	1.9	14.2	2.2	10.8	8.9	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	811	902	305	2887	2039	633
V/C Ratio(X)	0.17	1.08	0.44	0.52	0.50	0.07
Avail Cap(c_a), veh/h	811	902	931	2887	2039	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.97	0.97
Uniform Delay (d), s/veh	18.2	20.2	25.9	7.9	13.4	11.0
Incr Delay (d2), s/veh	0.1	52.5	0.7	0.7	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	19.1	0.8	2.7	2.9	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	72.8	26.6	8.5	14.2	11.3
LnGrp LOS	B	F	C	A	B	B
Approach Vol, veh/h	1106			1628	1057	
Approach Delay, s/veh	66.1			10.0	14.1	
Approach LOS	E			B	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	40.0		20.0	10.0	30.0
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	34.2		14.2	* 16	13.2
Max Q Clear Time (g_c+I1), s	12.8		16.2	4.2	10.9
Green Ext Time (p_c), s	8.9		0.0	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1001	311	233	496	728	1095
Future Volume (veh/h)	1001	311	233	496	728	1095
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1065	324	248	528	774	1044
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1354	1350	319	1279	811	1730
Arrive On Green	0.13	0.13	0.09	0.36	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1065	324	248	528	774	1044
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	30.1	9.0	7.1	11.2	21.7	22.7
Cycle Q Clear(g_c), s	30.1	9.0	7.1	11.2	21.7	22.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1354	1350	319	1279	811	1730
V/C Ratio(X)	0.79	0.24	0.78	0.41	0.95	0.60
Avail Cap(c_a), veh/h	1354	1350	782	1756	811	1730
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	22.1	44.3	23.9	38.0	11.3
Incr Delay (d2), s/veh	4.2	0.4	1.6	0.5	21.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	3.0	2.9	4.4	11.3	12.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.6	22.5	45.9	24.3	59.6	12.2
LnGrp LOS	D	C	D	C	E	B
Approach Vol, veh/h	1389			776	1818	
Approach Delay, s/veh	38.7			31.2	32.4	
Approach LOS	D			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.3	28.5			41.8	44.7
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	22.8	23.0			49.8	39.5
Max Q Clear Time (g_c+I1), s	19.1	24.7			13.2	32.1
Green Ext Time (p_c), s	0.2	0.0			6.8	4.5

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	282	506	47	63	23	315	909	12	47	1009	272
Future Volume (veh/h)	375	282	506	47	63	23	315	909	12	47	1009	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	395	297	459	49	66	1	332	957	7	49	1062	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	470	740	518	102	365	6	409	2768	859	102	2264	918
Arrive On Green	0.14	0.21	0.21	0.03	0.10	0.10	0.12	0.55	0.55	0.01	0.15	0.15
Sat Flow, veh/h	3428	3526	1572	3428	3555	54	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	395	297	459	49	33	34	332	957	7	49	1062	175
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1846	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	11.2	7.3	21.0	1.4	1.7	1.7	9.4	10.6	0.2	1.4	19.2	7.4
Cycle Q Clear(g_c), s	11.2	7.3	21.0	1.4	1.7	1.7	9.4	10.6	0.2	1.4	19.2	7.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	740	518	102	181	190	409	2768	859	102	2264	918
V/C Ratio(X)	0.84	0.40	0.89	0.48	0.18	0.18	0.81	0.35	0.01	0.48	0.47	0.19
Avail Cap(c_a), veh/h	679	740	518	267	181	190	850	2768	859	267	2264	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	42.1	34.1	31.8	47.8	41.0	41.0	42.9	12.7	10.3	48.7	31.8	15.7
Incr Delay (d2), s/veh	4.4	0.1	16.3	1.3	0.2	0.2	1.5	0.3	0.0	1.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	3.0	12.0	0.6	0.7	0.8	3.9	3.6	0.1	0.6	8.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	34.2	48.0	49.1	41.2	41.2	44.4	13.0	10.3	49.8	32.3	16.1
LnGrp LOS	D	C	D	D	D	D	D	B	B	D	C	B
Approach Vol, veh/h		1151			116			1296			1286	
Approach Delay, s/veh		43.9			44.5			21.1			30.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	26.2	16.9	49.9	17.7	15.5	7.0	59.9
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	21.0	24.8	27.0	19.8	9.0	7.8	45.0
Max Q Clear Time (g_c+I1), s	3.4	23.0	11.4	21.2	13.2	3.7	3.4	12.6
Green Ext Time (p_c), s	0.0	0.0	0.5	2.5	0.5	0.1	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	730	236	204	435	86	235	893	199	100	1133	212
Future Volume (veh/h)	250	730	236	204	435	86	235	893	199	100	1133	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	272	793	61	222	473	61	255	971	82	109	1232	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	340	1106	343	293	931	118	320	1535	476	638	2082	646
Arrive On Green	0.10	0.22	0.22	0.09	0.20	0.20	0.09	0.30	0.30	0.19	0.41	0.41
Sat Flow, veh/h	3428	5066	1572	3428	4552	577	3428	5066	1571	3428	5066	1572
Grp Volume(v), veh/h	272	793	61	222	349	185	255	971	82	109	1232	84
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1752	1714	1689	1571	1714	1689	1572
Q Serve(g_s), s	7.8	14.5	3.2	6.3	9.2	9.4	7.3	16.5	2.8	2.7	18.9	3.3
Cycle Q Clear(g_c), s	7.8	14.5	3.2	6.3	9.2	9.4	7.3	16.5	2.8	2.7	18.9	3.3
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	1106	343	293	691	358	320	1535	476	638	2082	646
V/C Ratio(X)	0.80	0.72	0.18	0.76	0.50	0.52	0.80	0.63	0.17	0.17	0.59	0.13
Avail Cap(c_a), veh/h	446	1317	409	549	979	508	353	1535	476	638	2082	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	36.2	31.8	44.7	35.3	35.4	44.4	30.1	14.1	34.2	22.9	18.3
Incr Delay (d2), s/veh	5.6	2.3	0.5	1.5	1.2	2.5	9.8	2.0	0.8	0.0	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	5.9	1.2	2.6	3.7	4.0	3.4	6.4	1.4	1.1	7.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	38.5	32.3	46.2	36.5	37.8	54.2	32.0	14.9	34.2	24.2	18.7
LnGrp LOS	D	D	C	D	D	D	D	C	B	C	C	B
Approach Vol, veh/h		1126			756			1308			1425	
Approach Delay, s/veh		40.9			39.7			35.3			24.6	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	35.8	12.5	27.5	13.3	46.6	13.9	26.2
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 30	16.0	26.0	10.3	28.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	11.7	18.5	8.3	16.5	9.3	20.9	9.8	11.4
Green Ext Time (p_c), s	0.0	7.3	0.2	5.3	0.1	6.0	0.2	5.0

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

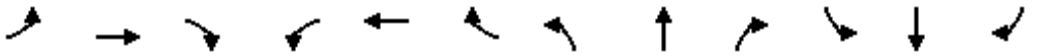
Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	83	157	118	97	253
Future Vol, veh/h	48	83	157	118	97	253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	56	98	185	139	114	298

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	632	162	0	0	324	0
Stage 1	255	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	410	851	-	-	1225	-
Stage 1	761	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	372	851	-	-	1225	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	599	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	372	851	1225	-
HCM Lane V/C Ratio	-	-	0.152	0.115	0.093	-
HCM Control Delay (s)	-	-	16.4	9.8	8.2	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.4	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	223	49	151	104	61	50	261	226	158	212	23
Future Volume (veh/h)	53	223	49	151	104	61	50	261	226	158	212	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	60	251	11	170	117	51	56	293	60	178	238	23
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	757	235	481	233	102	371	390	330	263	381	38
Arrive On Green	0.10	0.15	0.15	0.14	0.19	0.19	0.21	0.21	0.21	0.19	0.19	0.19
Sat Flow, veh/h	1767	5066	1569	3428	1225	534	1767	1856	1572	1392	2015	199
Grp Volume(v), veh/h	60	251	11	170	0	168	56	293	60	228	0	211
Grp Sat Flow(s),veh/h/ln	1767	1689	1569	1714	0	1759	1767	1856	1572	1786	0	1820
Q Serve(g_s), s	2.2	3.0	0.4	3.1	0.0	5.9	1.8	10.1	2.1	8.1	0.0	7.3
Cycle Q Clear(g_c), s	2.2	3.0	0.4	3.1	0.0	5.9	1.8	10.1	2.1	8.1	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	0.78		0.11
Lane Grp Cap(c), veh/h	176	757	235	481	0	335	371	390	330	338	0	344
V/C Ratio(X)	0.34	0.33	0.05	0.35	0.00	0.50	0.15	0.75	0.18	0.68	0.00	0.61
Avail Cap(c_a), veh/h	516	2588	802	1001	0	899	645	677	574	652	0	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	26.1	25.0	26.6	0.0	24.8	22.1	25.4	22.2	25.8	0.0	25.5
Incr Delay (d2), s/veh	0.4	0.4	0.1	0.2	0.0	1.7	0.3	4.1	0.4	3.3	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	0.1	1.1	0.0	2.3	0.7	4.5	0.8	3.4	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	26.4	25.1	26.8	0.0	26.5	22.3	29.5	22.6	29.2	0.0	28.0
LnGrp LOS	C	C	C	C	A	C	C	C	C	C	A	C
Approach Vol, veh/h		322			338			409			439	
Approach Delay, s/veh		26.9			26.6			27.5			28.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	16.2		18.4	11.3	19.0		19.8				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	5.1	5.0		10.1	4.2	7.9		12.1				
Green Ext Time (p_c), s	0.2	2.2		2.8	0.0	1.2		2.2				

Intersection Summary			
HCM 6th Ctrl Delay		27.5	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	301	24	591	273	4	389
Future Volume (veh/h)	301	24	591	273	4	389
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	317	8	622	101	4	409
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	885	406	1267	564	37	1730
Arrive On Green	0.26	0.26	0.36	0.36	0.01	0.49
Sat Flow, veh/h	3428	1572	3618	1568	3428	3618
Grp Volume(v), veh/h	317	8	622	101	4	409
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1568	1714	1763
Q Serve(g_s), s	2.8	0.1	5.1	1.6	0.0	2.5
Cycle Q Clear(g_c), s	2.8	0.1	5.1	1.6	0.0	2.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	885	406	1267	564	37	1730
V/C Ratio(X)	0.36	0.02	0.49	0.18	0.11	0.24
Avail Cap(c_a), veh/h	3665	1681	2827	1257	1833	4240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	10.3	9.3	8.2	18.3	5.5
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.3	0.4	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	10.4	9.7	8.4	18.8	5.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	325		723			413
Approach Delay, s/veh	11.4		9.6			5.7
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	4.9	18.4				23.3	14.2
Change Period (Y+Rc), s	4.5	4.9				4.9	4.5
Max Green Setting (Gmax), s	20.0	30.0				45.0	40.0
Max Q Clear Time (g_c+I1), s	2.0	7.1				4.5	4.8
Green Ext Time (p_c), s	0.0	6.2				4.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	157	0	102	228	762	0	0	518	172
Future Volume (veh/h)	0	0	0	157	0	102	228	762	0	0	518	172
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				164	0	0	238	794	0	0	540	89
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				208	0		571	1356	0	0	1080	913
Arrive On Green				0.12	0.00	0.00	0.11	0.97	0.00	0.00	0.58	0.58
Sat Flow, veh/h				1767	0	1572	1767	1856	0	0	1856	1568
Grp Volume(v), veh/h				164	0	0	238	794	0	0	540	89
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1767	1856	0	0	1856	1568
Q Serve(g_s), s				6.3	0.0	0.0	3.4	2.0	0.0	0.0	12.0	1.8
Cycle Q Clear(g_c), s				6.3	0.0	0.0	3.4	2.0	0.0	0.0	12.0	1.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				208	0		571	1356	0	0	1080	913
V/C Ratio(X)				0.79	0.00		0.42	0.59	0.00	0.00	0.50	0.10
Avail Cap(c_a), veh/h				371	0		813	1356	0	0	1080	913
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.33	0.33	0.00	0.00	0.97	0.97
Uniform Delay (d), s/veh				30.0	0.0	0.0	5.7	0.3	0.0	0.0	8.6	6.5
Incr Delay (d2), s/veh				4.9	0.0	0.0	0.1	0.6	0.0	0.0	1.6	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	0.0	0.0	0.7	0.4	0.0	0.0	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.9	0.0	0.0	5.8	0.9	0.0	0.0	10.2	6.7
LnGrp LOS				C	A		A	A	A	A	B	A
Approach Vol, veh/h					164	A		1032			629	
Approach Delay, s/veh					34.9			2.0			9.7	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	56.4		10.4	46.0		13.6
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	4.0		5.4	14.0		8.3
Green Ext Time (p_c), s	5.0		0.3	2.2		0.3

Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	2	326	0	0	0	0	680	126	89	586	0
Future Volume (veh/h)	310	2	326	0	0	0	0	680	126	89	586	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	313	2	88				0	687	118	90	592	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	363	2	325				0	795	137	292	1191	0
Arrive On Green	0.21	0.21	0.21				0.00	0.52	0.52	0.06	0.64	0.00
Sat Flow, veh/h	1756	11	1572				0	1543	265	1767	1856	0
Grp Volume(v), veh/h	315	0	88				0	0	805	90	592	0
Grp Sat Flow(s),veh/h/ln	1768	0	1572				0	0	1808	1767	1856	0
Q Serve(g_s), s	12.0	0.0	3.3				0.0	0.0	27.2	1.5	11.8	0.0
Cycle Q Clear(g_c), s	12.0	0.0	3.3				0.0	0.0	27.2	1.5	11.8	0.0
Prop In Lane	0.99		1.00				0.00		0.15	1.00		0.00
Lane Grp Cap(c), veh/h	366	0	325				0	0	932	292	1191	0
V/C Ratio(X)	0.86	0.00	0.27				0.00	0.00	0.86	0.31	0.50	0.00
Avail Cap(c_a), veh/h	422	0	375				0	0	932	372	1191	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	26.8	0.0	23.3				0.0	0.0	14.8	12.9	6.6	0.0
Incr Delay (d2), s/veh	14.3	0.0	0.3				0.0	0.0	10.5	0.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	1.1				0.0	0.0	11.5	0.5	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.1	0.0	23.7				0.0	0.0	25.3	13.2	7.8	0.0
LnGrp LOS	D	A	C				A	A	C	B	A	A
Approach Vol, veh/h		403						805			682	
Approach Delay, s/veh		37.3						25.3			8.5	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.8	41.4	19.8	50.2
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	3.5	29.2	14.0	13.8
Green Ext Time (p_c), s	0.0	0.7	0.4	3.1

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	100	0	0	210	20	0	0	0	40	0	30
Future Vol, veh/h	20	100	0	0	210	20	0	0	0	40	0	30
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	159	0	0	333	32	0	0	0	63	0	48
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	7.8	13.6	0	9.9
HCM LOS	A	B	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	57%
Vol Thru, %	100%	0%	100%	100%	100%	91%	0%
Vol Right, %	0%	0%	0%	0%	0%	9%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	20	50	50	0	230	70
LT Vol	0	20	0	0	0	0	40
Through Vol	0	0	50	50	0	210	0
RT Vol	0	0	0	0	0	20	30
Lane Flow Rate	0	32	79	79	0	365	111
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0	0.05	0.115	0.076	0	0.527	0.18
Departure Headway (Hd)	6.037	5.721	5.217	3.452	5.258	5.197	5.832
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	625	686	1031	0	694	612
Service Time	3.817	3.465	2.961	1.195	3.004	2.942	3.593
HCM Lane V/C Ratio	0	0.051	0.115	0.077	0	0.526	0.181
HCM Control Delay	8.8	8.8	8.6	6.5	8	13.6	9.9
HCM Lane LOS	N	A	A	A	N	B	A
HCM 95th-tile Q	0	0.2	0.4	0.2	0	3.1	0.7

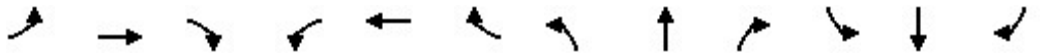
Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	10	220	20	10	130
Future Vol, veh/h	60	10	220	20	10	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	78	13	286	26	13	169

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	494	156	0	0	312	0
Stage 1	299	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	517	860	-	-	1240	-
Stage 1	724	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	511	860	-	-	1240	-
Mov Cap-2 Maneuver	511	-	-	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	511	860	1240	-
HCM Lane V/C Ratio	-	-	0.152	0.015	0.01	-
HCM Control Delay (s)	-	-	13.3	9.3	7.9	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	0	-



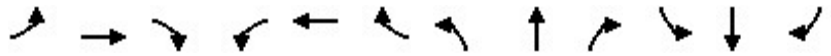
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	60	20	30	170	90	10	310	60	30	280	70
Future Volume (veh/h)	60	60	20	30	170	90	10	310	60	30	280	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	76	76	11	38	215	37	13	392	52	38	354	76
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	454	468	68	564	548	464	379	1126	148	479	534	115
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1117	1584	229	1298	1856	1570	950	3123	411	938	1480	318
Grp Volume(v), veh/h	76	0	87	38	215	37	13	220	224	38	0	430
Grp Sat Flow(s),veh/h/ln	1117	0	1814	1298	1856	1570	950	1763	1771	938	0	1798
Q Serve(g_s), s	1.8	0.0	1.1	0.7	2.9	0.5	0.4	2.9	2.9	1.0	0.0	6.4
Cycle Q Clear(g_c), s	4.8	0.0	1.1	1.8	2.9	0.5	6.7	2.9	2.9	3.9	0.0	6.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.23	1.00		0.18
Lane Grp Cap(c), veh/h	454	0	536	564	548	464	379	636	639	479	0	649
V/C Ratio(X)	0.17	0.00	0.16	0.07	0.39	0.08	0.03	0.35	0.35	0.08	0.00	0.66
Avail Cap(c_a), veh/h	1182	0	1717	1409	1756	1486	1386	2503	2515	1472	0	2553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	8.3	8.9	8.9	8.1	11.3	7.4	7.4	8.8	0.0	8.5
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.5	0.1	0.0	0.3	0.3	0.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.1	0.7	0.1	0.1	0.6	0.6	0.1	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	0.0	8.4	9.0	9.4	8.1	11.4	7.7	7.7	8.9	0.0	9.7
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		163			290			457			468	
Approach Delay, s/veh		9.6			9.2			7.8			9.6	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.6		14.1		17.6		14.1				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		8.7		6.8		8.4		4.9				
Green Ext Time (p_c), s		2.7		0.7		2.7		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	90	250	100	170	110	520	760	90	100	830	140
Future Volume (veh/h)	80	90	250	100	170	110	520	760	90	100	830	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	90	101	27	112	191	12	584	854	0	112	933	77
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	291	229	242	271	121	634	2722		498	2557	793
Arrive On Green	0.07	0.08	0.08	0.07	0.08	0.08	0.06	0.18	0.00	0.15	0.50	0.50
Sat Flow, veh/h	3428	3526	2768	3428	3526	1572	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	90	101	27	112	191	12	584	854	0	112	933	77
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1572	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	3.5	3.8	0.9	4.4	7.4	0.7	23.7	20.6	0.0	4.0	15.7	3.6
Cycle Q Clear(g_c), s	3.5	3.8	0.9	4.4	7.4	0.7	23.7	20.6	0.0	4.0	15.7	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	291	229	242	271	121	634	2722		498	2557	793
V/C Ratio(X)	0.38	0.35	0.12	0.46	0.71	0.10	0.92	0.31		0.22	0.36	0.10
Avail Cap(c_a), veh/h	245	957	751	245	957	427	661	2722		498	2557	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	60.6	33.3	62.5	63.1	30.7	64.7	35.1	0.0	52.9	21.0	18.0
Incr Delay (d2), s/veh	0.4	0.9	0.3	0.5	4.0	0.4	16.4	0.1	0.0	0.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.7	0.4	1.9	3.4	0.4	12.4	9.3	0.0	1.7	6.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	61.5	33.6	63.0	67.1	31.1	81.1	35.2	0.0	53.0	21.4	18.3
LnGrp LOS	E	E	C	E	E	C	F	D		D	C	B
Approach Vol, veh/h		218			315			1438	A		1122	
Approach Delay, s/veh		58.5			64.3			53.8			24.4	
Approach LOS		E			E			D			C	

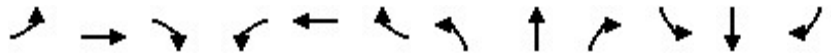
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.3	81.2	15.7	16.7	30.9	76.7	14.9	17.6
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.3	* 59	10.0	* 38	27.0	43.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	16.0	22.6	5.5	9.4	25.7	17.7	6.4	5.8
Green Ext Time (p_c), s	0.0	9.1	0.0	1.3	0.2	9.4	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	380	0	170	0	1200	1010	0	990	190
Future Volume (veh/h)	0	0	0	380	0	170	0	1200	1010	0	990	190
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				445	0	95	0	1263	0	0	1042	127
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				583	0	259	0	3391		0	3391	1053
Arrive On Green				0.16	0.00	0.16	0.00	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				445	0	95	0	1263	0	0	1042	127
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				8.4	0.0	3.8	0.0	0.0	0.0	0.0	6.0	2.0
Cycle Q Clear(g_c), s				8.4	0.0	3.8	0.0	0.0	0.0	0.0	6.0	2.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				583	0	259	0	3391		0	3391	1053
V/C Ratio(X)				0.76	0.00	0.37	0.00	0.37		0.00	0.31	0.12
Avail Cap(c_a), veh/h				1070	0	476	0	3391		0	3391	1053
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.80	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh				27.9	0.0	26.0	0.0	0.0	0.0	0.0	4.8	4.2
Incr Delay (d2), s/veh				1.6	0.0	0.6	0.0	0.3	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	0.0	1.3	0.0	0.1	0.0	0.0	1.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.5	0.0	26.6	0.0	0.3	0.0	0.0	5.0	4.4
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					540			1263	A		1169	
Approach Delay, s/veh					29.0			0.3			5.0	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	52.7		52.7		17.3			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	37.2		37.2		21.2			
Max Q Clear Time (g_c+I1), s	2.0		8.0		10.4			
Green Ext Time (p_c), s	8.3		6.6		1.1			

Intersection Summary		
HCM 6th Ctrl Delay	7.3	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	790	120	2110	1230	140
Future Volume (veh/h)	100	790	120	2110	1230	140
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	108	840	129	2269	1323	73
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	779	270	3199	2460	764
Arrive On Green	0.20	0.20	0.08	0.63	0.97	0.97
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	108	840	129	2269	1323	73
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	1.8	14.2	2.5	20.9	1.1	0.1
Cycle Q Clear(g_c), s	1.8	14.2	2.5	20.9	1.1	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	695	779	270	3199	2460	764
V/C Ratio(X)	0.16	1.08	0.48	0.71	0.54	0.10
Avail Cap(c_a), veh/h	695	779	700	3199	2460	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	23.0	25.1	30.9	8.6	0.5	0.5
Incr Delay (d2), s/veh	0.1	55.3	1.0	1.4	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	19.0	1.0	5.3	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.0	80.4	31.8	10.0	1.3	0.8
LnGrp LOS	C	F	C	A	A	A
Approach Vol, veh/h	948			2398	1396	
Approach Delay, s/veh	73.9			11.1	1.3	
Approach LOS	E			B	A	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	50.0		20.0	10.2	39.8
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	44.2		14.2	* 14	25.2
Max Q Clear Time (g_c+I1), s	22.9		16.2	4.5	3.1
Green Ext Time (p_c), s	14.5		0.0	0.2	7.9

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

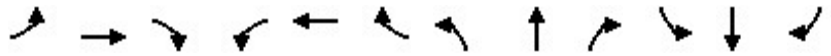
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1240	240	490	990	670	1350
Future Volume (veh/h)	1240	240	490	990	670	1350
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1333	248	527	1065	720	1409
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1251	1494	599	1568	811	1647
Arrive On Green	0.12	0.12	0.17	0.44	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1333	248	527	1065	720	1409
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	36.5	5.9	15.0	24.0	19.8	23.0
Cycle Q Clear(g_c), s	36.5	5.9	15.0	24.0	19.8	23.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1251	1494	599	1568	811	1647
V/C Ratio(X)	1.07	0.17	0.88	0.68	0.89	0.86
Avail Cap(c_a), veh/h	1251	1494	885	1861	811	1647
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	16.5	40.2	22.1	37.3	12.9
Incr Delay (d2), s/veh	42.5	0.2	5.1	1.3	12.4	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.9	1.8	6.4	9.2	9.5	18.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	86.5	16.7	45.4	23.4	49.7	17.9
LnGrp LOS	F	B	D	C	D	B
Approach Vol, veh/h	1581			1592	2129	
Approach Delay, s/veh	75.5			30.7	28.7	
Approach LOS	E			C	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	31.5	28.5				50.0	41.7
Change Period (Y+Rc), s	4.0	5.5				5.5	5.2
Max Green Setting (Gmax), s	25.8	23.0				52.8	36.5
Max Q Clear Time (g_c+I1), s	17.0	25.0				26.0	38.5
Green Ext Time (p_c), s	0.5	0.0				13.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D



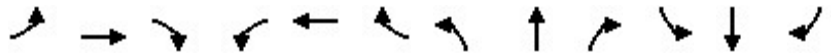
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	200	510	50	180	40	630	1110	30	60	1240	540
Future Volume (veh/h)	330	200	510	50	180	40	630	1110	30	60	1240	540
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	375	227	527	57	205	26	716	1261	17	68	1409	546
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	439	670	661	109	295	37	790	2838	881	116	1792	758
Arrive On Green	0.13	0.19	0.19	0.03	0.09	0.09	0.23	0.56	0.56	0.01	0.12	0.12
Sat Flow, veh/h	3428	3526	1572	3428	3152	395	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	375	227	527	57	113	118	716	1261	17	68	1409	546
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1784	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	10.7	5.6	19.0	1.6	6.2	6.4	20.3	14.6	0.5	2.0	27.1	27.8
Cycle Q Clear(g_c), s	10.7	5.6	19.0	1.6	6.2	6.4	20.3	14.6	0.5	2.0	27.1	27.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	439	670	661	109	165	167	790	2838	881	116	1792	758
V/C Ratio(X)	0.85	0.34	0.80	0.52	0.69	0.70	0.91	0.44	0.02	0.58	0.79	0.72
Avail Cap(c_a), veh/h	473	670	661	267	229	232	919	2838	881	267	1792	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.59	0.59	0.59
Uniform Delay (d), s/veh	42.7	35.1	25.3	47.7	43.9	44.0	37.4	12.9	9.8	48.7	40.5	28.2
Incr Delay (d2), s/veh	12.4	0.1	6.3	1.4	1.9	2.3	10.5	0.5	0.0	1.0	2.1	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.3	10.9	0.7	2.7	2.9	9.1	4.8	0.2	0.8	12.4	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	35.2	31.5	49.1	45.8	46.3	47.9	13.4	9.8	49.8	42.6	31.7
LnGrp LOS	E	D	C	D	D	D	D	B	A	D	D	C
Approach Vol, veh/h		1129			288			1994			2023	
Approach Delay, s/veh		40.1			46.6			25.7			39.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.2	28.1	40.6	16.8	14.6	7.4	61.2
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	19.0	26.8	27.0	13.8	13.0	7.8	47.0
Max Q Clear Time (g_c+I1), s	3.6	21.0	22.3	29.8	12.7	8.4	4.0	16.6
Green Ext Time (p_c), s	0.0	0.0	0.7	0.0	0.1	0.3	0.0	5.9

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	470	160	280	990	120	310	1260	190	90	1300	420
Future Volume (veh/h)	340	470	160	280	990	120	310	1260	190	90	1300	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	370	511	48	304	1076	115	337	1370	92	98	1413	259
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	411	1467	455	375	1296	138	353	1586	491	278	1550	481
Arrive On Green	0.12	0.29	0.29	0.11	0.28	0.28	0.10	0.31	0.31	0.08	0.31	0.31
Sat Flow, veh/h	3428	5066	1572	3428	4645	496	3428	5066	1569	3428	5066	1572
Grp Volume(v), veh/h	370	511	48	304	782	409	337	1370	92	98	1413	259
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1764	1714	1689	1569	1714	1689	1572
Q Serve(g_s), s	10.6	8.0	2.2	8.7	21.7	21.8	9.8	25.5	3.0	2.7	26.8	13.7
Cycle Q Clear(g_c), s	10.6	8.0	2.2	8.7	21.7	21.8	9.8	25.5	3.0	2.7	26.8	13.7
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	1467	455	375	942	492	353	1586	491	278	1550	481
V/C Ratio(X)	0.90	0.35	0.11	0.81	0.83	0.83	0.95	0.86	0.19	0.35	0.91	0.54
Avail Cap(c_a), veh/h	411	1467	455	549	979	511	353	1586	491	291	1550	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	28.1	26.0	43.5	33.8	33.8	44.6	32.3	12.4	43.5	33.4	28.8
Incr Delay (d2), s/veh	21.6	0.3	0.2	3.6	6.7	12.2	35.7	6.5	0.8	0.3	9.6	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	3.1	0.8	3.7	9.1	10.3	5.7	10.4	1.6	1.1	11.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	28.4	26.2	47.1	40.5	46.0	80.3	38.9	13.2	43.7	43.0	33.1
LnGrp LOS	E	C	C	D	D	D	F	D	B	D	D	C
Approach Vol, veh/h		929			1495			1799			1770	
Approach Delay, s/veh		42.8			43.4			45.3			41.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	36.8	14.9	34.7	14.3	36.1	16.0	33.6
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 31	16.0	25.0	10.3	29.5	12.0	29.0
Max Q Clear Time (g_c+I1), s	14.7	27.5	10.7	10.0	11.8	28.8	12.6	23.8
Green Ext Time (p_c), s	0.0	3.3	0.3	4.9	0.0	0.6	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

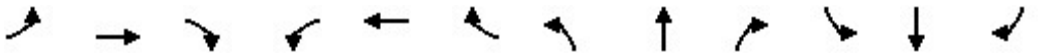
Intersection	
Int Delay, s/veh	11

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	310	320	60	150	340
Future Vol, veh/h	130	310	320	60	150	340
Conflicting Peds, #/hr	0	1	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	157	373	386	72	181	410

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	991	232	0	0	460	0
Stage 1	424	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	241	767	-	-	1090	-
Stage 1	625	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	201	765	-	-	1088	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	440	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.7	0	2.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	201	765	1088	-
HCM Lane V/C Ratio	-	-	0.779	0.488	0.166	-
HCM Control Delay (s)	-	-	66.8	14.1	9	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	5.4	2.7	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	180	60	340	250	80	180	270	180	120	370	90
Future Volume (veh/h)	20	180	60	340	250	80	180	270	180	120	370	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	22	196	12	370	272	78	196	293	43	130	402	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	86	780	242	466	335	96	365	383	325	169	548	124
Arrive On Green	0.05	0.15	0.15	0.14	0.24	0.24	0.21	0.21	0.21	0.23	0.23	0.23
Sat Flow, veh/h	1767	5066	1572	3428	1386	398	1767	1856	1572	720	2333	527
Grp Volume(v), veh/h	22	196	12	370	0	350	196	293	43	329	0	290
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1714	0	1784	1767	1856	1572	1820	0	1761
Q Serve(g_s), s	1.0	2.7	0.5	8.3	0.0	14.7	7.8	11.8	1.8	13.4	0.0	12.0
Cycle Q Clear(g_c), s	1.0	2.7	0.5	8.3	0.0	14.7	7.8	11.8	1.8	13.4	0.0	12.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	0.40		0.30
Lane Grp Cap(c), veh/h	86	780	242	466	0	431	365	383	325	427	0	413
V/C Ratio(X)	0.26	0.25	0.05	0.79	0.00	0.81	0.54	0.76	0.13	0.77	0.00	0.70
Avail Cap(c_a), veh/h	446	2237	694	865	0	788	557	585	496	574	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.3	29.5	28.6	33.2	0.0	28.4	28.1	29.6	25.6	28.3	0.0	27.8
Incr Delay (d2), s/veh	0.6	0.2	0.1	1.2	0.0	5.2	1.7	4.5	0.3	5.4	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.2	3.2	0.0	6.2	3.3	5.4	0.6	6.0	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	29.7	28.7	34.3	0.0	33.6	29.8	34.1	25.9	33.8	0.0	31.2
LnGrp LOS	D	C	C	C	A	C	C	C	C	C	A	C
Approach Vol, veh/h		230			720			532			619	
Approach Delay, s/veh		30.4			34.0			31.9			32.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	18.2		24.0	8.3	25.1		21.8				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	10.3	4.7		15.4	3.0	16.7		13.8				
Green Ext Time (p_c), s	0.5	1.7		3.2	0.0	2.5		2.6				

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	30	600	190	10	760
Future Volume (veh/h)	290	30	600	190	10	760
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	299	8	619	71	10	784
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	873	400	1235	551	90	1749
Arrive On Green	0.25	0.25	0.35	0.35	0.03	0.50
Sat Flow, veh/h	3428	1572	3618	1572	3428	3618
Grp Volume(v), veh/h	299	8	619	71	10	784
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1572	1714	1763
Q Serve(g_s), s	2.7	0.1	5.2	1.2	0.1	5.4
Cycle Q Clear(g_c), s	2.7	0.1	5.2	1.2	0.1	5.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	873	400	1235	551	90	1749
V/C Ratio(X)	0.34	0.02	0.50	0.13	0.11	0.45
Avail Cap(c_a), veh/h	3638	1669	2806	1251	1819	4209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	10.5	9.7	8.3	17.9	6.2
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.4	0.3	0.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.6	10.5	10.1	8.5	18.1	6.4
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	307		690			794
Approach Delay, s/veh	11.5		9.9			6.6
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.5	18.1			23.6	14.1
Change Period (Y+Rc), s	4.5	4.9			4.9	4.5
Max Green Setting (Gmax), s	20.0	30.0			45.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	7.2			7.4	4.7
Green Ext Time (p_c), s	0.0	6.0			8.6	0.6

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	240	0	180	420	610	0	0	640	410
Future Volume (veh/h)	0	0	0	240	0	180	420	610	0	0	640	410
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				245	0	0	429	622	0	0	653	219
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				354	0		1107	2639	0	0	2116	944
Arrive On Green				0.10	0.00	0.00	0.03	0.25	0.00	0.00	0.60	0.60
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1572
Grp Volume(v), veh/h				245	0	0	429	622	0	0	653	219
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1572
Q Serve(g_s), s				4.7	0.0	0.0	2.8	9.9	0.0	0.0	6.4	4.5
Cycle Q Clear(g_c), s				4.7	0.0	0.0	2.8	9.9	0.0	0.0	6.4	4.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				354	0		1107	2639	0	0	2116	944
V/C Ratio(X)				0.69	0.00		0.39	0.24	0.00	0.00	0.31	0.23
Avail Cap(c_a), veh/h				742	0		1578	2639	0	0	2116	944
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.91	0.91	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh				30.5	0.0	0.0	4.4	10.3	0.0	0.0	6.9	6.5
Incr Delay (d2), s/veh				1.8	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.9	0.0	0.0	0.6	3.2	0.0	0.0	1.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.3	0.0	0.0	4.5	10.5	0.0	0.0	7.2	7.0
LnGrp LOS				C	A		A	B	A	A	A	A
Approach Vol, veh/h					245	A		1051			872	
Approach Delay, s/veh					32.3			8.1			7.2	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	57.7		10.4	47.3		12.3
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	11.9		4.8	8.4		6.7
Green Ext Time (p_c), s	3.5		0.9	3.7		0.4

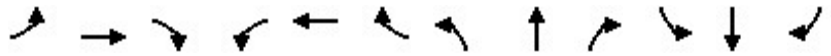
Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	0	300	0	0	0	0	860	220	90	790	0
Future Volume (veh/h)	170	0	300	0	0	0	0	860	220	90	790	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	173	0	143				0	878	176	92	806	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	436	0	194				0	2110	930	889	2557	0
Arrive On Green	0.12	0.00	0.12				0.00	0.60	0.60	0.12	1.00	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1553	3428	3618	0
Grp Volume(v), veh/h	173	0	143				0	878	176	92	806	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1553	1714	1763	0
Q Serve(g_s), s	3.2	0.0	6.1				0.0	9.3	3.6	0.6	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	6.1				0.0	9.3	3.6	0.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	436	0	194				0	2110	930	889	2557	0
V/C Ratio(X)	0.40	0.00	0.74				0.00	0.42	0.19	0.10	0.32	0.00
Avail Cap(c_a), veh/h	843	0	375				0	2110	930	1043	2557	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	28.3	0.0	29.6				0.0	7.5	6.4	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	4.0				0.0	0.6	0.5	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.3				0.0	2.8	1.0	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	33.6				0.0	8.1	6.8	4.3	0.3	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		316						1054			898	
Approach Delay, s/veh		30.9						7.9			0.7	
Approach LOS		C						A			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.9	47.2	13.9	56.1
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	2.6	11.3	8.1	2.0
Green Ext Time (p_c), s	0.1	5.2	0.5	4.9

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	60	0	0	50	40	0	0	0	30	0	20
Future Vol, veh/h	40	60	0	0	50	40	0	0	0	30	0	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	47	71	0	0	59	47	0	0	0	35	0	24
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	7.4	8.1	0	8.2
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	60%
Vol Thru, %	100%	0%	100%	100%	100%	56%	0%
Vol Right, %	0%	0%	0%	0%	0%	44%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	40	30	30	0	90	50
LT Vol	0	40	0	0	0	0	30
Through Vol	0	0	30	30	0	50	0
RT Vol	0	0	0	0	0	40	20
Lane Flow Rate	0	47	35	35	0	106	59
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0	0.068	0.046	0.029	0	0.136	0.083
Departure Headway (Hd)	5.115	5.209	4.708	2.954	4.941	4.629	5.072
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	680	751	1184	0	778	710
Service Time	2.822	2.999	2.497	0.741	2.646	2.334	2.777
HCM Lane V/C Ratio	0	0.069	0.047	0.03	0	0.136	0.083
HCM Control Delay	7.8	8.4	7.7	5.8	7.6	8.1	8.2
HCM Lane LOS	N	A	A	A	N	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1	0	0.5	0.3

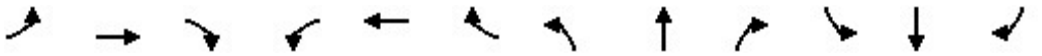
Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	10	80	50	10	90
Future Vol, veh/h	50	10	80	50	10	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	60	12	95	60	12	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	256	78	0	0	155	0
Stage 1	125	-	-	-	-	-
Stage 2	131	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.145	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.2285	-
Pot Cap-1 Maneuver	719	964	-	-	1417	-
Stage 1	885	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	713	964	-	-	1417	-
Mov Cap-2 Maneuver	713	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	713	964	1417	-
HCM Lane V/C Ratio	-	-	0.083	0.012	0.008	-
HCM Control Delay (s)	-	-	10.5	8.8	7.6	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	0	-



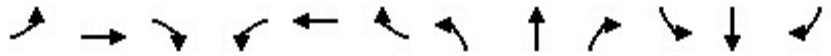
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	100	30	30	100	20	20	100	60	30	140	30
Future Volume (veh/h)	40	100	30	30	100	20	20	100	60	30	140	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	111	19	33	111	6	22	111	28	33	156	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	528	408	70	512	491	410	591	988	240	655	562	79
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1264	1540	264	1249	1856	1549	1196	2797	681	1239	1590	224
Grp Volume(v), veh/h	44	0	130	33	111	6	22	68	71	33	0	178
Grp Sat Flow(s),veh/h/ln	1264	0	1804	1249	1856	1549	1196	1763	1715	1239	0	1815
Q Serve(g_s), s	0.8	0.0	1.6	0.6	1.3	0.1	0.4	0.7	0.8	0.5	0.0	2.0
Cycle Q Clear(g_c), s	2.1	0.0	1.6	2.2	1.3	0.1	2.4	0.7	0.8	1.3	0.0	2.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.40	1.00		0.12
Lane Grp Cap(c), veh/h	528	0	477	512	491	410	591	622	605	655	0	641
V/C Ratio(X)	0.08	0.00	0.27	0.06	0.23	0.01	0.04	0.11	0.12	0.05	0.00	0.28
Avail Cap(c_a), veh/h	1523	0	1897	1495	1952	1629	2054	2781	2705	2172	0	2863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	8.3	9.2	8.2	7.7	7.5	6.2	6.2	6.7	0.0	6.6
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.1	0.3	0.0	0.1	0.1	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.0	8.6	9.2	8.4	7.8	7.5	6.3	6.3	6.7	0.0	6.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		174			150			161			211	
Approach Delay, s/veh		8.7			8.6			6.5			6.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		12.3		16.3		12.3				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		4.4		4.1		4.0		4.2				
Green Ext Time (p_c), s		0.8		0.8		1.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	170	370	60	90	70	270	680	140	70	710	90
Future Volume (veh/h)	120	170	370	60	90	70	270	680	140	70	710	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	141	200	76	71	106	11	318	800	0	82	835	50
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	362	284	259	308	137	365	1062		1442	2695	837
Arrive On Green	0.08	0.10	0.10	0.08	0.09	0.09	0.21	0.42	0.00	0.42	0.53	0.53
Sat Flow, veh/h	3428	3526	2768	3428	3526	1567	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	141	200	76	71	106	11	318	800	0	82	835	50
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1567	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	4.7	6.5	1.3	2.3	3.4	0.6	10.8	16.1	0.0	1.7	11.1	1.8
Cycle Q Clear(g_c), s	4.7	6.5	1.3	2.3	3.4	0.6	10.8	16.1	0.0	1.7	11.1	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	362	284	259	308	137	365	1062		1442	2695	837
V/C Ratio(X)	0.50	0.55	0.27	0.27	0.34	0.08	0.87	0.75		0.06	0.31	0.06
Avail Cap(c_a), veh/h	286	1116	876	286	1116	496	371	1646		1442	2695	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	51.2	8.8	52.4	51.5	30.9	46.4	32.2	0.0	20.6	15.7	13.6
Incr Delay (d2), s/veh	0.5	1.6	0.6	0.2	0.8	0.3	17.9	4.7	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.9	1.0	1.0	1.5	0.3	4.9	5.5	0.0	0.7	4.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	52.8	9.4	52.6	52.3	31.2	64.3	36.9	0.0	20.6	16.0	13.7
LnGrp LOS	D	D	A	D	D	C	E	D		C	B	B
Approach Vol, veh/h		417			188			1118	A		967	
Approach Delay, s/veh		45.0			51.2			44.7			16.3	
Approach LOS		D			D			D			B	

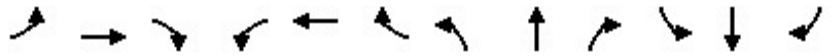
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	31.1	15.9	16.5	17.8	69.8	14.1	18.3
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.5	* 39	10.0	* 38	13.0	37.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	13.7	18.1	6.7	5.4	12.8	13.1	4.3	8.5
Green Ext Time (p_c), s	0.0	7.0	0.0	0.7	0.0	8.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	35.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	0	130	0	960	800	0	1010	130
Future Volume (veh/h)	0	0	0	250	0	130	0	960	800	0	1010	130
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				307	0	56	0	1079	0	0	1135	93
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				449	0	200	0	3443		0	3443	1069
Arrive On Green				0.13	0.00	0.13	0.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				307	0	56	0	1079	0	0	1135	93
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				5.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				5.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				449	0	200	0	3443		0	3443	1069
V/C Ratio(X)				0.68	0.00	0.28	0.00	0.31		0.00	0.33	0.09
Avail Cap(c_a), veh/h				954	0	425	0	3443		0	3443	1069
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.88	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				25.0	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.6	0.0	0.2	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.9	0.0	0.7	0.0	0.1	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.4	0.0	24.3	0.0	0.2	0.0	0.0	0.2	0.1
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					363			1079	A		1228	
Approach Delay, s/veh					26.1			0.2			0.2	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	46.6		46.6		13.4			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	32.2		32.2		16.2			
Max Q Clear Time (g_c+I1), s	2.0		2.0		7.0			
Green Ext Time (p_c), s	6.5		7.2		0.6			

Intersection Summary		
HCM 6th Ctrl Delay	3.7	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	990	150	1610	1100	160
Future Volume (veh/h)	150	990	150	1610	1100	160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	163	1075	163	1750	1196	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	811	913	320	2887	2018	626
Arrive On Green	0.24	0.24	0.09	0.57	0.53	0.53
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	163	1075	163	1750	1196	60
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	2.3	14.2	2.7	13.6	9.7	1.1
Cycle Q Clear(g_c), s	2.3	14.2	2.7	13.6	9.7	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	811	913	320	2887	2018	626
V/C Ratio(X)	0.20	1.18	0.51	0.61	0.59	0.10
Avail Cap(c_a), veh/h	811	913	931	2887	2018	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	18.4	20.1	25.9	8.5	10.8	8.8
Incr Delay (d2), s/veh	0.1	91.0	0.9	1.0	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	24.2	1.0	3.5	2.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.4	111.1	26.8	9.4	12.0	9.0
LnGrp LOS	B	F	C	A	B	A
Approach Vol, veh/h	1238			1913	1256	
Approach Delay, s/veh	98.9			10.9	11.8	
Approach LOS	F			B	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	40.0		20.0	10.3	29.7
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	34.2		14.2	* 16	13.2
Max Q Clear Time (g_c+I1), s	15.6		16.2	4.7	11.7
Green Ext Time (p_c), s	10.0		0.0	0.3	1.0

Intersection Summary	
HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

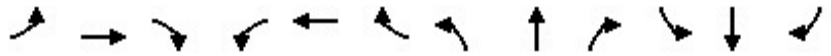
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1110	350	260	650	880	1210
Future Volume (veh/h)	1110	350	260	650	880	1210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1181	369	277	691	936	1182
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1354	1374	348	1310	811	1730
Arrive On Green	0.13	0.13	0.10	0.37	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1181	369	277	691	936	1182
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	33.8	10.1	7.9	15.3	23.0	23.0
Cycle Q Clear(g_c), s	33.8	10.1	7.9	15.3	23.0	23.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1354	1374	348	1310	811	1730
V/C Ratio(X)	0.87	0.27	0.80	0.53	1.15	0.68
Avail Cap(c_a), veh/h	1354	1374	782	1756	811	1730
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	21.9	43.9	24.6	38.5	11.3
Incr Delay (d2), s/veh	6.9	0.4	1.6	0.7	83.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	3.4	3.3	6.0	18.7	14.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.9	22.3	45.5	25.3	121.8	12.8
LnGrp LOS	D	C	D	C	F	B
Approach Vol, veh/h	1550			968	2118	
Approach Delay, s/veh	41.8			31.1	61.0	
Approach LOS	D			C	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.1	28.5			42.6	44.7
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	22.8	23.0			49.8	39.5
Max Q Clear Time (g_c+I1), s	19.3	25.0			17.3	35.8
Green Ext Time (p_c), s	0.3	0.0			9.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D



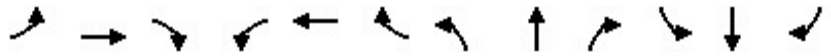
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	320	560	60	80	30	350	1050	20	60	1100	310
Future Volume (veh/h)	420	320	560	60	80	30	350	1050	20	60	1100	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	442	337	536	63	84	1	368	1105	10	63	1158	228
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	516	740	535	113	331	4	446	2735	849	113	2193	917
Arrive On Green	0.15	0.21	0.21	0.03	0.09	0.09	0.13	0.54	0.54	0.01	0.14	0.14
Sat Flow, veh/h	3428	3526	1572	3428	3568	42	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	442	337	536	63	41	44	368	1105	10	63	1158	228
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1848	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	12.6	8.3	21.0	1.8	2.2	2.2	10.5	12.8	0.3	1.8	21.2	9.6
Cycle Q Clear(g_c), s	12.6	8.3	21.0	1.8	2.2	2.2	10.5	12.8	0.3	1.8	21.2	9.6
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	740	535	113	163	171	446	2735	849	113	2193	917
V/C Ratio(X)	0.86	0.46	1.00	0.56	0.25	0.25	0.83	0.40	0.01	0.56	0.53	0.25
Avail Cap(c_a), veh/h	679	740	535	267	163	171	850	2735	849	267	2193	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	41.4	34.5	33.0	47.6	42.2	42.2	42.4	13.5	10.7	48.7	33.4	16.1
Incr Delay (d2), s/veh	6.8	0.2	39.6	1.6	0.3	0.3	1.5	0.4	0.0	1.2	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	3.5	17.7	0.8	0.9	1.0	4.3	4.3	0.1	0.8	9.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	34.7	72.6	49.2	42.5	42.4	43.9	14.0	10.7	50.0	34.1	16.6
LnGrp LOS	D	C	F	D	D	D	D	B	B	D	C	B
Approach Vol, veh/h		1315			148			1483			1449	
Approach Delay, s/veh		54.7			45.3			21.4			32.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	26.2	18.0	48.5	19.0	14.5	7.3	59.2
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.3	21.0	24.8	27.0	19.8	9.0	7.8	45.0
Max Q Clear Time (g_c+I1), s	3.8	23.0	12.5	23.2	14.6	4.2	3.8	14.8
Green Ext Time (p_c), s	0.0	0.0	0.5	2.0	0.5	0.1	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	800	270	240	480	100	270	950	270	120	1220	240
Future Volume (veh/h)	280	800	270	240	480	100	270	950	270	120	1220	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	304	870	82	261	522	75	293	1033	105	130	1326	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	371	1167	362	332	982	139	353	1535	476	558	1914	594
Arrive On Green	0.11	0.23	0.23	0.10	0.22	0.22	0.10	0.30	0.30	0.16	0.38	0.38
Sat Flow, veh/h	3428	5066	1572	3428	4485	634	3428	5066	1571	3428	5066	1572
Grp Volume(v), veh/h	304	870	82	261	391	206	293	1033	105	130	1326	89
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1741	1714	1689	1571	1714	1689	1572
Q Serve(g_s), s	8.7	16.0	4.2	7.4	10.2	10.5	8.4	17.9	3.6	3.3	22.1	3.7
Cycle Q Clear(g_c), s	8.7	16.0	4.2	7.4	10.2	10.5	8.4	17.9	3.6	3.3	22.1	3.7
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	371	1167	362	332	740	381	353	1535	476	558	1914	594
V/C Ratio(X)	0.82	0.75	0.23	0.79	0.53	0.54	0.83	0.67	0.22	0.23	0.69	0.15
Avail Cap(c_a), veh/h	446	1317	409	549	979	505	353	1535	476	558	1914	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	35.8	31.3	44.1	34.5	34.6	44.0	30.5	13.7	36.4	26.2	20.5
Incr Delay (d2), s/veh	8.3	2.8	0.7	1.6	1.3	2.5	14.4	2.4	1.1	0.1	2.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	6.5	1.6	3.1	4.1	4.4	4.0	7.0	1.9	1.3	8.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	38.6	31.9	45.7	35.7	37.1	58.4	32.9	14.7	36.5	28.3	21.1
LnGrp LOS	D	D	C	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		1256			858			1431			1545	
Approach Delay, s/veh		41.4			39.1			36.8			28.6	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.8	35.8	13.7	28.7	14.3	43.3	14.8	27.6
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 30	16.0	26.0	10.3	28.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	5.3	19.9	9.4	18.0	10.4	24.1	10.7	12.5
Green Ext Time (p_c), s	0.1	7.1	0.3	5.1	0.0	3.8	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

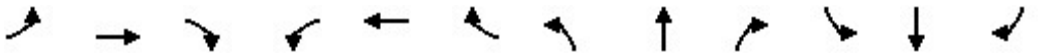
Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	190	180	140	110	280
Future Vol, veh/h	60	190	180	140	110	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	71	224	212	165	129	329

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	718	189	0	0	377	0
Stage 1	295	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	362	818	-	-	1171	-
Stage 1	727	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	322	818	-	-	1171	-
Mov Cap-2 Maneuver	322	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	2.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	322	818	1171	-
HCM Lane V/C Ratio	-	-	0.219	0.273	0.111	-
HCM Control Delay (s)	-	-	19.3	11	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1.1	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	270	110	170	140	70	70	350	250	180	280	50
Future Volume (veh/h)	100	270	110	170	140	70	70	350	250	180	280	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	112	303	26	191	157	63	79	393	71	202	315	50
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	198	783	243	411	205	82	442	464	393	265	441	72
Arrive On Green	0.11	0.15	0.15	0.12	0.16	0.16	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	1767	5066	1569	3428	1259	505	1767	1856	1572	1221	2037	332
Grp Volume(v), veh/h	112	303	26	191	0	220	79	393	71	297	0	270
Grp Sat Flow(s),veh/h/ln	1767	1689	1569	1714	0	1765	1767	1856	1572	1794	0	1796
Q Serve(g_s), s	4.9	4.4	1.2	4.3	0.0	9.8	2.9	16.6	2.9	12.8	0.0	11.4
Cycle Q Clear(g_c), s	4.9	4.4	1.2	4.3	0.0	9.8	2.9	16.6	2.9	12.8	0.0	11.4
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	0.68		0.19
Lane Grp Cap(c), veh/h	198	783	243	411	0	287	442	464	393	389	0	389
V/C Ratio(X)	0.57	0.39	0.11	0.46	0.00	0.77	0.18	0.85	0.18	0.76	0.00	0.69
Avail Cap(c_a), veh/h	429	2154	667	833	0	750	537	564	478	545	0	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	31.3	29.9	33.8	0.0	33.0	24.2	29.4	24.2	30.3	0.0	29.7
Incr Delay (d2), s/veh	0.9	0.4	0.3	0.3	0.0	6.0	0.3	10.8	0.3	5.3	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.7	0.4	1.7	0.0	4.3	1.2	8.3	1.1	5.7	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	31.7	30.2	34.1	0.0	39.0	24.5	40.2	24.6	35.5	0.0	32.9
LnGrp LOS	D	C	C	C	A	D	C	D	C	D	A	C
Approach Vol, veh/h		441			411			543			567	
Approach Delay, s/veh		32.6			36.7			35.8			34.3	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	18.7		23.2	13.7	19.4		26.0				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	6.3	6.4		14.8	6.9	11.8		18.6				
Green Ext Time (p_c), s	0.3	2.7		3.1	0.1	1.5		2.0				

Intersection Summary		
HCM 6th Ctrl Delay		34.8
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	390	30	640	310	10	550
Future Volume (veh/h)	390	30	640	310	10	550
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	411	10	674	119	11	579
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	855	392	1311	583	99	1812
Arrive On Green	0.25	0.25	0.37	0.37	0.03	0.51
Sat Flow, veh/h	3428	1572	3618	1568	3428	3618
Grp Volume(v), veh/h	411	10	674	119	11	579
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1568	1714	1763
Q Serve(g_s), s	4.1	0.2	5.9	2.0	0.1	3.8
Cycle Q Clear(g_c), s	4.1	0.2	5.9	2.0	0.1	3.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	855	392	1311	583	99	1812
V/C Ratio(X)	0.48	0.03	0.51	0.20	0.11	0.32
Avail Cap(c_a), veh/h	3453	1584	2663	1185	1727	3995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	11.3	9.7	8.5	18.8	5.6
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	1.6	0.5	0.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	11.3	10.1	8.7	19.0	5.8
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	421		793			590
Approach Delay, s/veh	12.8		9.9			6.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.6	19.7				25.3	14.4
Change Period (Y+Rc), s	4.5	4.9				4.9	4.5
Max Green Setting (Gmax), s	20.0	30.0				45.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	7.9				5.8	6.1
Green Ext Time (p_c), s	0.0	6.8				6.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	300	0	140	250	810	0	0	750	190
Future Volume (veh/h)	0	0	0	300	0	140	250	810	0	0	750	190
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				312	0	0	260	844	0	0	781	104
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				424	0		1021	2569	0	0	2082	927
Arrive On Green				0.12	0.00	0.00	0.07	0.73	0.00	0.00	0.59	0.59
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1570
Grp Volume(v), veh/h				312	0	0	260	844	0	0	781	104
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1570
Q Serve(g_s), s				6.0	0.0	0.0	1.8	6.0	0.0	0.0	8.2	2.0
Cycle Q Clear(g_c), s				6.0	0.0	0.0	1.8	6.0	0.0	0.0	8.2	2.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				424	0		1021	2569	0	0	2082	927
V/C Ratio(X)				0.74	0.00		0.25	0.33	0.00	0.00	0.38	0.11
Avail Cap(c_a), veh/h				742	0		1527	2569	0	0	2082	927
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.91	0.91	0.00	0.00	0.93	0.93
Uniform Delay (d), s/veh				29.7	0.0	0.0	4.6	3.4	0.0	0.0	7.5	6.3
Incr Delay (d2), s/veh				1.9	0.0	0.0	0.1	0.3	0.0	0.0	0.5	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	0.0	0.4	1.2	0.0	0.0	2.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.6	0.0	0.0	4.7	3.7	0.0	0.0	8.0	6.5
LnGrp LOS				C	A		A	A	A	A	A	A
Approach Vol, veh/h					312	A		1104			885	
Approach Delay, s/veh					31.6			3.9			7.8	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	56.3		9.7	46.6		13.7
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	8.0		3.8	10.2		8.0
Green Ext Time (p_c), s	5.1		0.5	3.9		0.5

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	0	360	0	0	0	0	720	320	140	910	0
Future Volume (veh/h)	340	0	360	0	0	0	0	720	320	140	910	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	343	0	244				0	727	247	141	919	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	664	0	296				0	1857	828	883	2329	0
Arrive On Green	0.19	0.00	0.19				0.00	0.53	0.53	0.09	0.88	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1572	3428	3618	0
Grp Volume(v), veh/h	343	0	244				0	727	247	141	919	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1572	1714	1763	0
Q Serve(g_s), s	6.1	0.0	10.4				0.0	8.6	6.2	1.1	3.4	0.0
Cycle Q Clear(g_c), s	6.1	0.0	10.4				0.0	8.6	6.2	1.1	3.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	664	0	296				0	1857	828	883	2329	0
V/C Ratio(X)	0.52	0.00	0.83				0.00	0.39	0.30	0.16	0.39	0.00
Avail Cap(c_a), veh/h	843	0	375				0	1857	828	1012	2329	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	25.6	0.0	27.3				0.0	9.9	9.3	6.0	1.6	0.0
Incr Delay (d2), s/veh	0.5	0.0	10.5				0.0	0.6	0.9	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.4				0.0	2.8	1.9	0.3	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	0.0	37.8				0.0	10.5	10.2	6.0	2.1	0.0
LnGrp LOS	C	A	D				A	B	B	A	A	A
Approach Vol, veh/h		587						974			1060	
Approach Delay, s/veh		30.9						10.4			2.6	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.4	42.2	18.5	51.5
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	13.1	10.6	12.4	5.4
Green Ext Time (p_c), s	0.1	4.5	0.7	5.8

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	100	6	4	210	20	13	0	7	40	0	30
Future Vol, veh/h	20	100	6	4	210	20	13	0	7	40	0	30
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	159	10	6	333	32	21	0	11	63	0	48
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	8.9	14.4	9.4	10.1
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	65%	100%	0%	0%	100%	0%	57%
Vol Thru, %	0%	0%	100%	85%	0%	91%	0%
Vol Right, %	35%	0%	0%	15%	0%	9%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	67	39	4	230	70
LT Vol	13	20	0	0	4	0	40
Through Vol	0	0	67	33	0	210	0
RT Vol	7	0	0	6	0	20	30
Lane Flow Rate	32	32	106	62	6	365	111
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0.056	0.052	0.157	0.091	0.01	0.545	0.184
Departure Headway (Hd)	6.318	5.845	5.341	5.233	5.943	5.379	5.973
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	570	609	667	679	598	664	594
Service Time	4.018	3.619	3.114	3.006	3.716	3.151	3.768
HCM Lane V/C Ratio	0.056	0.053	0.159	0.091	0.01	0.55	0.187
HCM Control Delay	9.4	8.9	9.1	8.5	8.8	14.5	10.1
HCM Lane LOS	A	A	A	A	A	B	B
HCM 95th-tile Q	0.2	0.2	0.6	0.3	0	3.3	0.7

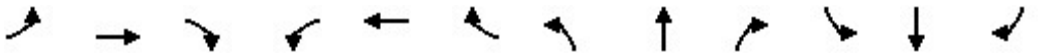
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	61	60	0	10	30	224	20	10	137	0
Future Vol, veh/h	0	0	61	60	0	10	30	224	20	10	137	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	77	92	77	92	77	77	77	77	92
Heavy Vehicles, %	2	2	2	3	2	3	2	3	3	3	3	2
Mvmt Flow	0	0	66	78	0	13	33	291	26	13	178	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	178	607	-	159	178	0	0	317	0	0
Stage 1	-	-	-	370	-	-	-	-	-	-	-	-
Stage 2	-	-	-	237	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	7.345	-	6.945	4.13	-	-	4.145	-	-
Critical Hdwy Stg 1	-	-	-	6.545	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.145	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	3.5285	-	3.3285	2.219	-	-	2.2285	-	-
Pot Cap-1 Maneuver	0	0	864	392	0	856	1397	-	-	1235	-	0
Stage 1	0	0	-	621	0	-	-	-	-	-	-	0
Stage 2	0	0	-	763	0	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	864	351	-	856	1397	-	-	1235	-	-
Mov Cap-2 Maneuver	-	-	-	351	-	-	-	-	-	-	-	-
Stage 1	-	-	-	603	-	-	-	-	-	-	-	-
Stage 2	-	-	-	696	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	16.9	0.8	0.5
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	1397	-	-	864	351	856	1235	-
HCM Lane V/C Ratio	0.023	-	-	0.077	0.222	0.015	0.011	-
HCM Control Delay (s)	7.6	0.1	-	9.5	18.2	9.3	7.9	0
HCM Lane LOS	A	A	-	A	C	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.8	0	0	-



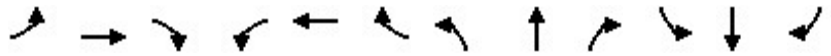
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	74	20	30	205	90	10	310	60	30	280	70
Future Volume (veh/h)	60	74	20	30	205	90	10	310	60	30	280	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	76	94	14	38	259	38	13	392	52	38	354	76
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	425	474	71	551	558	472	375	1122	148	475	532	114
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1073	1578	235	1273	1856	1569	950	3123	411	938	1480	318
Grp Volume(v), veh/h	76	0	108	38	259	38	13	220	224	38	0	430
Grp Sat Flow(s),veh/h/ln	1073	0	1813	1273	1856	1569	950	1763	1771	938	0	1798
Q Serve(g_s), s	2.0	0.0	1.4	0.7	3.6	0.6	0.4	2.9	3.0	1.0	0.0	6.5
Cycle Q Clear(g_c), s	5.6	0.0	1.4	2.2	3.6	0.6	6.8	2.9	3.0	4.0	0.0	6.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.23	1.00		0.18
Lane Grp Cap(c), veh/h	425	0	545	551	558	472	375	634	637	475	0	646
V/C Ratio(X)	0.18	0.00	0.20	0.07	0.46	0.08	0.03	0.35	0.35	0.08	0.00	0.67
Avail Cap(c_a), veh/h	1107	0	1697	1360	1737	1469	1367	2475	2486	1455	0	2525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	8.3	9.1	9.1	8.0	11.5	7.5	7.5	9.0	0.0	8.6
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.1	0.6	0.1	0.0	0.3	0.3	0.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.1	0.9	0.1	0.1	0.7	0.7	0.1	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	8.5	9.2	9.7	8.1	11.6	7.8	7.9	9.1	0.0	9.8
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		184			335			457			468	
Approach Delay, s/veh		9.8			9.5			8.0			9.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.7		14.3		17.7		14.3				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		8.8		7.6		8.5		5.6				
Green Ext Time (p_c), s		2.7		0.8		2.7		1.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	90	250	100	170	110	520	811	90	100	929	140
Future Volume (veh/h)	80	90	250	100	170	110	520	811	90	100	929	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	90	101	27	112	191	12	584	911	0	112	1044	79
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	291	229	242	271	121	631	2585		591	2561	795
Arrive On Green	0.07	0.08	0.08	0.07	0.08	0.08	0.12	0.34	0.00	0.17	0.51	0.51
Sat Flow, veh/h	3428	3526	2768	3428	3526	1572	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	90	101	27	112	191	12	584	911	0	112	1044	79
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1572	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	3.5	3.8	0.9	4.4	7.4	0.7	23.6	18.8	0.0	3.9	18.0	3.7
Cycle Q Clear(g_c), s	3.5	3.8	0.9	4.4	7.4	0.7	23.6	18.8	0.0	3.9	18.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	291	229	242	271	121	631	2585		591	2561	795
V/C Ratio(X)	0.38	0.35	0.12	0.46	0.71	0.10	0.93	0.35		0.19	0.41	0.10
Avail Cap(c_a), veh/h	245	957	751	245	957	427	661	2585		591	2561	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	60.6	30.7	62.5	63.1	30.8	60.4	28.8	0.0	49.6	21.5	18.0
Incr Delay (d2), s/veh	0.4	0.9	0.3	0.5	4.0	0.4	16.8	0.1	0.0	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.7	0.4	1.9	3.4	0.4	11.9	8.0	0.0	1.7	7.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	61.5	31.0	63.0	67.1	31.2	77.3	28.9	0.0	49.6	22.0	18.3
LnGrp LOS	E	E	C	E	E	C	E	C		D	C	B
Approach Vol, veh/h		218			315			1495	A		1235	
Approach Delay, s/veh		58.2			64.3			47.8			24.3	
Approach LOS		E			E			D			C	

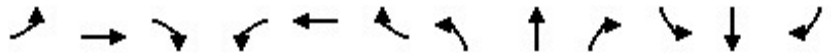
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.1	77.4	15.7	16.7	30.8	76.8	14.9	17.6
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	24.0	* 59	10.0	* 38	27.0	43.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	5.9	20.8	5.5	9.4	25.6	20.0	6.4	5.8
Green Ext Time (p_c), s	0.0	10.0	0.0	1.3	0.2	10.2	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	380	0	174	0	1247	1010	0	1060	219
Future Volume (veh/h)	0	0	0	380	0	174	0	1247	1010	0	1060	219
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				446	0	99	0	1313	0	0	1116	146
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				584	0	260	0	3389		0	3389	1052
Arrive On Green				0.17	0.00	0.17	0.00	1.00	0.00	0.00	0.89	0.89
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				446	0	99	0	1313	0	0	1116	146
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				8.4	0.0	3.9	0.0	0.0	0.0	0.0	2.4	0.8
Cycle Q Clear(g_c), s				8.4	0.0	3.9	0.0	0.0	0.0	0.0	2.4	0.8
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				584	0	260	0	3389		0	3389	1052
V/C Ratio(X)				0.76	0.00	0.38	0.00	0.39		0.00	0.33	0.14
Avail Cap(c_a), veh/h				1070	0	476	0	3389		0	3389	1052
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.79	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh				27.9	0.0	26.0	0.0	0.0	0.0	0.0	1.4	1.3
Incr Delay (d2), s/veh				1.6	0.0	0.7	0.0	0.3	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.4	0.0	1.4	0.0	0.1	0.0	0.0	0.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.5	0.0	26.7	0.0	0.3	0.0	0.0	1.6	1.6
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					545			1313	A		1262	
Approach Delay, s/veh					29.0			0.3			1.6	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	52.6		52.6		17.4			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	37.2		37.2		21.2			
Max Q Clear Time (g_c+I1), s	2.0		4.4		10.4			
Green Ext Time (p_c), s	8.7		7.4		1.1			

Intersection Summary		
HCM 6th Ctrl Delay	5.8	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	118	790	120	2139	1293	147
Future Volume (veh/h)	118	790	120	2139	1293	147
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	127	843	129	2300	1390	74
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	779	270	3199	2460	764
Arrive On Green	0.20	0.20	0.08	0.63	0.97	0.97
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	127	843	129	2300	1390	74
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	2.1	14.2	2.5	21.5	1.2	0.1
Cycle Q Clear(g_c), s	2.1	14.2	2.5	21.5	1.2	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	695	779	270	3199	2460	764
V/C Ratio(X)	0.18	1.08	0.48	0.72	0.57	0.10
Avail Cap(c_a), veh/h	695	779	700	3199	2460	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	23.1	25.1	30.9	8.7	0.5	0.5
Incr Delay (d2), s/veh	0.1	56.6	1.0	1.4	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	19.1	1.0	5.5	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	81.8	31.8	10.1	1.4	0.8
LnGrp LOS	C	F	C	B	A	A
Approach Vol, veh/h	970			2429	1464	
Approach Delay, s/veh	74.1			11.3	1.4	
Approach LOS	E			B	A	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	50.0		20.0	10.2	39.8
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	44.2		14.2	* 14	25.2
Max Q Clear Time (g_c+I1), s	23.5		16.2	4.5	3.2
Green Ext Time (p_c), s	14.5		0.0	0.2	8.4

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

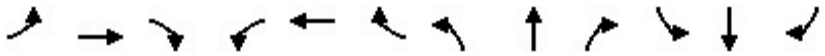
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1260	240	490	999	691	1392
Future Volume (veh/h)	1260	240	490	999	691	1392
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1355	249	527	1074	743	1454
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1251	1494	599	1568	811	1647
Arrive On Green	0.12	0.12	0.17	0.44	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1355	249	527	1074	743	1454
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	36.5	5.9	15.0	24.3	20.6	23.0
Cycle Q Clear(g_c), s	36.5	5.9	15.0	24.3	20.6	23.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1251	1494	599	1568	811	1647
V/C Ratio(X)	1.08	0.17	0.88	0.68	0.92	0.88
Avail Cap(c_a), veh/h	1251	1494	885	1861	811	1647
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	16.6	40.2	22.2	37.6	12.9
Incr Delay (d2), s/veh	48.9	0.2	5.1	1.3	15.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.0	1.8	6.4	9.3	10.1	19.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	92.9	16.7	45.4	23.5	53.2	19.3
LnGrp LOS	F	B	D	C	D	B
Approach Vol, veh/h	1604			1601	2197	
Approach Delay, s/veh	81.1			30.7	30.8	
Approach LOS	F			C	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	31.5	28.5				50.0	41.7
Change Period (Y+Rc), s	4.0	5.5				5.5	5.2
Max Green Setting (Gmax), s	25.8	23.0				52.8	36.5
Max Q Clear Time (g_c+I1), s	17.0	25.0				26.3	38.5
Green Ext Time (p_c), s	0.5	0.0				13.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D



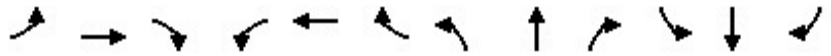
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	200	510	50	180	40	630	1128	30	60	1276	546
Future Volume (veh/h)	332	200	510	50	180	40	630	1128	30	60	1276	546
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	377	227	527	57	205	26	716	1282	17	68	1450	552
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	441	670	661	109	294	37	790	2838	881	116	1792	758
Arrive On Green	0.13	0.19	0.19	0.03	0.09	0.09	0.23	0.56	0.56	0.01	0.12	0.12
Sat Flow, veh/h	3428	3526	1572	3428	3152	395	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	377	227	527	57	113	118	716	1282	17	68	1450	552
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1784	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	10.8	5.6	19.0	1.6	6.2	6.4	20.3	14.9	0.5	2.0	27.9	28.1
Cycle Q Clear(g_c), s	10.8	5.6	19.0	1.6	6.2	6.4	20.3	14.9	0.5	2.0	27.9	28.1
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	441	670	661	109	164	166	790	2838	881	116	1792	758
V/C Ratio(X)	0.85	0.34	0.80	0.52	0.69	0.71	0.91	0.45	0.02	0.58	0.81	0.73
Avail Cap(c_a), veh/h	473	670	661	267	229	232	919	2838	881	267	1792	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	42.7	35.1	25.3	47.7	43.9	44.0	37.4	12.9	9.8	48.7	40.9	28.2
Incr Delay (d2), s/veh	12.6	0.1	6.3	1.4	1.9	2.4	10.5	0.5	0.0	1.0	2.3	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.3	10.9	0.7	2.7	2.9	9.1	5.0	0.2	0.8	12.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	35.2	31.5	49.1	45.9	46.4	47.9	13.5	9.8	49.7	43.2	31.7
LnGrp LOS	E	D	C	D	D	D	D	B	A	D	D	C
Approach Vol, veh/h		1131			288			2015			2070	
Approach Delay, s/veh		40.2			46.7			25.7			40.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.2	28.1	40.6	16.9	14.5	7.4	61.2
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	19.0	26.8	27.0	13.8	13.0	7.8	47.0
Max Q Clear Time (g_c+I1), s	3.6	21.0	22.3	30.1	12.8	8.4	4.0	16.9
Green Ext Time (p_c), s	0.0	0.0	0.7	0.0	0.1	0.3	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	470	160	280	990	120	310	1274	190	90	1326	430
Future Volume (veh/h)	344	470	160	280	990	120	310	1274	190	90	1326	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	374	511	48	304	1076	115	337	1385	93	98	1441	269
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	411	1467	455	375	1296	138	353	1586	491	278	1550	481
Arrive On Green	0.12	0.29	0.29	0.11	0.28	0.28	0.10	0.31	0.31	0.08	0.31	0.31
Sat Flow, veh/h	3428	5066	1572	3428	4645	496	3428	5066	1569	3428	5066	1572
Grp Volume(v), veh/h	374	511	48	304	782	409	337	1385	93	98	1441	269
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1764	1714	1689	1569	1714	1689	1572
Q Serve(g_s), s	10.8	8.0	2.2	8.7	21.7	21.8	9.8	25.9	3.0	2.7	27.6	14.3
Cycle Q Clear(g_c), s	10.8	8.0	2.2	8.7	21.7	21.8	9.8	25.9	3.0	2.7	27.6	14.3
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	1467	455	375	942	492	353	1586	491	278	1550	481
V/C Ratio(X)	0.91	0.35	0.11	0.81	0.83	0.83	0.95	0.87	0.19	0.35	0.93	0.56
Avail Cap(c_a), veh/h	411	1467	455	549	979	511	353	1586	491	291	1550	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	28.1	26.0	43.5	33.8	33.8	44.6	32.5	12.4	43.5	33.7	29.0
Incr Delay (d2), s/veh	23.2	0.3	0.2	3.6	6.7	12.2	35.7	7.0	0.9	0.3	11.3	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	3.1	0.8	3.7	9.1	10.3	5.7	10.6	1.6	1.1	12.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	28.4	26.2	47.1	40.5	46.0	80.3	39.5	13.2	43.7	44.9	33.7
LnGrp LOS	E	C	C	D	D	D	F	D	B	D	D	C
Approach Vol, veh/h		933			1495			1815			1808	
Approach Delay, s/veh		43.6			43.4			45.7			43.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	36.8	14.9	34.7	14.3	36.1	16.0	33.6
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 31	16.0	25.0	10.3	29.5	12.0	29.0
Max Q Clear Time (g_c+I1), s	14.7	27.9	10.7	10.0	11.8	29.6	12.8	23.8
Green Ext Time (p_c), s	0.0	3.0	0.3	4.9	0.0	0.0	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

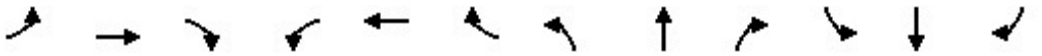
Intersection	
Int Delay, s/veh	12.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	310	355	60	150	410
Future Vol, veh/h	130	310	355	60	150	410
Conflicting Peds, #/hr	0	1	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	157	373	428	72	181	494

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1075	253	0	0	502	0
Stage 1	466	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	213	743	-	-	1052	-
Stage 1	595	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	176	741	-	-	1050	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.3	0	2.4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	176	741	1050	-
HCM Lane V/C Ratio	-	-	0.89	0.504	0.172	-
HCM Control Delay (s)	-	-	94.5	14.7	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	6.5	2.9	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	180	60	340	250	96	180	289	180	150	410	90
Future Volume (veh/h)	20	180	60	340	250	96	180	289	180	150	410	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	22	196	12	370	272	94	196	314	43	163	446	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	818	254	458	326	113	374	393	333	198	570	117
Arrive On Green	0.05	0.16	0.16	0.13	0.25	0.25	0.21	0.21	0.21	0.25	0.25	0.25
Sat Flow, veh/h	1767	5066	1572	3428	1318	456	1767	1856	1572	802	2309	475
Grp Volume(v), veh/h	22	196	12	370	0	366	196	314	43	369	0	328
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1714	0	1774	1767	1856	1572	1815	0	1770
Q Serve(g_s), s	1.0	2.9	0.6	9.1	0.0	16.9	8.5	13.9	1.9	16.6	0.0	14.8
Cycle Q Clear(g_c), s	1.0	2.9	0.6	9.1	0.0	16.9	8.5	13.9	1.9	16.6	0.0	14.8
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	0.44		0.27
Lane Grp Cap(c), veh/h	84	818	254	458	0	439	374	393	333	448	0	437
V/C Ratio(X)	0.26	0.24	0.05	0.81	0.00	0.83	0.52	0.80	0.13	0.82	0.00	0.75
Avail Cap(c_a), veh/h	409	2053	637	794	0	719	511	537	455	525	0	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.7	31.6	30.6	36.4	0.0	30.8	30.2	32.3	27.6	30.7	0.0	30.1
Incr Delay (d2), s/veh	0.6	0.2	0.1	1.3	0.0	6.1	1.6	7.2	0.2	9.8	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	0.2	3.6	0.0	7.3	3.6	6.7	0.7	7.9	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	31.8	30.7	37.7	0.0	36.9	31.8	39.5	27.8	40.5	0.0	36.0
LnGrp LOS	D	C	C	D	A	D	C	D	C	D	A	D
Approach Vol, veh/h		230			736			553			697	
Approach Delay, s/veh		32.6			37.3			35.9			38.4	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	19.9		26.7	8.6	27.4		23.7				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	11.1	4.9		18.6	3.0	18.9		15.9				
Green Ext Time (p_c), s	0.5	1.7		2.7	0.0	2.5		2.4				

Intersection Summary		
HCM 6th Ctrl Delay		36.8
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	290	30	619	190	10	800	
Future Volume (veh/h)	290	30	619	190	10	800	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	299	8	638	72	10	825	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	3	3	3	3	3	3	
Cap, veh/h	865	397	1257	561	90	1766	
Arrive On Green	0.25	0.25	0.36	0.36	0.03	0.50	
Sat Flow, veh/h	3428	1572	3618	1572	3428	3618	
Grp Volume(v), veh/h	299	8	638	72	10	825	
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1572	1714	1763	
Q Serve(g_s), s	2.7	0.1	5.4	1.2	0.1	5.8	
Cycle Q Clear(g_c), s	2.7	0.1	5.4	1.2	0.1	5.8	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	865	397	1257	561	90	1766	
V/C Ratio(X)	0.35	0.02	0.51	0.13	0.11	0.47	
Avail Cap(c_a), veh/h	3599	1651	2776	1238	1799	4164	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	11.7	10.7	9.6	8.3	18.1	6.2	
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.2	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.4	0.3	0.0	1.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	11.8	10.7	10.1	8.4	18.3	6.5	
LnGrp LOS	B	B	B	A	B	A	
Approach Vol, veh/h	307		710			835	
Approach Delay, s/veh	11.7		9.9			6.6	
Approach LOS	B		A			A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.5	18.5				24.0	14.1
Change Period (Y+Rc), s	4.5	4.9				4.9	4.5
Max Green Setting (Gmax), s	20.6	30.0				45.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	7.4				7.8	4.7
Green Ext Time (p_c), s	0.0	6.2				9.2	0.6

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	240	0	186	420	623	0	0	680	410
Future Volume (veh/h)	0	0	0	240	0	186	420	623	0	0	680	410
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				245	0	0	429	636	0	0	694	219
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				354	0		1075	2639	0	0	2116	944
Arrive On Green				0.10	0.00	0.00	0.03	0.25	0.00	0.00	0.60	0.60
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1572
Grp Volume(v), veh/h				245	0	0	429	636	0	0	694	219
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1572
Q Serve(g_s), s				4.7	0.0	0.0	2.8	10.1	0.0	0.0	6.9	4.5
Cycle Q Clear(g_c), s				4.7	0.0	0.0	2.8	10.1	0.0	0.0	6.9	4.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				354	0		1075	2639	0	0	2116	944
V/C Ratio(X)				0.69	0.00		0.40	0.24	0.00	0.00	0.33	0.23
Avail Cap(c_a), veh/h				742	0		1546	2639	0	0	2116	944
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.90	0.90	0.00	0.00	0.88	0.88
Uniform Delay (d), s/veh				30.5	0.0	0.0	4.5	10.4	0.0	0.0	7.0	6.5
Incr Delay (d2), s/veh				1.8	0.0	0.0	0.2	0.2	0.0	0.0	0.4	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.9	0.0	0.0	0.6	3.3	0.0	0.0	2.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.3	0.0	0.0	4.7	10.6	0.0	0.0	7.3	7.0
LnGrp LOS				C	A		A	B	A	A	A	A
Approach Vol, veh/h					245	A		1065			913	
Approach Delay, s/veh					32.3			8.2			7.3	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	57.7		10.4	47.3		12.3
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	12.1		4.8	8.9		6.7
Green Ext Time (p_c), s	3.6		0.9	3.9		0.4

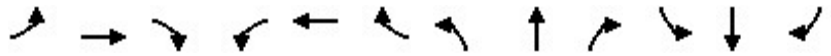
Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	0	300	0	0	0	0	873	220	104	816	0
Future Volume (veh/h)	170	0	300	0	0	0	0	873	220	104	816	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	173	0	153				0	891	176	106	833	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	458	0	204				0	2078	916	878	2535	0
Arrive On Green	0.13	0.00	0.13				0.00	0.59	0.59	0.12	1.00	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1553	3428	3618	0
Grp Volume(v), veh/h	173	0	153				0	891	176	106	833	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1553	1714	1763	0
Q Serve(g_s), s	3.1	0.0	6.6				0.0	9.7	3.7	0.7	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	6.6				0.0	9.7	3.7	0.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	458	0	204				0	2078	916	878	2535	0
V/C Ratio(X)	0.38	0.00	0.75				0.00	0.43	0.19	0.12	0.33	0.00
Avail Cap(c_a), veh/h	843	0	375				0	2078	916	1022	2535	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	27.9	0.0	29.4				0.0	7.9	6.7	4.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	4.1				0.0	0.6	0.5	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	2.5				0.0	2.9	1.0	0.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	0.0	33.5				0.0	8.5	7.1	4.5	0.3	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		326						1067			939	
Approach Delay, s/veh		30.7						8.3			0.8	
Approach LOS		C						A			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.1	46.6	14.4	55.6
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	2.7	11.7	8.6	2.0
Green Ext Time (p_c), s	0.1	5.2	0.5	5.1

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	60	15	7	50	40	9	0	5	30	0	20
Future Vol, veh/h	40	60	15	7	50	40	9	0	5	30	0	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	47	71	18	8	59	47	11	0	6	35	0	24
Number of Lanes	1	2	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	3
HCM Control Delay	8	8.2	8.1	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	64%	100%	0%	0%	100%	0%	60%
Vol Thru, %	0%	0%	100%	57%	0%	56%	0%
Vol Right, %	36%	0%	0%	43%	0%	44%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	40	40	35	7	90	50
LT Vol	9	40	0	0	7	0	30
Through Vol	0	0	40	20	0	50	0
RT Vol	5	0	0	15	0	40	20
Lane Flow Rate	16	47	47	41	8	106	59
Geometry Grp	7	7	7	7	8	8	7
Degree of Util (X)	0.024	0.07	0.063	0.052	0.013	0.139	0.084
Departure Headway (Hd)	5.267	5.346	4.845	4.544	5.547	4.733	5.17
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	681	672	742	791	648	760	695
Service Time	2.985	3.059	2.557	2.256	3.26	2.447	2.886
HCM Lane V/C Ratio	0.023	0.07	0.063	0.052	0.012	0.139	0.085
HCM Control Delay	8.1	8.5	7.9	7.5	8.3	8.2	8.4
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2	0	0.5	0.3

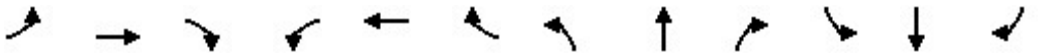
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	43	50	0	10	67	87	50	10	95	0
Future Vol, veh/h	0	0	43	50	0	10	67	87	50	10	95	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	92	84	92	84	84	84	84	92
Heavy Vehicles, %	2	2	2	3	2	3	2	3	3	3	3	2
Mvmt Flow	0	0	47	60	0	12	73	104	60	12	113	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	113	441	-	82	113	0	0	164	0	0
Stage 1	-	-	-	280	-	-	-	-	-	-	-	-
Stage 2	-	-	-	161	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.23	7.345	-	6.945	4.13	-	-	4.145	-	-
Critical Hdwy Stg 1	-	-	-	6.545	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.145	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	3.5285	-	3.3285	2.219	-	-	2.2285	-	-
Pot Cap-1 Maneuver	0	0	939	511	0	959	1475	-	-	1407	-	0
Stage 1	0	0	-	701	0	-	-	-	-	-	-	0
Stage 2	0	0	-	838	0	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	939	462	-	959	1475	-	-	1407	-	-
Mov Cap-2 Maneuver	-	-	-	462	-	-	-	-	-	-	-	-
Stage 1	-	-	-	662	-	-	-	-	-	-	-	-
Stage 2	-	-	-	789	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	13.1	2.4	0.7
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	1475	-	-	939	462	959	1407	-
HCM Lane V/C Ratio	0.049	-	-	0.05	0.129	0.012	0.008	-
HCM Control Delay (s)	7.6	0.1	-	9	13.9	8.8	7.6	0
HCM Lane LOS	A	A	-	A	B	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.4	0	0	-



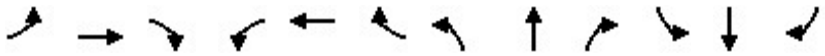
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	128	30	30	125	20	20	100	60	30	140	30
Future Volume (veh/h)	40	128	30	30	125	20	20	100	60	30	140	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	142	22	33	139	6	22	111	28	33	156	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	522	441	68	501	522	436	574	965	235	639	549	77
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1232	1565	243	1211	1856	1549	1196	2797	681	1239	1590	224
Grp Volume(v), veh/h	44	0	164	33	139	6	22	68	71	33	0	178
Grp Sat Flow(s),veh/h/ln	1232	0	1808	1211	1856	1549	1196	1763	1715	1239	0	1815
Q Serve(g_s), s	0.8	0.0	2.1	0.6	1.7	0.1	0.4	0.8	0.8	0.5	0.0	2.1
Cycle Q Clear(g_c), s	2.5	0.0	2.1	2.7	1.7	0.1	2.5	0.8	0.8	1.4	0.0	2.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.40	1.00		0.12
Lane Grp Cap(c), veh/h	522	0	509	501	522	436	574	608	592	639	0	626
V/C Ratio(X)	0.08	0.00	0.32	0.07	0.27	0.01	0.04	0.11	0.12	0.05	0.00	0.28
Avail Cap(c_a), veh/h	1441	0	1858	1405	1907	1592	2004	2717	2643	2121	0	2797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	0.0	8.3	9.4	8.1	7.6	7.8	6.5	6.5	7.0	0.0	6.9
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.1	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.1	0.4	0.0	0.1	0.2	0.2	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	8.6	9.4	8.4	7.6	7.9	6.6	6.6	7.0	0.0	7.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		208			178			161			211	
Approach Delay, s/veh		8.8			8.6			6.8			7.2	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		12.9		16.3		12.9				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		4.5		4.5		4.1		4.7				
Green Ext Time (p_c), s		0.8		1.0		1.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	170	370	60	90	70	270	800	140	70	781	90
Future Volume (veh/h)	120	170	370	60	90	70	270	800	140	70	781	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	141	200	76	71	106	11	318	941	0	82	919	50
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	362	284	259	308	137	365	1201		1348	2695	837
Arrive On Green	0.08	0.10	0.10	0.08	0.09	0.09	0.21	0.47	0.00	0.39	0.53	0.53
Sat Flow, veh/h	3428	3526	2768	3428	3526	1567	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	141	200	76	71	106	11	318	941	0	82	919	50
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1567	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	4.7	6.5	1.4	2.3	3.4	0.6	10.8	18.7	0.0	1.8	12.4	1.8
Cycle Q Clear(g_c), s	4.7	6.5	1.4	2.3	3.4	0.6	10.8	18.7	0.0	1.8	12.4	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	362	284	259	308	137	365	1201		1348	2695	837
V/C Ratio(X)	0.50	0.55	0.27	0.27	0.34	0.08	0.87	0.78		0.06	0.34	0.06
Avail Cap(c_a), veh/h	286	1116	876	286	1116	496	371	1646		1348	2695	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	51.2	10.1	52.4	51.5	30.9	46.4	29.0	0.0	22.6	16.0	13.6
Incr Delay (d2), s/veh	0.5	1.6	0.6	0.2	0.8	0.3	17.6	4.8	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.9	1.0	1.0	1.5	0.3	4.9	6.0	0.0	0.7	4.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	52.8	10.7	52.6	52.3	31.2	64.0	33.8	0.0	22.7	16.4	13.7
LnGrp LOS	D	D	B	D	D	C	E	C		C	B	B
Approach Vol, veh/h		417			188			1259	A		1051	
Approach Delay, s/veh		45.3			51.2			41.4			16.8	
Approach LOS		D			D			D			B	

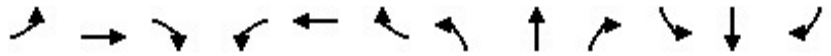
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	34.5	15.9	16.5	17.8	69.8	14.1	18.3
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	7.2	* 39	10.0	* 38	13.0	37.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	13.8	20.7	6.7	5.4	12.8	14.4	4.3	8.5
Green Ext Time (p_c), s	0.0	7.8	0.0	0.7	0.0	8.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	0	138	0	1072	800	0	1060	151
Future Volume (veh/h)	0	0	0	250	0	138	0	1072	800	0	1060	151
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				315	0	73	0	1204	0	0	1191	108
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				459	0	204	0	3428		0	3428	1064
Arrive On Green				0.13	0.00	0.13	0.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				315	0	73	0	1204	0	0	1191	108
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				5.1	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				5.1	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				459	0	204	0	3428		0	3428	1064
V/C Ratio(X)				0.69	0.00	0.36	0.00	0.35		0.00	0.35	0.10
Avail Cap(c_a), veh/h				954	0	425	0	3428		0	3428	1064
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.83	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh				24.9	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.8	0.0	0.2	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	0.9	0.0	0.1	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.3	0.0	24.6	0.0	0.2	0.0	0.0	0.3	0.2
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					388			1204	A		1299	
Approach Delay, s/veh					26.0			0.2			0.2	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	46.4		46.4		13.6			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	32.2		32.2		16.2			
Max Q Clear Time (g_c+I1), s	2.0		2.0		7.1			
Green Ext Time (p_c), s	7.5		7.7		0.7			

Intersection Summary		
HCM 6th Ctrl Delay	3.7	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	196	990	150	1676	1144	166
Future Volume (veh/h)	196	990	150	1676	1144	166
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	213	1075	163	1822	1243	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	811	913	320	2887	2018	626
Arrive On Green	0.24	0.24	0.09	0.57	0.53	0.53
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	213	1075	163	1822	1243	56
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	3.0	14.2	2.7	14.5	10.3	1.1
Cycle Q Clear(g_c), s	3.0	14.2	2.7	14.5	10.3	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	811	913	320	2887	2018	626
V/C Ratio(X)	0.26	1.18	0.51	0.63	0.62	0.09
Avail Cap(c_a), veh/h	811	913	931	2887	2018	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	18.6	20.1	25.9	8.7	10.9	8.7
Incr Delay (d2), s/veh	0.1	91.0	0.9	1.1	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	24.2	1.0	3.7	2.8	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.8	111.1	26.8	9.7	12.2	9.0
LnGrp LOS	B	F	C	A	B	A
Approach Vol, veh/h	1288			1985	1299	
Approach Delay, s/veh	95.9			11.1	12.1	
Approach LOS	F			B	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	40.0		20.0	10.3	29.7
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	34.2		14.2	* 16	13.2
Max Q Clear Time (g_c+I1), s	16.5		16.2	4.7	12.3
Green Ext Time (p_c), s	10.1		0.0	0.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

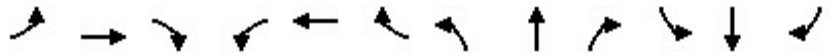
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1155	350	260	671	894	1240
Future Volume (veh/h)	1155	350	260	671	894	1240
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1229	370	277	714	951	1214
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1354	1374	348	1310	811	1730
Arrive On Green	0.13	0.13	0.10	0.37	0.23	0.23
Sat Flow, veh/h	3428	2768	3428	3618	3618	2768
Grp Volume(v), veh/h	1229	370	277	714	951	1214
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1763	1763	1384
Q Serve(g_s), s	35.4	10.1	7.9	16.0	23.0	23.0
Cycle Q Clear(g_c), s	35.4	10.1	7.9	16.0	23.0	23.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1354	1374	348	1310	811	1730
V/C Ratio(X)	0.91	0.27	0.80	0.55	1.17	0.70
Avail Cap(c_a), veh/h	1354	1374	782	1756	811	1730
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	21.9	43.9	24.8	38.5	11.3
Incr Delay (d2), s/veh	9.0	0.4	1.6	0.8	90.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.6	3.4	3.3	6.3	19.6	15.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.7	22.3	45.5	25.5	129.2	13.0
LnGrp LOS	D	C	D	C	F	B
Approach Vol, veh/h	1599			991	2165	
Approach Delay, s/veh	44.1			31.1	64.0	
Approach LOS	D			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.1	28.5				42.6	44.7
Change Period (Y+Rc), s	4.0	5.5				5.5	5.2
Max Green Setting (Gmax), s	22.8	23.0				49.8	39.5
Max Q Clear Time (g_c+I1), s	19.9	25.0				18.0	37.4
Green Ext Time (p_c), s	0.3	0.0				9.3	1.7

Intersection Summary	
HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D



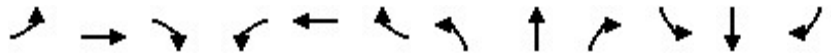
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	320	560	60	80	30	350	1090	20	60	1126	314
Future Volume (veh/h)	425	320	560	60	80	30	350	1090	20	60	1126	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	447	337	536	63	84	1	368	1147	10	63	1185	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	520	740	535	113	326	4	446	2735	849	113	2193	919
Arrive On Green	0.15	0.21	0.21	0.03	0.09	0.09	0.13	0.54	0.54	0.01	0.14	0.14
Sat Flow, veh/h	3428	3526	1572	3428	3568	42	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	447	337	536	63	41	44	368	1147	10	63	1185	234
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1848	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	12.7	8.3	21.0	1.8	2.2	2.2	10.5	13.5	0.3	1.8	21.7	9.8
Cycle Q Clear(g_c), s	12.7	8.3	21.0	1.8	2.2	2.2	10.5	13.5	0.3	1.8	21.7	9.8
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	520	740	535	113	161	169	446	2735	849	113	2193	919
V/C Ratio(X)	0.86	0.46	1.00	0.56	0.26	0.26	0.83	0.42	0.01	0.56	0.54	0.25
Avail Cap(c_a), veh/h	679	740	535	267	161	169	850	2735	849	267	2193	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	41.4	34.5	33.0	47.6	42.3	42.3	42.4	13.7	10.7	48.7	33.6	16.1
Incr Delay (d2), s/veh	7.1	0.2	39.6	1.6	0.3	0.3	1.5	0.5	0.0	1.2	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	3.5	17.7	0.8	0.9	1.0	4.3	4.6	0.1	0.8	9.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	34.7	72.6	49.2	42.6	42.6	43.9	14.2	10.7	49.9	34.4	16.6
LnGrp LOS	D	C	F	D	D	D	D	B	B	D	C	B
Approach Vol, veh/h		1320			148			1525			1482	
Approach Delay, s/veh		54.7			45.4			21.3			32.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	26.2	18.0	48.5	19.2	14.3	7.3	59.2
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.3	21.0	24.8	27.0	19.8	9.0	7.8	45.0
Max Q Clear Time (g_c+I1), s	3.8	23.0	12.5	23.7	14.7	4.2	3.8	15.5
Green Ext Time (p_c), s	0.0	0.0	0.5	1.8	0.5	0.1	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	800	270	240	480	100	270	980	270	120	1239	247
Future Volume (veh/h)	290	800	270	240	480	100	270	980	270	120	1239	247
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	315	870	82	261	522	75	293	1065	105	130	1347	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1167	362	332	969	137	353	1535	476	558	1914	594
Arrive On Green	0.11	0.23	0.23	0.10	0.22	0.22	0.10	0.30	0.30	0.16	0.38	0.38
Sat Flow, veh/h	3428	5066	1572	3428	4485	634	3428	5066	1571	3428	5066	1572
Grp Volume(v), veh/h	315	870	82	261	391	206	293	1065	105	130	1347	91
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1741	1714	1689	1571	1714	1689	1572
Q Serve(g_s), s	9.0	16.0	4.2	7.4	10.3	10.5	8.4	18.6	3.6	3.3	22.5	3.8
Cycle Q Clear(g_c), s	9.0	16.0	4.2	7.4	10.3	10.5	8.4	18.6	3.6	3.3	22.5	3.8
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1167	362	332	729	376	353	1535	476	558	1914	594
V/C Ratio(X)	0.83	0.75	0.23	0.79	0.54	0.55	0.83	0.69	0.22	0.23	0.70	0.15
Avail Cap(c_a), veh/h	446	1317	409	549	979	505	353	1535	476	558	1914	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	35.8	31.3	44.1	34.8	34.9	44.0	30.8	13.7	36.4	26.4	20.5
Incr Delay (d2), s/veh	9.2	2.8	0.7	1.6	1.3	2.6	14.4	2.6	1.1	0.1	2.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	6.5	1.6	3.1	4.1	4.5	4.0	7.3	1.9	1.3	8.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	38.6	31.9	45.7	36.1	37.5	58.4	33.4	14.7	36.5	28.6	21.1
LnGrp LOS	D	D	C	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		1267			858			1463			1568	
Approach Delay, s/veh		41.7			39.3			37.0			28.8	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.8	35.8	13.7	28.7	14.3	43.3	15.1	27.3
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 30	16.0	26.0	10.3	28.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	5.3	20.6	9.4	18.0	10.4	24.5	11.0	12.5
Green Ext Time (p_c), s	0.1	6.8	0.3	5.1	0.0	3.4	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

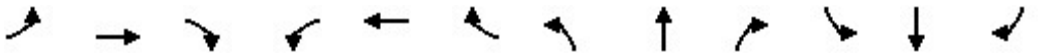
Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	190	256	140	110	328
Future Vol, veh/h	60	190	256	140	110	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	71	224	301	165	129	386

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	835	233	0	0	466	0
Stage 1	384	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	304	766	-	-	1085	-
Stage 1	655	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	268	766	-	-	1085	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	534	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	268	766	1085	-
HCM Lane V/C Ratio	-	-	0.263	0.292	0.119	-
HCM Control Delay (s)	-	-	23.2	11.6	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1	1.2	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	270	110	170	140	103	70	393	250	201	307	50
Future Volume (veh/h)	100	270	110	170	140	103	70	393	250	201	307	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	112	303	27	191	157	94	79	442	92	226	345	52
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	182	881	273	372	195	117	462	485	411	278	454	70
Arrive On Green	0.10	0.17	0.17	0.11	0.18	0.18	0.26	0.26	0.26	0.22	0.22	0.22
Sat Flow, veh/h	1767	5066	1570	3428	1087	651	1767	1856	1572	1244	2033	315
Grp Volume(v), veh/h	112	303	27	191	0	251	79	442	92	326	0	297
Grp Sat Flow(s),veh/h/ln	1767	1689	1570	1714	0	1738	1767	1856	1572	1793	0	1799
Q Serve(g_s), s	5.6	4.8	1.3	4.8	0.0	12.7	3.2	21.1	4.2	15.8	0.0	14.1
Cycle Q Clear(g_c), s	5.6	4.8	1.3	4.8	0.0	12.7	3.2	21.1	4.2	15.8	0.0	14.1
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	0.69		0.17
Lane Grp Cap(c), veh/h	182	881	273	372	0	312	462	485	411	401	0	402
V/C Ratio(X)	0.62	0.34	0.10	0.51	0.00	0.80	0.17	0.91	0.22	0.81	0.00	0.74
Avail Cap(c_a), veh/h	386	1938	600	749	0	665	483	507	430	490	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	33.2	31.8	38.5	0.0	36.0	26.1	32.8	26.5	33.7	0.0	33.1
Incr Delay (d2), s/veh	1.3	0.3	0.2	0.4	0.0	6.8	0.2	20.6	0.4	9.4	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.9	0.5	1.9	0.0	5.6	1.3	11.7	1.5	7.5	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	33.5	32.0	38.9	0.0	42.8	26.4	53.4	26.9	43.2	0.0	38.6
LnGrp LOS	D	C	C	D	A	D	C	D	C	D	A	D
Approach Vol, veh/h		442			442			613			623	
Approach Delay, s/veh		35.2			41.1			45.9			41.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	21.9		25.8	13.9	22.4		29.3				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	6.8	6.8		17.8	7.6	14.7		23.1				
Green Ext Time (p_c), s	0.2	2.7		2.7	0.1	1.7		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		41.2
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	390	30	683	310	10	577
Future Volume (veh/h)	390	30	683	310	10	577
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	411	10	719	123	11	607
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	836	383	1360	605	99	1851
Arrive On Green	0.24	0.24	0.39	0.39	0.03	0.53
Sat Flow, veh/h	3428	1572	3618	1568	3428	3618
Grp Volume(v), veh/h	411	10	719	123	11	607
Grp Sat Flow(s),veh/h/ln	1714	1572	1763	1568	1714	1763
Q Serve(g_s), s	4.2	0.2	6.4	2.1	0.1	4.0
Cycle Q Clear(g_c), s	4.2	0.2	6.4	2.1	0.1	4.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	836	383	1360	605	99	1851
V/C Ratio(X)	0.49	0.03	0.53	0.20	0.11	0.33
Avail Cap(c_a), veh/h	3372	1547	2601	1157	1686	3901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	11.7	9.6	8.3	19.2	5.5
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	1.7	0.5	0.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	11.7	10.1	8.6	19.4	5.7
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	421		842			618
Approach Delay, s/veh	13.3		9.9			5.9
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	5.7	20.6				26.3	14.4
Change Period (Y+Rc), s	4.5	4.9				4.9	4.5
Max Green Setting (Gmax), s	20.6	30.0				45.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	8.4				6.0	6.2
Green Ext Time (p_c), s	0.0	7.2				6.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	300	0	156	250	837	0	0	777	190
Future Volume (veh/h)	0	0	0	300	0	156	250	837	0	0	777	190
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				312	0	0	260	872	0	0	809	104
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				424	0		1000	2569	0	0	2082	927
Arrive On Green				0.12	0.00	0.00	0.07	0.73	0.00	0.00	0.59	0.59
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1570
Grp Volume(v), veh/h				312	0	0	260	872	0	0	809	104
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1570
Q Serve(g_s), s				6.0	0.0	0.0	1.8	6.2	0.0	0.0	8.5	2.0
Cycle Q Clear(g_c), s				6.0	0.0	0.0	1.8	6.2	0.0	0.0	8.5	2.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				424	0		1000	2569	0	0	2082	927
V/C Ratio(X)				0.74	0.00		0.26	0.34	0.00	0.00	0.39	0.11
Avail Cap(c_a), veh/h				742	0		1506	2569	0	0	2082	927
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.90	0.90	0.00	0.00	0.93	0.93
Uniform Delay (d), s/veh				29.7	0.0	0.0	4.7	3.4	0.0	0.0	7.6	6.3
Incr Delay (d2), s/veh				1.9	0.0	0.0	0.1	0.3	0.0	0.0	0.5	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	0.0	0.4	1.3	0.0	0.0	2.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.6	0.0	0.0	4.7	3.8	0.0	0.0	8.1	6.5
LnGrp LOS				C	A		A	A	A	A	A	A
Approach Vol, veh/h					312	A		1132			913	
Approach Delay, s/veh					31.6			4.0			7.9	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	56.3		9.7	46.6		13.7
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	8.2		3.8	10.5		8.0
Green Ext Time (p_c), s	5.4		0.5	4.0		0.5

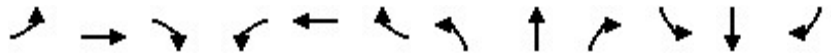
Intersection Summary		
HCM 6th Ctrl Delay		9.2
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	0	360	0	0	0	0	747	320	149	928	0
Future Volume (veh/h)	340	0	360	0	0	0	0	747	320	149	928	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	343	0	249				0	755	250	151	937	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	674	0	300				0	1844	822	862	2319	0
Arrive On Green	0.19	0.00	0.19				0.00	0.52	0.52	0.09	0.87	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1572	3428	3618	0
Grp Volume(v), veh/h	343	0	249				0	755	250	151	937	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1572	1714	1763	0
Q Serve(g_s), s	6.1	0.0	10.7				0.0	9.1	6.3	1.2	3.6	0.0
Cycle Q Clear(g_c), s	6.1	0.0	10.7				0.0	9.1	6.3	1.2	3.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	674	0	300				0	1844	822	862	2319	0
V/C Ratio(X)	0.51	0.00	0.83				0.00	0.41	0.30	0.18	0.40	0.00
Avail Cap(c_a), veh/h	843	0	375				0	1844	822	987	2319	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	25.4	0.0	27.2				0.0	10.1	9.5	6.2	1.7	0.0
Incr Delay (d2), s/veh	0.4	0.0	11.1				0.0	0.7	1.0	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.5				0.0	3.0	2.0	0.3	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	0.0	38.4				0.0	10.8	10.4	6.2	2.2	0.0
LnGrp LOS	C	A	D				A	B	B	A	A	A
Approach Vol, veh/h		592						1005			1088	
Approach Delay, s/veh		31.1						10.7			2.7	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.4	41.9	18.7	51.3
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 7.3	30.7	16.7	42.7
Max Q Clear Time (g_c+I1), s	13.2	11.1	12.7	5.6
Green Ext Time (p_c), s	0.1	4.6	0.7	5.9

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Notes

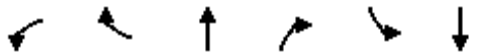
User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	130	310	355	60	150	410
Future Volume (veh/h)	130	310	355	60	150	410
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	157	95	428	58	181	494
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	265	236	982	132	237	2072
Arrive On Green	0.15	0.15	0.31	0.31	0.13	0.59
Sat Flow, veh/h	1767	1572	3213	420	1767	3618
Grp Volume(v), veh/h	157	95	241	245	181	494
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1778	1767	1763
Q Serve(g_s), s	2.7	1.8	3.5	3.6	3.2	2.2
Cycle Q Clear(g_c), s	2.7	1.8	3.5	3.6	3.2	2.2
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	265	236	555	560	237	2072
V/C Ratio(X)	0.59	0.40	0.43	0.44	0.76	0.24
Avail Cap(c_a), veh/h	2291	2039	1714	1729	573	5061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	12.5	8.8	8.8	13.5	3.2
Incr Delay (d2), s/veh	2.1	1.1	0.5	0.5	5.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.5	0.8	0.8	1.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.0	13.6	9.3	9.4	18.6	3.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	252		486			675
Approach Delay, s/veh	14.4		9.4			7.4
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.8	14.7			23.5	8.9
Change Period (Y+Rc), s	4.5	4.5			4.5	4.0
Max Green Setting (Gmax), s	10.5	31.5			46.5	42.0
Max Q Clear Time (g_c+I1), s	5.2	5.6			4.2	4.7
Green Ext Time (p_c), s	0.2	2.7			3.3	0.7

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	190	256	140	110	328
Future Volume (veh/h)	60	190	256	140	110	328
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	71	43	301	86	129	386
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	182	162	929	261	196	2138
Arrive On Green	0.10	0.10	0.34	0.34	0.11	0.61
Sat Flow, veh/h	1767	1572	2811	763	1767	3618
Grp Volume(v), veh/h	71	43	193	194	129	386
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1718	1767	1763
Q Serve(g_s), s	1.1	0.7	2.4	2.4	2.0	1.4
Cycle Q Clear(g_c), s	1.1	0.7	2.4	2.4	2.0	1.4
Prop In Lane	1.00	1.00		0.44	1.00	
Lane Grp Cap(c), veh/h	182	162	602	587	196	2138
V/C Ratio(X)	0.39	0.26	0.32	0.33	0.66	0.18
Avail Cap(c_a), veh/h	2536	2256	1897	1849	634	5601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	12.1	7.1	7.1	12.5	2.5
Incr Delay (d2), s/veh	1.4	0.9	0.3	0.3	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.4	0.4	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.6	13.0	7.4	7.5	16.2	2.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	114		387			515
Approach Delay, s/veh	13.4		7.5			6.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.7	14.5			22.2	7.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.0
Max Green Setting (Gmax), s	10.5	31.5			46.5	42.0
Max Q Clear Time (g_c+I1), s	4.0	4.4			3.4	3.1
Green Ext Time (p_c), s	0.1	2.1			2.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	130	0	0	240	20	0	0	0	40	0	30
Future Vol, veh/h	20	130	0	0	240	20	0	0	0	40	0	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	130	0	0	240	20	0	0	0	40	0	30
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	7.3	8.6	0	8.8
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	0%	57%
Vol Thru, %	100%	0%	100%	100%	100%	100%	80%	0%
Vol Right, %	0%	0%	0%	0%	0%	0%	20%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	20	65	65	0	160	100	70
LT Vol	0	20	0	0	0	0	0	40
Through Vol	0	0	65	65	0	160	80	0
RT Vol	0	0	0	0	0	0	20	30
Lane Flow Rate	0	20	65	65	0	160	100	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.03	0.09	0.058	0	0.216	0.131	0.105
Departure Headway (Hd)	5.521	5.472	4.969	3.211	4.859	4.859	4.719	5.413
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	657	723	1117	0	741	762	664
Service Time	3.248	3.186	2.684	0.925	2.571	2.571	2.431	3.136
HCM Lane V/C Ratio	0	0.03	0.09	0.058	0	0.216	0.131	0.105
HCM Control Delay	8.2	8.4	8.2	6.1	7.6	8.9	8.1	8.8
HCM Lane LOS	N	A	A	A	N	A	A	A
HCM 95th-tile Q	0	0.1	0.3	0.2	0	0.8	0.4	0.4

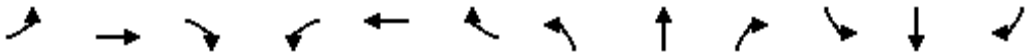
Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	10	250	30	10	160
Future Vol, veh/h	70	10	250	30	10	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	70	10	250	30	10	160

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	365	140	0	0	280	0
Stage 1	265	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	605	879	-	-	1272	-
Stage 1	752	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	600	879	-	-	1272	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	600	879	1272	-
HCM Lane V/C Ratio	-	-	0.117	0.011	0.008	-
HCM Control Delay (s)	-	-	11.8	9.1	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	90	20	30	310	100	20	310	60	30	280	70
Future Volume (veh/h)	60	90	20	30	310	100	20	310	60	30	280	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	60	90	7	30	310	63	20	310	35	30	280	56
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	472	1060	82	621	934	187	412	1039	116	494	489	98
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1000	3317	255	1286	2925	587	1036	3191	357	1027	1501	300
Grp Volume(v), veh/h	60	47	50	30	185	188	20	170	175	30	0	336
Grp Sat Flow(s),veh/h/ln	1000	1763	1809	1286	1763	1749	1036	1763	1786	1027	0	1801
Q Serve(g_s), s	1.5	0.6	0.6	0.5	2.5	2.5	0.5	2.2	2.2	0.7	0.0	4.7
Cycle Q Clear(g_c), s	4.0	0.6	0.6	1.1	2.5	2.5	5.2	2.2	2.2	2.9	0.0	4.7
Prop In Lane	1.00		0.14	1.00		0.34	1.00		0.20	1.00		0.17
Lane Grp Cap(c), veh/h	472	563	578	621	563	559	412	574	581	494	0	587
V/C Ratio(X)	0.13	0.08	0.09	0.05	0.33	0.34	0.05	0.30	0.30	0.06	0.00	0.57
Avail Cap(c_a), veh/h	1130	1722	1767	1466	1722	1708	1592	2583	2617	1665	0	2640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	7.3	7.3	7.7	7.9	8.0	10.8	7.7	7.7	8.8	0.0	8.6
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.0	0.3	0.4	0.0	0.3	0.3	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.1	0.1	0.5	0.5	0.1	0.5	0.5	0.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	7.4	7.4	7.7	8.3	8.3	10.8	8.0	8.0	8.9	0.0	9.5
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		157			403			365			366	
Approach Delay, s/veh		8.2			8.3			8.2			9.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.2		14.5		16.2		14.5				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		7.2		6.0		6.7		4.5				
Green Ext Time (p_c), s		2.1		0.7		2.0		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	280	140	240	120	660	930	120	120	970	170
Future Volume (veh/h)	80	100	280	140	240	120	660	930	120	120	970	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	100	31	140	240	13	660	930	0	120	970	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	234	342	268	244	327	146	715	2526		579	2362	733
Arrive On Green	0.07	0.10	0.10	0.07	0.09	0.09	0.14	0.33	0.00	0.17	0.47	0.47
Sat Flow, veh/h	3428	3526	2768	3428	3526	1572	3428	5066	1572	3428	5066	1571
Grp Volume(v), veh/h	80	100	31	140	240	13	660	930	0	120	970	79
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1572	1714	1689	1572	1714	1689	1571
Q Serve(g_s), s	3.1	3.7	1.0	5.5	9.3	0.7	26.6	19.5	0.0	4.2	17.7	4.0
Cycle Q Clear(g_c), s	3.1	3.7	1.0	5.5	9.3	0.7	26.6	19.5	0.0	4.2	17.7	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	342	268	244	327	146	715	2526		579	2362	733
V/C Ratio(X)	0.34	0.29	0.12	0.57	0.73	0.09	0.92	0.37		0.21	0.41	0.11
Avail Cap(c_a), veh/h	245	957	751	245	957	427	857	2526		579	2362	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	58.8	29.8	63.0	61.8	27.2	59.1	29.9	0.0	50.1	24.7	21.0
Incr Delay (d2), s/veh	0.3	0.6	0.2	2.1	3.9	0.3	11.4	0.1	0.0	0.1	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	0.5	2.4	4.3	0.4	12.9	8.3	0.0	1.8	7.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	59.3	30.0	65.1	65.7	27.5	70.5	30.0	0.0	50.2	25.2	21.3
LnGrp LOS	E	E	C	E	E	C	E	C		D	C	C
Approach Vol, veh/h		211			393			1590	A		1169	
Approach Delay, s/veh		56.2			64.2			46.8			27.5	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	75.8	15.6	19.0	34.2	71.3	15.0	19.6
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	* 60	10.0	* 38	35.0	35.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	6.2	21.5	5.1	11.3	28.6	19.7	7.5	5.7
Green Ext Time (p_c), s	0.0	10.3	0.0	1.7	0.6	7.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	460	0	220	0	1490	1170	0	1190	200
Future Volume (veh/h)	0	0	0	460	0	220	0	1490	1170	0	1190	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				507	0	101	0	1490	0	0	1190	123
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				647	0	288	0	3300		0	3300	1024
Arrive On Green				0.18	0.00	0.18	0.00	1.00	0.00	0.00	0.87	0.87
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				507	0	101	0	1490	0	0	1190	123
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				9.6	0.0	3.9	0.0	0.0	0.0	0.0	3.2	0.8
Cycle Q Clear(g_c), s				9.6	0.0	3.9	0.0	0.0	0.0	0.0	3.2	0.8
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				647	0	288	0	3300		0	3300	1024
V/C Ratio(X)				0.78	0.00	0.35	0.00	0.45		0.00	0.36	0.12
Avail Cap(c_a), veh/h				1070	0	476	0	3300		0	3300	1024
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.73	0.00	0.00	0.88	0.88
Uniform Delay (d), s/veh				27.3	0.0	25.0	0.0	0.0	0.0	0.0	1.8	1.7
Incr Delay (d2), s/veh				1.6	0.0	0.5	0.0	0.3	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.8	0.0	1.4	0.0	0.1	0.0	0.0	0.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.9	0.0	25.5	0.0	0.3	0.0	0.0	2.1	1.9
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					608			1490	A		1313	
Approach Delay, s/veh					28.3			0.3			2.1	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	51.4		51.4		18.6	
Change Period (Y+Rc), s	5.8		5.8		5.8	
Max Green Setting (Gmax), s	37.2		37.2		21.2	
Max Q Clear Time (g_c+I1), s	2.0		5.2		11.6	
Green Ext Time (p_c), s	10.5		7.9		1.2	

Intersection Summary		
HCM 6th Ctrl Delay		6.0
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	920	120	2550	1460	190
Future Volume (veh/h)	110	920	120	2550	1460	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	110	915	120	2550	1460	90
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	776	265	3199	2466	766
Arrive On Green	0.20	0.20	0.08	0.63	0.97	0.97
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	110	915	120	2550	1460	90
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	1.8	14.2	2.3	26.2	1.2	0.1
Cycle Q Clear(g_c), s	1.8	14.2	2.3	26.2	1.2	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	695	776	265	3199	2466	766
V/C Ratio(X)	0.16	1.18	0.45	0.80	0.59	0.12
Avail Cap(c_a), veh/h	695	776	700	3199	2466	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.90	0.90
Uniform Delay (d), s/veh	23.0	25.2	30.9	9.6	0.5	0.5
Incr Delay (d2), s/veh	0.1	94.0	0.9	2.2	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	23.1	0.9	6.8	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	119.2	31.8	11.7	1.4	0.8
LnGrp LOS	C	F	C	B	A	A
Approach Vol, veh/h	1025			2670	1550	
Approach Delay, s/veh	108.8			12.6	1.4	
Approach LOS	F			B	A	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	50.0		20.0	10.1	39.9
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	44.2		14.2	* 14	25.2
Max Q Clear Time (g_c+I1), s	28.2		16.2	4.3	3.2
Green Ext Time (p_c), s	13.0		0.0	0.2	9.0

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1450	280	560	1300	1020	1530
Future Volume (veh/h)	1450	280	560	1300	1020	1530
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1450	268	560	1300	1020	1519
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1734	1461	617	1919	1143	2410
Arrive On Green	0.11	0.11	0.18	0.54	0.32	0.32
Sat Flow, veh/h	4983	2768	3428	3618	3618	3585
Grp Volume(v), veh/h	1450	268	560	1300	1020	1519
Grp Sat Flow(s),veh/h/ln	1661	1384	1714	1763	1763	1195
Q Serve(g_s), s	28.5	6.4	16.0	26.6	27.5	24.1
Cycle Q Clear(g_c), s	28.5	6.4	16.0	26.6	27.5	24.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1734	1461	617	1919	1143	2410
V/C Ratio(X)	0.84	0.18	0.91	0.68	0.89	0.63
Avail Cap(c_a), veh/h	1734	1461	617	1921	1146	2413
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	17.2	40.2	16.4	32.1	9.3
Incr Delay (d2), s/veh	3.8	0.2	16.9	1.3	9.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	2.0	7.8	9.5	12.4	12.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.3	17.4	57.1	17.7	41.7	10.1
LnGrp LOS	D	B	E	B	D	B
Approach Vol, veh/h	1718			1860	2539	
Approach Delay, s/veh	40.9			29.6	22.8	
Approach LOS	D			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.0	37.9			59.9	40.0
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	18.0	32.5			54.5	34.8
Max Q Clear Time (g_c+I1), s	18.0	29.5			28.6	30.5
Green Ext Time (p_c), s	0.0	2.9			16.7	3.3

Intersection Summary		
HCM 6th Ctrl Delay	29.9	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	230	600	50	210	40	730	1520	40	60	1470	630
Future Volume (veh/h)	350	230	600	50	210	40	730	1520	40	60	1470	630
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	350	230	541	50	210	24	730	1520	21	60	1470	562
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	416	670	667	103	315	36	803	2855	886	111	1782	744
Arrive On Green	0.12	0.19	0.19	0.03	0.10	0.10	0.23	0.56	0.56	0.01	0.12	0.12
Sat Flow, veh/h	3428	3526	1572	3428	3193	361	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	350	230	541	50	115	119	730	1520	21	60	1470	562
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1791	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	10.0	5.7	19.0	1.4	6.3	6.4	20.7	18.7	0.6	1.7	28.4	29.1
Cycle Q Clear(g_c), s	10.0	5.7	19.0	1.4	6.3	6.4	20.7	18.7	0.6	1.7	28.4	29.1
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	670	667	103	174	177	803	2855	886	111	1782	744
V/C Ratio(X)	0.84	0.34	0.81	0.49	0.66	0.67	0.91	0.53	0.02	0.54	0.83	0.76
Avail Cap(c_a), veh/h	473	670	667	267	229	233	919	2855	886	267	1782	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	43.0	35.1	25.3	47.7	43.5	43.5	37.2	13.6	9.7	48.7	41.2	29.4
Incr Delay (d2), s/veh	10.4	0.1	7.0	1.3	1.6	2.1	11.0	0.7	0.0	1.0	3.1	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	2.4	11.4	0.6	2.7	2.9	9.3	6.2	0.2	0.7	13.2	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	35.2	32.2	49.1	45.1	45.6	48.2	14.3	9.7	49.8	44.3	34.3
LnGrp LOS	D	D	C	D	D	D	D	B	A	D	D	C
Approach Vol, veh/h		1121			284			2271			2092	
Approach Delay, s/veh		39.5			46.0			25.2			41.8	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	24.2	28.4	40.4	16.1	15.1	7.2	61.6
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	19.0	26.8	27.0	13.8	13.0	7.8	47.0
Max Q Clear Time (g_c+I1), s	3.4	21.0	22.7	31.1	12.0	8.4	3.7	20.7
Green Ext Time (p_c), s	0.0	0.0	0.7	0.0	0.1	0.3	0.0	7.5

Intersection Summary	
HCM 6th Ctrl Delay	35.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	550	180	340	1150	140	360	1410	260	110	1550	490
Future Volume (veh/h)	400	550	180	340	1150	140	360	1410	260	110	1550	490
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	400	550	51	340	1150	125	360	1410	115	110	1550	318
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	377	1404	436	402	1319	143	343	1813	562	783	2539	788
Arrive On Green	0.11	0.28	0.28	0.12	0.28	0.28	0.10	0.36	0.36	0.23	0.50	0.50
Sat Flow, veh/h	3428	5066	1572	3428	4636	504	3428	5066	1570	3428	5066	1572
Grp Volume(v), veh/h	400	550	51	340	838	437	360	1410	115	110	1550	318
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1762	1714	1689	1570	1714	1689	1572
Q Serve(g_s), s	11.0	8.8	2.4	9.7	23.6	23.6	10.0	24.8	4.9	2.6	22.0	12.6
Cycle Q Clear(g_c), s	11.0	8.8	2.4	9.7	23.6	23.6	10.0	24.8	4.9	2.6	22.0	12.6
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	377	1404	436	402	961	501	343	1813	562	783	2539	788
V/C Ratio(X)	1.06	0.39	0.12	0.84	0.87	0.87	1.05	0.78	0.20	0.14	0.61	0.40
Avail Cap(c_a), veh/h	377	1418	440	411	979	511	343	1813	562	783	2539	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	29.3	27.0	43.2	34.0	34.0	45.0	28.6	20.6	30.8	17.9	15.6
Incr Delay (d2), s/veh	63.3	0.4	0.3	13.8	9.3	16.2	62.3	3.4	0.8	0.0	1.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	3.4	0.9	4.7	10.2	11.6	7.0	9.6	1.9	1.0	7.8	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.8	29.7	27.3	57.1	43.3	50.2	107.3	31.9	21.4	30.8	19.0	17.1
LnGrp LOS	F	C	C	E	D	D	F	C	C	C	B	B
Approach Vol, veh/h		1001			1615			1885			1978	
Approach Delay, s/veh		60.8			48.1			45.7			19.4	
Approach LOS		E			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	41.3	15.7	33.4	14.0	55.9	15.0	34.2
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	5.0	* 36	12.0	28.0	10.0	30.8	11.0	29.0
Max Q Clear Time (g_c+I1), s	4.6	26.8	11.7	10.8	12.0	24.0	13.0	25.6
Green Ext Time (p_c), s	0.0	7.5	0.0	5.6	0.0	6.2	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

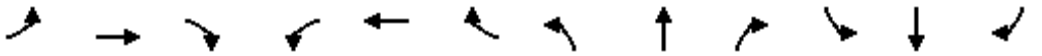
Intersection	
Int Delay, s/veh	10.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	160	360	350	70	180	400
Future Vol, veh/h	160	360	350	70	180	400
Conflicting Peds, #/hr	0	1	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	160	360	350	70	180	400

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	947	213	0	0	422	0
Stage 1	387	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	258	789	-	-	1127	-
Stage 1	653	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	787	-	-	1125	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	652	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.1	0	2.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	216	787	1125	-
HCM Lane V/C Ratio	-	-	0.741	0.457	0.16	-
HCM Control Delay (s)	-	-	58	13.4	8.8	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	5	2.4	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	230	100	370	390	80	300	460	200	130	570	150
Future Volume (veh/h)	30	230	100	370	390	80	300	460	200	130	570	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	230	14	370	390	54	300	460	45	130	570	133
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	108	645	200	467	913	124	705	725	324	459	737	171
Arrive On Green	0.06	0.13	0.13	0.14	0.20	0.20	0.21	0.21	0.21	0.26	0.26	0.26
Sat Flow, veh/h	1767	5066	1572	3428	4511	611	3428	3526	1572	1767	2839	660
Grp Volume(v), veh/h	30	230	14	370	290	154	300	460	45	130	353	350
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1714	1689	1746	1714	1763	1572	1767	1763	1737
Q Serve(g_s), s	1.3	3.3	0.6	8.2	5.9	6.1	6.0	9.4	1.8	4.6	14.6	14.7
Cycle Q Clear(g_c), s	1.3	3.3	0.6	8.2	5.9	6.1	6.0	9.4	1.8	4.6	14.6	14.7
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	108	645	200	467	683	353	705	725	324	459	458	451
V/C Ratio(X)	0.28	0.36	0.07	0.79	0.42	0.44	0.43	0.63	0.14	0.28	0.77	0.78
Avail Cap(c_a), veh/h	450	2257	701	873	1505	778	1091	1122	500	562	561	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	31.3	30.2	32.8	27.3	27.4	27.2	28.5	25.5	23.2	26.9	27.0
Incr Delay (d2), s/veh	0.5	0.5	0.2	1.2	0.6	1.2	0.6	1.3	0.3	0.5	6.1	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.2	3.2	2.2	2.4	2.4	3.8	0.7	1.8	6.3	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	31.8	30.4	34.0	27.9	28.6	27.7	29.8	25.8	23.7	33.1	33.4
LnGrp LOS	D	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		274			814			805			833	
Approach Delay, s/veh		32.2			30.8			28.8			31.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	16.0		25.8	9.3	21.9		21.6				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	10.2	5.3		16.7	3.3	8.1		11.4				
Green Ext Time (p_c), s	0.5	2.0		3.7	0.0	3.6		4.8				

Intersection Summary		
HCM 6th Ctrl Delay		30.6
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	10	410	0	40	40	850	220	10	990	40
Future Volume (veh/h)	70	0	10	410	0	40	40	850	220	10	990	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	70	0	1	410	0	9	40	850	77	10	990	37
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	2
Cap, veh/h	218	0	97	667	0	297	75	1904	591	89	1803	67
Arrive On Green	0.06	0.00	0.06	0.19	0.00	0.19	0.04	0.38	0.38	0.03	0.36	0.36
Sat Flow, veh/h	3563	0	1585	3534	0	1572	1781	5066	1572	3428	5012	187
Grp Volume(v), veh/h	70	0	1	410	0	9	40	850	77	10	667	360
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1767	0	1572	1781	1689	1572	1714	1689	1822
Q Serve(g_s), s	1.0	0.0	0.0	5.6	0.0	0.2	1.2	6.6	1.7	0.2	8.3	8.3
Cycle Q Clear(g_c), s	1.0	0.0	0.0	5.6	0.0	0.2	1.2	6.6	1.7	0.2	8.3	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	218	0	97	667	0	297	75	1904	591	89	1215	655
V/C Ratio(X)	0.32	0.00	0.01	0.61	0.00	0.03	0.53	0.45	0.13	0.11	0.55	0.55
Avail Cap(c_a), veh/h	1247	0	555	2541	0	1131	172	2406	747	649	1917	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	23.3	19.7	0.0	17.5	24.8	12.4	10.8	25.1	13.5	13.5
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.3	0.0	0.0	5.8	0.2	0.1	0.2	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.1	0.0	0.1	0.6	2.0	0.5	0.1	2.6	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	0.0	23.3	20.0	0.0	17.5	30.6	12.6	11.0	25.4	14.1	14.5
LnGrp LOS	C	A	C	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		71			419			967			1037	
Approach Delay, s/veh		24.6			20.0			13.2			14.3	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	24.8		7.7	6.7	23.9		14.5
Change Period (Y+Rc), s	4.5	4.9		4.5	4.5	4.9		4.5
Max Green Setting (Gmax), s	10.0	25.1		18.5	5.1	30.0		38.0
Max Q Clear Time (g_c+I1), s	2.2	8.6		3.0	3.2	10.3		7.6
Green Ext Time (p_c), s	0.0	7.1		0.1	0.0	8.7		0.8

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	550	0	320	450	790	0	0	970	440
Future Volume (veh/h)	0	0	0	550	0	320	450	790	0	0	970	440
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				550	0	0	450	790	0	0	970	184
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				681	0		806	2223	0	0	1604	715
Arrive On Green				0.19	0.00	0.00	0.10	0.63	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1572
Grp Volume(v), veh/h				550	0	0	450	790	0	0	970	184
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1572
Q Serve(g_s), s				8.9	0.0	0.0	3.8	6.4	0.0	0.0	12.4	4.3
Cycle Q Clear(g_c), s				8.9	0.0	0.0	3.8	6.4	0.0	0.0	12.4	4.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				681	0		806	2223	0	0	1604	715
V/C Ratio(X)				0.81	0.00		0.56	0.36	0.00	0.00	0.60	0.26
Avail Cap(c_a), veh/h				866	0		833	2223	0	0	1604	715
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.78	0.78	0.00	0.00	0.77	0.77
Uniform Delay (d), s/veh				23.2	0.0	0.0	9.3	5.3	0.0	0.0	12.3	10.1
Incr Delay (d2), s/veh				4.1	0.0	0.0	0.5	0.3	0.0	0.0	1.3	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.6	0.0	0.0	1.0	1.5	0.0	0.0	4.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.3	0.0	0.0	9.8	5.6	0.0	0.0	13.6	10.8
LnGrp LOS				C	A		A	A	A	A	B	B
Approach Vol, veh/h					550	A		1240			1154	
Approach Delay, s/veh					27.3			7.1			13.2	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	43.1		10.5	32.6		16.9
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	34.7		* 6.3	23.7		14.7
Max Q Clear Time (g_c+I1), s	8.4		5.8	14.4		10.9
Green Ext Time (p_c), s	4.5		0.1	4.0		0.6

Intersection Summary		
HCM 6th Ctrl Delay		13.2
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	370	0	0	0	0	1030	440	190	1330	0
Future Volume (veh/h)	210	0	370	0	0	0	0	1030	440	190	1330	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	210	0	286				0	1030	306	190	1330	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	757	0	337				0	1754	773	673	2236	0
Arrive On Green	0.21	0.00	0.21				0.00	0.50	0.50	0.07	0.63	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1553	3428	3618	0
Grp Volume(v), veh/h	210	0	286				0	1030	306	190	1330	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1553	1714	1763	0
Q Serve(g_s), s	3.5	0.0	12.2				0.0	14.5	8.6	1.7	15.5	0.0
Cycle Q Clear(g_c), s	3.5	0.0	12.2				0.0	14.5	8.6	1.7	15.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	757	0	337				0	1754	773	673	2236	0
V/C Ratio(X)	0.28	0.00	0.85				0.00	0.59	0.40	0.28	0.59	0.00
Avail Cap(c_a), veh/h	1045	0	465				0	1754	773	684	2236	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	23.0	0.0	26.4				0.0	12.5	11.0	8.6	7.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	9.3				0.0	1.4	1.5	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	5.0				0.0	5.0	2.8	0.5	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	35.8				0.0	13.9	12.5	8.7	8.3	0.0
LnGrp LOS	C	A	D				A	B	B	A	A	A
Approach Vol, veh/h		496						1336			1520	
Approach Delay, s/veh		30.4						13.6			8.4	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.6	40.1	20.3	49.7
Change Period (Y+Rc), s	* 4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	* 5.1	28.9	20.7	38.7
Max Q Clear Time (g_c+I1), s	3.7	16.5	14.2	17.5
Green Ext Time (p_c), s	0.1	5.4	0.8	8.2

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	80	0	0	80	40	0	0	0	30	0	20
Future Vol, veh/h	40	80	0	0	80	40	0	0	0	30	0	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	40	80	0	0	80	40	0	0	0	30	0	20
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	7.3	7.6	0	8.2
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	0%	100%	0%	0%	0%	0%	0%	60%
Vol Thru, %	100%	0%	100%	100%	100%	100%	40%	0%
Vol Right, %	0%	0%	0%	0%	0%	0%	60%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	40	40	40	0	53	67	50
LT Vol	0	40	0	0	0	0	0	30
Through Vol	0	0	40	40	0	53	27	0
RT Vol	0	0	0	0	0	0	40	20
Lane Flow Rate	0	40	40	40	0	53	67	50
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.058	0.052	0.033	0	0.07	0.079	0.071
Departure Headway (Hd)	5.12	5.2	4.7	2.946	4.699	4.699	4.279	5.087
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	682	754	1190	0	755	827	709
Service Time	2.822	2.983	2.482	0.727	2.477	2.477	2.056	2.787
HCM Lane V/C Ratio	0	0.059	0.053	0.034	0	0.07	0.081	0.071
HCM Control Delay	7.8	8.3	7.7	5.8	7.5	7.8	7.4	8.2
HCM Lane LOS	N	A	A	A	N	A	A	A
HCM 95th-tile Q	0	0.2	0.2	0.1	0	0.2	0.3	0.2

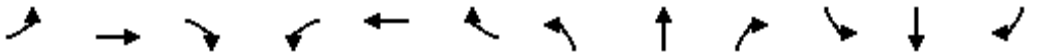
Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	10	90	60	10	110
Future Vol, veh/h	60	10	90	60	10	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	60	10	90	60	10	110

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	195	75	0	0	150	0
Stage 1	120	-	-	-	-	-
Stage 2	75	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	773	968	-	-	1421	-
Stage 1	889	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	768	968	-	-	1421	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	929	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	768	968	1421	-
HCM Lane V/C Ratio	-	-	0.078	0.01	0.007	-
HCM Control Delay (s)	-	-	10.1	8.8	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	190	30	30	120	20	20	110	60	30	150	30
Future Volume (veh/h)	40	190	30	30	120	20	20	110	60	30	150	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	40	190	14	30	120	6	20	110	24	30	150	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	578	978	71	535	1004	50	570	979	207	631	547	69
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1254	3327	243	1168	3415	170	1206	2887	611	1245	1614	204
Grp Volume(v), veh/h	40	100	104	30	62	64	20	66	68	30	0	169
Grp Sat Flow(s),veh/h/ln	1254	1763	1808	1168	1763	1822	1206	1763	1736	1245	0	1819
Q Serve(g_s), s	0.7	1.3	1.3	0.6	0.8	0.8	0.4	0.8	0.8	0.5	0.0	2.0
Cycle Q Clear(g_c), s	1.5	1.3	1.3	1.9	0.8	0.8	2.4	0.8	0.8	1.3	0.0	2.0
Prop In Lane	1.00		0.13	1.00		0.09	1.00		0.35	1.00		0.11
Lane Grp Cap(c), veh/h	578	518	531	535	518	536	570	598	589	631	0	617
V/C Ratio(X)	0.07	0.19	0.20	0.06	0.12	0.12	0.04	0.11	0.12	0.05	0.00	0.27
Avail Cap(c_a), veh/h	1476	1780	1825	1371	1780	1840	1987	2670	2629	2094	0	2755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	7.8	7.9	8.6	7.7	7.7	8.0	6.7	6.8	7.2	0.0	7.2
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	8.0	8.0	8.6	7.8	7.8	8.0	6.8	6.8	7.2	0.0	7.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		244			156			154			199	
Approach Delay, s/veh		8.1			7.9			7.0			7.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		13.4		16.3		13.4				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		4.4		3.5		4.0		3.9				
Green Ext Time (p_c), s		0.8		1.2		1.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	210	420	90	90	70	270	760	200	70	810	100
Future Volume (veh/h)	140	210	420	90	90	70	270	760	200	70	810	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	140	210	64	90	90	9	270	760	0	70	810	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	349	274	271	308	137	322	1024		1468	2758	856
Arrive On Green	0.08	0.10	0.10	0.08	0.09	0.09	0.19	0.40	0.00	0.43	0.54	0.54
Sat Flow, veh/h	3428	3526	2768	3428	3526	1567	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	140	210	64	90	90	9	270	760	0	70	810	47
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1567	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	4.7	6.8	1.1	3.0	2.9	0.5	9.1	15.3	0.0	1.4	10.4	1.7
Cycle Q Clear(g_c), s	4.7	6.8	1.1	3.0	2.9	0.5	9.1	15.3	0.0	1.4	10.4	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	349	274	271	308	137	322	1024		1468	2758	856
V/C Ratio(X)	0.49	0.60	0.23	0.33	0.29	0.07	0.84	0.74		0.05	0.29	0.05
Avail Cap(c_a), veh/h	286	1116	876	286	1116	496	486	1689		1468	2758	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	51.8	8.5	52.2	51.3	31.9	47.8	33.1	0.0	20.0	14.8	12.8
Incr Delay (d2), s/veh	0.5	2.0	0.5	0.3	0.6	0.2	4.7	4.6	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.1	0.9	1.3	1.3	0.3	3.7	5.3	0.0	0.6	3.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	53.8	9.1	52.5	51.9	32.1	52.5	37.7	0.0	20.0	15.1	13.0
LnGrp LOS	D	D	A	D	D	C	D	D		C	B	B
Approach Vol, veh/h		414			189			1030	A		927	
Approach Delay, s/veh		46.7			51.3			41.6			15.4	
Approach LOS		D			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	30.2	15.9	16.5	16.3	71.3	14.5	17.9
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	* 40	10.0	* 38	17.0	33.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	13.4	17.3	6.7	4.9	11.1	12.4	5.0	8.8
Green Ext Time (p_c), s	0.0	6.8	0.0	0.6	0.2	7.3	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	310	0	160	0	1070	930	0	1140	180
Future Volume (veh/h)	0	0	0	310	0	160	0	1070	930	0	1140	180
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				327	0	37	0	1070	0	0	1140	112
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				467	0	208	0	3416		0	3416	1061
Arrive On Green				0.13	0.00	0.13	0.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				327	0	37	0	1070	0	0	1140	112
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				5.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				5.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				467	0	208	0	3416		0	3416	1061
V/C Ratio(X)				0.70	0.00	0.18	0.00	0.31		0.00	0.33	0.11
Avail Cap(c_a), veh/h				954	0	425	0	3416		0	3416	1061
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.87	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				24.9	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.3	0.0	0.2	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	0.4	0.0	0.1	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.3	0.0	23.4	0.0	0.2	0.0	0.0	0.2	0.2
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					364			1070	A		1252	
Approach Delay, s/veh					26.0			0.2			0.2	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	46.3		46.3		13.7			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	32.2		32.2		16.2			
Max Q Clear Time (g_c+I1), s	2.0		2.0		7.3			
Green Ext Time (p_c), s	6.4		7.3		0.6			

Intersection Summary		
HCM 6th Ctrl Delay	3.7	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	1150	180	1830	1220	230
Future Volume (veh/h)	170	1150	180	1830	1220	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	170	1150	180	1830	1220	79
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1097	1149	326	2465	1587	493
Arrive On Green	0.32	0.32	0.10	0.49	0.21	0.21
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	170	1150	180	1830	1220	79
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	2.1	19.2	3.0	17.4	13.6	2.5
Cycle Q Clear(g_c), s	2.1	19.2	3.0	17.4	13.6	2.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1097	1149	326	2465	1587	493
V/C Ratio(X)	0.15	1.00	0.55	0.74	0.77	0.16
Avail Cap(c_a), veh/h	1097	1149	931	2465	1587	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	14.6	17.5	25.9	12.4	21.7	17.2
Incr Delay (d2), s/veh	0.0	26.8	1.1	2.1	3.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	19.4	1.1	5.2	5.6	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	44.4	27.0	14.4	25.0	17.9
LnGrp LOS	B	F	C	B	C	B
Approach Vol, veh/h	1320			2010	1299	
Approach Delay, s/veh	40.6			15.6	24.6	
Approach LOS	D			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.0		25.0	10.4	24.6
Change Period (Y+Rc), s		5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s		29.2		19.2	* 16	8.2
Max Q Clear Time (g_c+I1), s		19.4		21.2	5.0	15.6
Green Ext Time (p_c), s		6.7		0.0	0.3	0.0

Intersection Summary		
HCM 6th Ctrl Delay		25.2
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1200	410	310	930	1150	1400
Future Volume (veh/h)	1200	410	310	930	1150	1400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1200	389	310	930	1150	1373
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1585	1183	375	1940	1413	2577
Arrive On Green	0.10	0.10	0.11	0.55	0.40	0.40
Sat Flow, veh/h	4983	2768	3428	3618	3618	3585
Grp Volume(v), veh/h	1200	389	310	930	1150	1373
Grp Sat Flow(s),veh/h/ln	1661	1384	1714	1763	1763	1195
Q Serve(g_s), s	23.4	11.1	8.9	16.1	29.0	17.4
Cycle Q Clear(g_c), s	23.4	11.1	8.9	16.1	29.0	17.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1585	1183	375	1940	1413	2577
V/C Ratio(X)	0.76	0.33	0.83	0.48	0.81	0.53
Avail Cap(c_a), veh/h	1585	1183	446	2027	1428	2592
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	25.7	43.6	13.7	26.6	6.4
Incr Delay (d2), s/veh	2.8	0.6	9.0	0.4	4.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	3.9	4.0	5.6	12.0	9.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.8	26.3	52.6	14.1	30.8	6.8
LnGrp LOS	D	C	D	B	C	A
Approach Vol, veh/h	1589			1240	2523	
Approach Delay, s/veh	39.5			23.7	17.8	
Approach LOS	D			C	B	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.9	45.6			60.5	37.0
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	13.0	40.5			57.5	31.8
Max Q Clear Time (g_c+I1), s	10.9	31.0			18.1	25.4
Green Ext Time (p_c), s	0.1	9.1			14.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	370	650	60	90	40	410	1200	20	60	1490	360
Future Volume (veh/h)	490	370	650	60	90	40	410	1200	20	60	1490	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	490	370	597	60	90	3	410	1200	10	60	1490	275
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	561	740	554	111	274	9	488	2741	851	111	2133	920
Arrive On Green	0.16	0.21	0.21	0.03	0.08	0.08	0.14	0.54	0.54	0.01	0.14	0.14
Sat Flow, veh/h	3428	3526	1572	3428	3482	116	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	490	370	597	60	45	48	410	1200	10	60	1490	275
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1835	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	13.9	9.3	21.0	1.7	2.4	2.5	11.6	14.2	0.3	1.7	28.0	11.5
Cycle Q Clear(g_c), s	13.9	9.3	21.0	1.7	2.4	2.5	11.6	14.2	0.3	1.7	28.0	11.5
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	561	740	554	111	139	144	488	2741	851	111	2133	920
V/C Ratio(X)	0.87	0.50	1.08	0.54	0.33	0.33	0.84	0.44	0.01	0.54	0.70	0.30
Avail Cap(c_a), veh/h	679	740	554	267	159	165	850	2741	851	267	2133	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	40.8	34.9	32.4	47.6	43.6	43.6	41.8	13.8	10.6	48.7	37.0	16.4
Incr Delay (d2), s/veh	9.3	0.2	60.7	1.5	0.5	0.5	1.5	0.5	0.0	1.2	1.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	3.9	21.5	0.7	1.1	1.1	4.8	4.8	0.1	0.7	12.8	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	35.1	93.1	49.2	44.1	44.1	43.3	14.3	10.6	50.0	38.6	17.0
LnGrp LOS	D	D	F	D	D	D	D	B	B	D	D	B
Approach Vol, veh/h		1457			153			1620			1825	
Approach Delay, s/veh		63.9			46.1			21.6			35.7	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	26.2	19.2	47.3	20.4	13.1	7.2	59.3
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	21.0	24.8	27.0	19.8	9.0	7.8	45.0
Max Q Clear Time (g_c+I1), s	3.7	23.0	13.6	30.0	15.9	4.5	3.7	16.2
Green Ext Time (p_c), s	0.0	0.0	0.6	0.0	0.4	0.1	0.0	5.5

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	930	310	300	560	120	310	1030	390	130	1380	280
Future Volume (veh/h)	320	930	310	300	560	120	310	1030	390	130	1380	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	320	930	109	300	560	85	310	1030	170	130	1380	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	386	1208	375	371	1041	156	353	1535	476	492	1815	564
Arrive On Green	0.11	0.24	0.24	0.11	0.23	0.23	0.10	0.30	0.30	0.14	0.36	0.36
Sat Flow, veh/h	3428	5066	1572	3428	4448	665	3428	5066	1571	3428	5066	1572
Grp Volume(v), veh/h	320	930	109	300	423	222	310	1030	170	130	1380	92
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1736	1714	1689	1571	1714	1689	1572
Q Serve(g_s), s	9.1	17.1	5.7	8.6	11.0	11.2	8.9	17.8	6.0	3.4	24.0	4.0
Cycle Q Clear(g_c), s	9.1	17.1	5.7	8.6	11.0	11.2	8.9	17.8	6.0	3.4	24.0	4.0
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1208	375	371	790	406	353	1535	476	492	1815	564
V/C Ratio(X)	0.83	0.77	0.29	0.81	0.54	0.55	0.88	0.67	0.36	0.26	0.76	0.16
Avail Cap(c_a), veh/h	446	1317	409	549	979	503	353	1535	476	492	1815	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	35.5	31.2	43.6	33.5	33.6	44.2	30.5	13.7	38.1	28.3	21.9
Incr Delay (d2), s/veh	9.6	3.3	0.9	3.3	1.2	2.4	20.7	2.4	2.1	0.1	3.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	7.0	2.1	3.6	4.4	4.7	4.6	7.0	3.1	1.4	9.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	38.8	32.1	46.9	34.7	36.1	64.9	32.8	15.8	38.2	31.3	22.5
LnGrp LOS	D	D	C	D	C	D	E	C	B	D	C	C
Approach Vol, veh/h		1359			945			1510			1602	
Approach Delay, s/veh		41.6			38.9			37.5			31.4	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	35.8	14.8	29.5	14.3	41.3	15.3	29.1
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 30	16.0	26.0	10.3	28.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	5.4	19.8	10.6	19.1	10.9	26.0	11.1	13.2
Green Ext Time (p_c), s	0.1	7.3	0.3	4.7	0.0	2.2	0.1	5.8

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

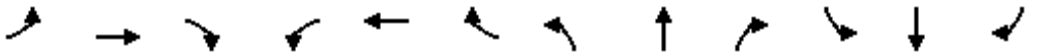
Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	370	210	160	130	330
Future Vol, veh/h	70	370	210	160	130	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	70	370	210	160	130	330

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	715	185	0	0	370	0
Stage 1	290	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	363	823	-	-	1178	-
Stage 1	731	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	323	823	-	-	1178	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	555	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	2.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	323	823	1178	-
HCM Lane V/C Ratio	-	-	0.217	0.45	0.11	-
HCM Control Delay (s)	-	-	19.2	12.9	8.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	2.4	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	330	210	180	190	80	160	540	280	210	400	80
Future Volume (veh/h)	160	330	210	180	190	80	160	540	280	210	400	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	160	330	38	180	190	12	160	540	70	210	400	67
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	233	713	221	458	695	43	791	813	363	359	614	102
Arrive On Green	0.13	0.14	0.14	0.13	0.14	0.14	0.23	0.23	0.23	0.20	0.20	0.20
Sat Flow, veh/h	1767	5066	1569	3428	4875	303	3428	3526	1572	1767	3025	503
Grp Volume(v), veh/h	160	330	38	180	131	71	160	540	70	210	232	235
Grp Sat Flow(s),veh/h/ln	1767	1689	1569	1714	1689	1801	1714	1763	1572	1767	1763	1765
Q Serve(g_s), s	6.3	4.4	1.6	3.5	2.5	2.6	2.7	10.1	2.6	7.8	8.8	8.9
Cycle Q Clear(g_c), s	6.3	4.4	1.6	3.5	2.5	2.6	2.7	10.1	2.6	7.8	8.8	8.9
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	233	713	221	458	481	257	791	813	363	359	358	358
V/C Ratio(X)	0.69	0.46	0.17	0.39	0.27	0.28	0.20	0.66	0.19	0.59	0.65	0.66
Avail Cap(c_a), veh/h	485	2432	753	941	1621	865	1176	1209	539	606	604	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	28.8	27.6	28.9	27.9	27.9	22.6	25.5	22.6	26.3	26.7	26.7
Incr Delay (d2), s/veh	1.3	0.7	0.5	0.2	0.4	0.8	0.2	1.3	0.4	2.2	2.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.6	0.6	1.3	1.0	1.1	1.0	4.0	0.9	3.2	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	29.5	28.1	29.1	28.3	28.7	22.8	26.8	22.9	28.4	29.5	29.6
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		528			382			770			677	
Approach Delay, s/veh		30.0			28.8			25.6			29.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	16.3		20.2	14.1	16.4		22.2				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	5.5	6.4		10.9	8.3	4.6		12.1				
Green Ext Time (p_c), s	0.2	3.0		3.9	0.1	1.5		4.7				

Intersection Summary			
HCM 6th Ctrl Delay		28.1	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	10	440	0	40	30	870	360	10	730	50
Future Volume (veh/h)	70	0	10	440	0	40	30	870	360	10	730	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	70	0	2	440	0	10	30	870	111	10	730	44
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	2
Cap, veh/h	226	0	100	750	0	332	61	1666	516	89	1568	94
Arrive On Green	0.06	0.00	0.06	0.21	0.00	0.21	0.03	0.33	0.33	0.03	0.32	0.32
Sat Flow, veh/h	3563	0	1585	3534	0	1566	1781	5066	1570	3428	4887	293
Grp Volume(v), veh/h	70	0	2	440	0	10	30	870	111	10	504	270
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1767	0	1566	1781	1689	1570	1714	1689	1803
Q Serve(g_s), s	0.9	0.0	0.1	5.6	0.0	0.3	0.8	6.9	2.5	0.1	5.9	6.0
Cycle Q Clear(g_c), s	0.9	0.0	0.1	5.6	0.0	0.3	0.8	6.9	2.5	0.1	5.9	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	226	0	100	750	0	332	61	1666	516	89	1083	578
V/C Ratio(X)	0.31	0.00	0.02	0.59	0.00	0.03	0.49	0.52	0.21	0.11	0.46	0.47
Avail Cap(c_a), veh/h	1324	0	589	2697	0	1195	218	2554	791	689	1967	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	21.9	17.6	0.0	15.5	23.6	13.5	12.1	23.7	13.5	13.5
Incr Delay (d2), s/veh	0.8	0.0	0.1	0.3	0.0	0.0	6.1	0.4	0.3	0.2	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.0	0.0	0.1	0.4	2.1	0.8	0.1	1.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	21.9	17.9	0.0	15.6	29.7	13.9	12.4	23.9	13.9	14.4
LnGrp LOS	C	A	C	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		72			450			1011			784	
Approach Delay, s/veh		23.0			17.9			14.2			14.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	21.3		7.7	6.2	20.9		15.1
Change Period (Y+Rc), s	4.5	4.9		4.5	4.5	4.9		4.5
Max Green Setting (Gmax), s	10.3	25.1		18.5	6.1	29.0		38.0
Max Q Clear Time (g_c+I1), s	2.1	8.9		2.9	2.8	8.0		7.6
Green Ext Time (p_c), s	0.0	7.3		0.1	0.0	6.6		0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	440	0	190	280	1070	0	0	960	220
Future Volume (veh/h)	0	0	0	440	0	190	280	1070	0	0	960	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				440	0	0	280	1070	0	0	960	109
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				552	0		843	2441	0	0	1954	870
Arrive On Green				0.16	0.00	0.00	0.09	0.92	0.00	0.00	0.55	0.55
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1570
Grp Volume(v), veh/h				440	0	0	280	1070	0	0	960	109
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1570
Q Serve(g_s), s				8.4	0.0	0.0	2.2	2.8	0.0	0.0	11.7	2.3
Cycle Q Clear(g_c), s				8.4	0.0	0.0	2.2	2.8	0.0	0.0	11.7	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				552	0		843	2441	0	0	1954	870
V/C Ratio(X)				0.80	0.00		0.33	0.44	0.00	0.00	0.49	0.13
Avail Cap(c_a), veh/h				742	0		1349	2441	0	0	1954	870
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.78	0.78	0.00	0.00	0.86	0.86
Uniform Delay (d), s/veh				28.5	0.0	0.0	6.2	1.0	0.0	0.0	9.6	7.5
Incr Delay (d2), s/veh				3.9	0.0	0.0	0.1	0.4	0.0	0.0	0.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.5	0.0	0.0	0.5	0.5	0.0	0.0	3.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.4	0.0	0.0	6.4	1.4	0.0	0.0	10.3	7.7
LnGrp LOS				C	A		A	A	A	A	B	A
Approach Vol, veh/h					440	A		1350			1069	
Approach Delay, s/veh					32.4			2.4			10.1	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	53.8		9.7	44.1		16.2
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	4.8		4.2	13.7		10.4
Green Ext Time (p_c), s	7.2		0.5	4.3		0.5

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	0	410	0	0	0	0	980	670	220	1180	0
Future Volume (veh/h)	370	0	410	0	0	0	0	980	670	220	1180	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	370	0	328				0	980	445	220	1180	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	852	0	379				0	1657	739	640	2142	0
Arrive On Green	0.24	0.00	0.24				0.00	0.47	0.47	0.07	0.61	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1572	3428	3618	0
Grp Volume(v), veh/h	370	0	328				0	980	445	220	1180	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1572	1714	1763	0
Q Serve(g_s), s	6.2	0.0	14.0				0.0	14.3	14.6	2.1	13.8	0.0
Cycle Q Clear(g_c), s	6.2	0.0	14.0				0.0	14.3	14.6	2.1	13.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	852	0	379				0	1657	739	640	2142	0
V/C Ratio(X)	0.43	0.00	0.87				0.00	0.59	0.60	0.34	0.55	0.00
Avail Cap(c_a), veh/h	1020	0	454				0	1657	739	648	2142	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.79	0.79	0.00
Uniform Delay (d), s/veh	22.5	0.0	25.5				0.0	13.6	13.7	9.7	8.1	0.0
Incr Delay (d2), s/veh	0.3	0.0	13.3				0.0	1.6	3.6	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	6.0				0.0	5.1	5.1	0.6	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	38.8				0.0	15.2	17.3	9.9	8.9	0.0
LnGrp LOS	C	A	D				A	B	B	A	A	A
Approach Vol, veh/h		698						1425			1400	
Approach Delay, s/veh		30.3						15.9			9.1	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.6	38.2	22.2	47.8
Change Period (Y+Rc), s	4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	5.1	29.4	20.2	39.2
Max Q Clear Time (g_c+I1), s	4.1	16.6	16.0	15.8
Green Ext Time (p_c), s	0.1	5.6	0.9	7.3

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	130	6	4	240	20	13	0	7	40	0	30
Future Vol, veh/h	20	130	6	4	240	20	13	0	7	40	0	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	130	6	4	240	20	13	0	7	40	0	30
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	8.3	8.8	8.6	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	65%	100%	0%	0%	100%	0%	0%	57%
Vol Thru, %	0%	0%	100%	88%	0%	100%	80%	0%
Vol Right, %	35%	0%	0%	12%	0%	0%	20%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	87	49	4	160	100	70
LT Vol	13	20	0	0	4	0	0	40
Through Vol	0	0	87	43	0	160	80	0
RT Vol	7	0	0	6	0	0	20	30
Lane Flow Rate	20	20	87	49	4	160	100	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.031	0.031	0.121	0.068	0.006	0.22	0.133	0.107
Departure Headway (Hd)	5.651	5.536	5.034	4.949	5.447	4.945	4.805	5.49
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	633	648	713	725	658	728	748	653
Service Time	3.386	3.259	2.757	2.672	3.168	2.666	2.525	3.22
HCM Lane V/C Ratio	0.032	0.031	0.122	0.068	0.006	0.22	0.134	0.107
HCM Control Delay	8.6	8.4	8.5	8	8.2	9.1	8.3	8.9
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.4	0.2	0	0.8	0.5	0.4

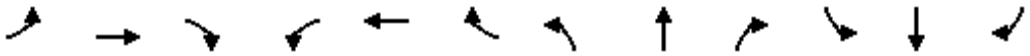
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	61	70	0	10	30	254	30	10	167	0
Future Vol, veh/h	0	0	61	70	0	10	30	254	30	10	167	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	50	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	3	2	3	3	3	3	2
Mvmt Flow	0	0	61	70	0	10	30	254	30	10	167	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	374	531	84	433	-	142	167	0	0	284	0	0
Stage 1	187	187	-	329	-	-	-	-	-	-	-	-
Stage 2	187	344	-	104	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.56	-	6.96	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.53	-	3.33	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	558	452	958	504	0	877	1408	-	-	1268	-	-
Stage 1	797	744	-	655	0	-	-	-	-	-	-	-
Stage 2	797	635	-	888	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	540	439	958	462	-	877	1408	-	-	1268	-	-
Mov Cap-2 Maneuver	540	439	-	462	-	-	-	-	-	-	-	-
Stage 1	780	738	-	641	-	-	-	-	-	-	-	-
Stage 2	771	622	-	825	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	13.6	0.7	0.4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1408	-	-	958	462	877	1268	-	-
HCM Lane V/C Ratio	0.021	-	-	0.064	0.152	0.011	0.008	-	-
HCM Control Delay (s)	7.6	-	-	9	14.2	9.2	7.9	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	104	20	30	345	100	20	310	60	30	280	70
Future Volume (veh/h)	60	104	20	30	345	100	20	310	60	30	280	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	60	104	7	30	345	69	20	310	35	30	280	56
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	455	1079	72	614	943	187	410	1036	116	492	487	97
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	964	3354	224	1270	2933	580	1036	3191	357	1027	1501	300
Grp Volume(v), veh/h	60	54	57	30	206	208	20	170	175	30	0	336
Grp Sat Flow(s),veh/h/ln	964	1763	1815	1270	1763	1750	1036	1763	1786	1027	0	1801
Q Serve(g_s), s	1.6	0.7	0.7	0.5	2.8	2.8	0.5	2.2	2.3	0.7	0.0	4.8
Cycle Q Clear(g_c), s	4.4	0.7	0.7	1.2	2.8	2.8	5.3	2.2	2.3	3.0	0.0	4.8
Prop In Lane	1.00		0.12	1.00		0.33	1.00		0.20	1.00		0.17
Lane Grp Cap(c), veh/h	455	567	584	614	567	563	410	572	580	492	0	585
V/C Ratio(X)	0.13	0.10	0.10	0.05	0.36	0.37	0.05	0.30	0.30	0.06	0.00	0.57
Avail Cap(c_a), veh/h	1084	1717	1767	1442	1717	1704	1586	2575	2608	1659	0	2631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	7.3	7.3	7.7	8.0	8.0	10.8	7.8	7.8	8.9	0.0	8.6
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.0	0.4	0.4	0.0	0.3	0.3	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	0.1	0.6	0.6	0.1	0.5	0.5	0.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	7.4	7.4	7.8	8.4	8.5	10.9	8.1	8.1	8.9	0.0	9.5
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		171			444			365			366	
Approach Delay, s/veh		8.3			8.4			8.2			9.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.2		14.6		16.2		14.6				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		7.3		6.4		6.8		4.8				
Green Ext Time (p_c), s		2.1		0.8		2.0		2.3				

Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	280	140	240	120	660	981	120	120	1069	170
Future Volume (veh/h)	80	100	280	140	240	120	660	981	120	120	1069	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	100	31	140	240	13	660	981	0	120	1069	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	234	342	268	244	327	146	711	2417		653	2368	734
Arrive On Green	0.07	0.10	0.10	0.07	0.09	0.09	0.21	0.48	0.00	0.19	0.47	0.47
Sat Flow, veh/h	3428	3526	2768	3428	3526	1572	3428	5066	1572	3428	5066	1571
Grp Volume(v), veh/h	80	100	31	140	240	13	660	981	0	120	1069	87
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1572	1714	1689	1572	1714	1689	1571
Q Serve(g_s), s	3.1	3.7	1.0	5.5	9.3	0.7	26.5	17.6	0.0	4.1	19.9	4.4
Cycle Q Clear(g_c), s	3.1	3.7	1.0	5.5	9.3	0.7	26.5	17.6	0.0	4.1	19.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	342	268	244	327	146	711	2417		653	2368	734
V/C Ratio(X)	0.34	0.29	0.12	0.57	0.73	0.09	0.93	0.41		0.18	0.45	0.12
Avail Cap(c_a), veh/h	245	957	751	245	957	427	857	2417		653	2368	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	58.8	27.8	63.0	61.8	27.3	54.5	23.7	0.0	47.5	25.2	21.0
Incr Delay (d2), s/veh	0.3	0.6	0.2	2.1	3.9	0.3	11.8	0.1	0.0	0.0	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	0.5	2.4	4.3	0.4	12.3	6.8	0.0	1.7	7.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	59.3	28.0	65.1	65.7	27.6	66.2	23.9	0.0	47.6	25.8	21.3
LnGrp LOS	E	E	C	E	E	C	E	C		D	C	C
Approach Vol, veh/h		211			393			1641	A		1276	
Approach Delay, s/veh		55.9			64.2			40.9			27.5	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	72.8	15.6	19.0	34.0	71.4	15.0	19.6
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	* 60	10.0	* 38	35.0	35.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	6.1	19.6	5.1	11.3	28.5	21.9	7.5	5.7
Green Ext Time (p_c), s	0.0	11.1	0.0	1.7	0.6	7.4	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	460	0	224	0	1537	1170	0	1260	229
Future Volume (veh/h)	0	0	0	460	0	224	0	1537	1170	0	1260	229
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				509	0	104	0	1537	0	0	1260	140
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				649	0	289	0	3296		0	3296	1023
Arrive On Green				0.18	0.00	0.18	0.00	1.00	0.00	0.00	0.87	0.87
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				509	0	104	0	1537	0	0	1260	140
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				9.6	0.0	4.0	0.0	0.0	0.0	0.0	3.5	1.0
Cycle Q Clear(g_c), s				9.6	0.0	4.0	0.0	0.0	0.0	0.0	3.5	1.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				649	0	289	0	3296		0	3296	1023
V/C Ratio(X)				0.78	0.00	0.36	0.00	0.47		0.00	0.38	0.14
Avail Cap(c_a), veh/h				1070	0	476	0	3296		0	3296	1023
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.72	0.00	0.00	0.86	0.86
Uniform Delay (d), s/veh				27.3	0.0	25.0	0.0	0.0	0.0	0.0	1.9	1.7
Incr Delay (d2), s/veh				1.6	0.0	0.6	0.0	0.3	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.8	0.0	1.4	0.0	0.1	0.0	0.0	0.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.8	0.0	25.5	0.0	0.3	0.0	0.0	2.2	1.9
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					613			1537	A		1400	
Approach Delay, s/veh					28.3			0.3			2.1	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	51.3		51.3		18.7			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	37.2		37.2		21.2			
Max Q Clear Time (g_c+I1), s	2.0		5.5		11.6			
Green Ext Time (p_c), s	11.0		8.6		1.2			

Intersection Summary		
HCM 6th Ctrl Delay	5.9	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	128	920	120	2579	1523	197
Future Volume (veh/h)	128	920	120	2579	1523	197
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	128	916	120	2579	1523	93
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	776	265	3199	2466	766
Arrive On Green	0.20	0.20	0.08	0.63	0.97	0.97
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	128	916	120	2579	1523	93
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	2.2	14.2	2.3	26.8	1.4	0.1
Cycle Q Clear(g_c), s	2.2	14.2	2.3	26.8	1.4	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	695	776	265	3199	2466	766
V/C Ratio(X)	0.18	1.18	0.45	0.81	0.62	0.12
Avail Cap(c_a), veh/h	695	776	700	3199	2466	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.89	0.89
Uniform Delay (d), s/veh	23.1	25.2	30.9	9.7	0.5	0.5
Incr Delay (d2), s/veh	0.1	94.5	0.9	2.3	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	23.1	0.9	7.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	119.7	31.8	12.0	1.5	0.8
LnGrp LOS	C	F	C	B	A	A
Approach Vol, veh/h	1044			2699	1616	
Approach Delay, s/veh	107.8			12.8	1.5	
Approach LOS	F			B	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.0		20.0	10.1	39.9
Change Period (Y+Rc), s		5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s		44.2		14.2	* 14	25.2
Max Q Clear Time (g_c+I1), s		28.8		16.2	4.3	3.4
Green Ext Time (p_c), s		12.7		0.0	0.2	9.4

Intersection Summary		
HCM 6th Ctrl Delay		27.9
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1470	280	560	1309	1041	1572
Future Volume (veh/h)	1470	280	560	1309	1041	1572
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1470	269	560	1309	1041	1561
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1734	1461	617	1920	1144	2411
Arrive On Green	0.11	0.11	0.18	0.54	0.32	0.32
Sat Flow, veh/h	4983	2768	3428	3618	3618	3585
Grp Volume(v), veh/h	1470	269	560	1309	1041	1561
Grp Sat Flow(s),veh/h/ln	1661	1384	1714	1763	1763	1195
Q Serve(g_s), s	28.9	6.4	16.0	26.9	28.3	25.2
Cycle Q Clear(g_c), s	28.9	6.4	16.0	26.9	28.3	25.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1734	1461	617	1920	1144	2411
V/C Ratio(X)	0.85	0.18	0.91	0.68	0.91	0.65
Avail Cap(c_a), veh/h	1734	1461	617	1921	1146	2413
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	17.2	40.2	16.5	32.4	9.5
Incr Delay (d2), s/veh	4.1	0.2	16.9	1.3	11.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	2.0	7.8	9.6	13.0	12.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.7	17.4	57.1	17.8	43.6	10.3
LnGrp LOS	D	B	E	B	D	B
Approach Vol, veh/h	1739			1869	2602	
Approach Delay, s/veh	41.4			29.6	23.6	
Approach LOS	D			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.0	38.0			60.0	40.0
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	18.0	32.5			54.5	34.8
Max Q Clear Time (g_c+I1), s	18.0	30.3			28.9	30.9
Green Ext Time (p_c), s	0.0	2.2			16.6	3.0

Intersection Summary		
HCM 6th Ctrl Delay	30.4	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	230	600	50	210	40	730	1538	40	60	1506	636
Future Volume (veh/h)	352	230	600	50	210	40	730	1538	40	60	1506	636
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	352	230	541	50	210	24	730	1538	21	60	1506	568
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	418	670	667	103	313	35	803	2855	886	111	1782	745
Arrive On Green	0.12	0.19	0.19	0.03	0.10	0.10	0.23	0.56	0.56	0.01	0.12	0.12
Sat Flow, veh/h	3428	3526	1572	3428	3193	361	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	352	230	541	50	115	119	730	1538	21	60	1506	568
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1791	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	10.0	5.7	19.0	1.4	6.3	6.4	20.7	19.0	0.6	1.7	29.1	29.4
Cycle Q Clear(g_c), s	10.0	5.7	19.0	1.4	6.3	6.4	20.7	19.0	0.6	1.7	29.1	29.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	670	667	103	173	176	803	2855	886	111	1782	745
V/C Ratio(X)	0.84	0.34	0.81	0.49	0.66	0.68	0.91	0.54	0.02	0.54	0.85	0.76
Avail Cap(c_a), veh/h	473	670	667	267	229	233	919	2855	886	267	1782	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	43.0	35.1	25.3	47.7	43.5	43.6	37.2	13.7	9.7	48.7	41.5	29.5
Incr Delay (d2), s/veh	10.6	0.1	7.0	1.3	1.7	2.2	11.0	0.7	0.0	1.0	3.5	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	2.4	11.4	0.6	2.7	2.9	9.3	6.3	0.2	0.7	13.6	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	35.2	32.2	49.1	45.2	45.7	48.2	14.4	9.7	49.7	45.1	34.4
LnGrp LOS	D	D	C	D	D	D	D	B	A	D	D	C
Approach Vol, veh/h		1123			284			2289			2134	
Approach Delay, s/veh		39.5			46.1			25.1			42.4	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	24.2	28.4	40.4	16.2	15.0	7.2	61.6
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	19.0	26.8	27.0	13.8	13.0	7.8	47.0
Max Q Clear Time (g_c+I1), s	3.4	21.0	22.7	31.4	12.0	8.4	3.7	21.0
Green Ext Time (p_c), s	0.0	0.0	0.7	0.0	0.1	0.3	0.0	7.6

Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	550	180	340	1150	140	360	1424	260	110	1576	500
Future Volume (veh/h)	404	550	180	340	1150	140	360	1424	260	110	1576	500
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	404	550	51	340	1150	125	360	1424	117	110	1576	328
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	377	1404	436	402	1319	143	343	1813	562	783	2539	788
Arrive On Green	0.11	0.28	0.28	0.12	0.28	0.28	0.10	0.36	0.36	0.23	0.50	0.50
Sat Flow, veh/h	3428	5066	1572	3428	4636	504	3428	5066	1570	3428	5066	1572
Grp Volume(v), veh/h	404	550	51	340	838	437	360	1424	117	110	1576	328
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1762	1714	1689	1570	1714	1689	1572
Q Serve(g_s), s	11.0	8.8	2.4	9.7	23.6	23.6	10.0	25.1	5.0	2.6	22.5	13.1
Cycle Q Clear(g_c), s	11.0	8.8	2.4	9.7	23.6	23.6	10.0	25.1	5.0	2.6	22.5	13.1
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	377	1404	436	402	961	501	343	1813	562	783	2539	788
V/C Ratio(X)	1.07	0.39	0.12	0.84	0.87	0.87	1.05	0.79	0.21	0.14	0.62	0.42
Avail Cap(c_a), veh/h	377	1418	440	411	979	511	343	1813	562	783	2539	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	29.3	27.0	43.2	34.0	34.0	45.0	28.7	20.6	30.8	18.1	15.7
Incr Delay (d2), s/veh	66.6	0.4	0.3	13.8	9.3	16.2	62.3	3.5	0.8	0.0	1.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	3.4	0.9	4.7	10.2	11.6	7.0	9.7	1.9	1.0	7.9	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.1	29.7	27.3	57.1	43.3	50.2	107.3	32.2	21.4	30.8	19.2	17.3
LnGrp LOS	F	C	C	E	D	D	F	C	C	C	B	B
Approach Vol, veh/h		1005			1615			1901			2014	
Approach Delay, s/veh		62.3			48.1			45.7			19.5	
Approach LOS		E			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	41.3	15.7	33.4	14.0	55.9	15.0	34.2
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	5.0	* 36	12.0	28.0	10.0	30.8	11.0	29.0
Max Q Clear Time (g_c+I1), s	4.6	27.1	11.7	10.8	12.0	24.5	13.0	25.6
Green Ext Time (p_c), s	0.0	7.3	0.0	5.6	0.0	5.8	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

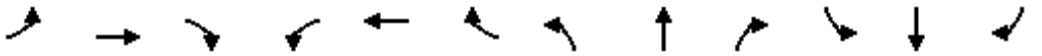
Intersection	
Int Delay, s/veh	11.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	160	360	385	70	180	470
Future Vol, veh/h	160	360	385	70	180	470
Conflicting Peds, #/hr	0	1	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	160	360	385	70	180	470

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1017	231	0	0	457	0
Stage 1	422	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	232	768	-	-	1093	-
Stage 1	627	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	766	-	-	1091	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	427	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.2	0	2.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	193	766	1091	-
HCM Lane V/C Ratio	-	-	0.829	0.47	0.165	-
HCM Control Delay (s)	-	-	77	13.8	9	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	6	2.5	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	230	100	370	390	96	300	479	200	160	610	150
Future Volume (veh/h)	30	230	100	370	390	96	300	479	200	160	610	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	230	14	370	390	60	300	479	46	160	610	135
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	107	629	195	464	884	133	716	737	329	472	766	169
Arrive On Green	0.06	0.12	0.12	0.14	0.20	0.20	0.21	0.21	0.21	0.27	0.27	0.27
Sat Flow, veh/h	1767	5066	1572	3428	4445	668	3428	3526	1572	1767	2870	634
Grp Volume(v), veh/h	30	230	14	370	294	156	300	479	46	160	374	371
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1714	1689	1735	1714	1763	1572	1767	1763	1741
Q Serve(g_s), s	1.3	3.4	0.6	8.4	6.2	6.4	6.1	10.0	1.9	5.9	15.9	16.0
Cycle Q Clear(g_c), s	1.3	3.4	0.6	8.4	6.2	6.4	6.1	10.0	1.9	5.9	15.9	16.0
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	107	629	195	464	672	345	716	737	329	472	471	465
V/C Ratio(X)	0.28	0.37	0.07	0.80	0.44	0.45	0.42	0.65	0.14	0.34	0.80	0.80
Avail Cap(c_a), veh/h	439	2202	683	851	1468	754	1064	1095	488	549	547	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	32.4	31.2	33.7	28.3	28.4	27.6	29.2	26.0	23.8	27.5	27.5
Incr Delay (d2), s/veh	0.5	0.5	0.2	1.2	0.6	1.3	0.6	1.4	0.3	0.6	7.7	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.2	3.3	2.3	2.5	2.4	4.1	0.7	2.3	7.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	32.9	31.4	34.9	28.9	29.7	28.2	30.5	26.2	24.4	35.2	35.4
LnGrp LOS	D	C	C	C	C	C	C	C	C	C	D	D
Approach Vol, veh/h		274			820			825			905	
Approach Delay, s/veh		33.2			31.8			29.4			33.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	16.0		26.9	9.4	22.0		22.2				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	10.4	5.4		18.0	3.3	8.4		12.0				
Green Ext Time (p_c), s	0.5	2.0		3.5	0.0	3.7		4.8				

Intersection Summary		
HCM 6th Ctrl Delay		31.7
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	10	410	0	40	40	869	220	10	1030	40
Future Volume (veh/h)	70	0	10	410	0	40	40	869	220	10	1030	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	70	0	1	410	0	9	40	869	78	10	1030	37
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	2
Cap, veh/h	217	0	97	659	0	293	75	1942	603	88	1844	66
Arrive On Green	0.06	0.00	0.06	0.19	0.00	0.19	0.04	0.38	0.38	0.03	0.37	0.37
Sat Flow, veh/h	3563	0	1585	3534	0	1572	1781	5066	1572	3428	5020	180
Grp Volume(v), veh/h	70	0	1	410	0	9	40	869	78	10	693	374
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1767	0	1572	1781	1689	1572	1714	1689	1823
Q Serve(g_s), s	1.0	0.0	0.0	5.7	0.0	0.3	1.2	6.8	1.7	0.2	8.7	8.8
Cycle Q Clear(g_c), s	1.0	0.0	0.0	5.7	0.0	0.3	1.2	6.8	1.7	0.2	8.7	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	217	0	97	659	0	293	75	1942	603	88	1241	670
V/C Ratio(X)	0.32	0.00	0.01	0.62	0.00	0.03	0.54	0.45	0.13	0.11	0.56	0.56
Avail Cap(c_a), veh/h	1230	0	547	2507	0	1116	170	2374	737	640	1891	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	23.6	20.1	0.0	17.8	25.2	12.3	10.7	25.5	13.5	13.5
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.4	0.0	0.0	5.9	0.2	0.1	0.2	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.2	0.0	0.1	0.6	2.1	0.5	0.1	2.7	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	0.0	23.7	20.4	0.0	17.8	31.0	12.5	10.8	25.7	14.0	14.5
LnGrp LOS	C	A	C	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		71			419			987			1077	
Approach Delay, s/veh		24.9			20.4			13.1			14.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	25.4		7.8	6.7	24.6		14.5
Change Period (Y+Rc), s	4.5	4.9		4.5	4.5	4.9		4.5
Max Green Setting (Gmax), s	10.0	25.1		18.5	5.1	30.0		38.0
Max Q Clear Time (g_c+I1), s	2.2	8.8		3.0	3.2	10.8		7.7
Green Ext Time (p_c), s	0.0	7.2		0.1	0.0	8.9		0.8

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	550	0	326	450	803	0	0	1010	440
Future Volume (veh/h)	0	0	0	550	0	326	450	803	0	0	1010	440
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				550	0	0	450	803	0	0	1010	184
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				681	0		787	2223	0	0	1604	715
Arrive On Green				0.19	0.00	0.00	0.10	0.63	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1572
Grp Volume(v), veh/h				550	0	0	450	803	0	0	1010	184
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1572
Q Serve(g_s), s				8.9	0.0	0.0	3.8	6.5	0.0	0.0	13.1	4.3
Cycle Q Clear(g_c), s				8.9	0.0	0.0	3.8	6.5	0.0	0.0	13.1	4.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				681	0		787	2223	0	0	1604	715
V/C Ratio(X)				0.81	0.00		0.57	0.36	0.00	0.00	0.63	0.26
Avail Cap(c_a), veh/h				866	0		813	2223	0	0	1604	715
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.78	0.78	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				23.2	0.0	0.0	9.7	5.3	0.0	0.0	12.5	10.1
Incr Delay (d2), s/veh				4.1	0.0	0.0	0.6	0.4	0.0	0.0	1.4	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.6	0.0	0.0	1.0	1.6	0.0	0.0	4.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.3	0.0	0.0	10.3	5.7	0.0	0.0	13.9	10.7
LnGrp LOS				C	A		B	A	A	A	B	B
Approach Vol, veh/h					550	A		1253			1194	
Approach Delay, s/veh					27.3			7.3			13.4	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	43.1		10.5	32.6		16.9
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	34.7		* 6.3	23.7		14.7
Max Q Clear Time (g_c+I1), s	8.5		5.8	15.1		10.9
Green Ext Time (p_c), s	4.6		0.1	4.0		0.6

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	370	0	0	0	0	1043	440	204	1356	0
Future Volume (veh/h)	210	0	370	0	0	0	0	1043	440	204	1356	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	210	0	286				0	1043	307	204	1356	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	757	0	337				0	1753	772	668	2236	0
Arrive On Green	0.21	0.00	0.21				0.00	0.50	0.50	0.07	0.63	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1553	3428	3618	0
Grp Volume(v), veh/h	210	0	286				0	1043	307	204	1356	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1553	1714	1763	0
Q Serve(g_s), s	3.5	0.0	12.2				0.0	14.8	8.7	1.8	16.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	12.2				0.0	14.8	8.7	1.8	16.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	757	0	337				0	1753	772	668	2236	0
V/C Ratio(X)	0.28	0.00	0.85				0.00	0.60	0.40	0.31	0.61	0.00
Avail Cap(c_a), veh/h	1045	0	465				0	1753	772	678	2236	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	23.0	0.0	26.4				0.0	12.6	11.0	8.8	7.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	9.3				0.0	1.5	1.5	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	5.0				0.0	5.1	2.8	0.5	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	35.8				0.0	14.1	12.6	8.9	8.4	0.0
LnGrp LOS	C	A	D				A	B	B	A	A	A
Approach Vol, veh/h		496						1350			1560	
Approach Delay, s/veh		30.4						13.7			8.5	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	9.6	40.1	20.3	49.7
Change Period (Y+Rc), s	4.7	5.3	5.3	5.3
Max Green Setting (Gmax), s	5.1	28.9	20.7	38.7
Max Q Clear Time (g_c+I1), s	3.8	16.8	14.2	18.0
Green Ext Time (p_c), s	0.1	5.4	0.8	8.4

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	80	15	7	80	40	9	0	5	30	0	20
Future Vol, veh/h	40	80	15	7	80	40	9	0	5	30	0	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	40	80	15	7	80	40	9	0	5	30	0	20
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	7.9	7.7	8.1	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	64%	100%	0%	0%	100%	0%	0%	60%
Vol Thru, %	0%	0%	100%	64%	0%	100%	40%	0%
Vol Right, %	36%	0%	0%	36%	0%	0%	60%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	40	53	42	7	53	67	50
LT Vol	9	40	0	0	7	0	0	30
Through Vol	0	0	53	27	0	53	27	0
RT Vol	5	0	0	15	0	0	40	20
Lane Flow Rate	14	40	53	42	7	53	67	50
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.02	0.059	0.072	0.053	0.01	0.072	0.082	0.072
Departure Headway (Hd)	5.254	5.333	4.832	4.579	5.337	4.836	4.415	5.164
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	683	676	746	787	674	744	815	696
Service Time	2.97	3.033	2.532	2.279	3.046	2.545	2.124	2.877
HCM Lane V/C Ratio	0.02	0.059	0.071	0.053	0.01	0.071	0.082	0.072
HCM Control Delay	8.1	8.4	7.9	7.5	8.1	7.9	7.5	8.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2	0	0.2	0.3	0.2

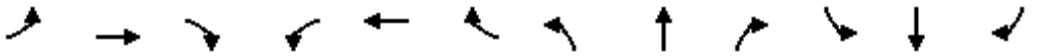
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	43	60	0	10	67	97	60	10	115	0
Future Vol, veh/h	0	0	43	60	0	10	67	97	60	10	115	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	50	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	3	2	3	2	3	3	3	3	2
Mvmt Flow	0	0	43	60	0	10	67	97	60	10	115	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	318	426	58	339	-	79	115	0	0	157	0	0
Stage 1	135	135	-	261	-	-	-	-	-	-	-	-
Stage 2	183	291	-	78	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.56	-	6.96	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.53	-	3.33	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	611	519	996	588	0	962	1472	-	-	1413	-	-
Stage 1	854	784	-	718	0	-	-	-	-	-	-	-
Stage 2	801	670	-	919	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	580	491	996	540	-	962	1472	-	-	1413	-	-
Mov Cap-2 Maneuver	580	491	-	540	-	-	-	-	-	-	-	-
Stage 1	815	779	-	685	-	-	-	-	-	-	-	-
Stage 2	757	639	-	873	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	12	2.3	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1472	-	-	996	540	962	1413	-	-
HCM Lane V/C Ratio	0.046	-	-	0.043	0.111	0.01	0.007	-	-
HCM Control Delay (s)	7.6	-	-	8.8	12.5	8.8	7.6	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.4	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	218	30	30	145	20	20	110	60	30	150	30
Future Volume (veh/h)	40	218	30	30	145	20	20	110	60	30	150	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	40	218	18	30	145	8	20	110	20	30	150	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	571	995	81	525	1025	56	563	1001	178	626	545	65
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1223	3295	270	1134	3396	186	1207	2985	529	1249	1625	195
Grp Volume(v), veh/h	40	116	120	30	75	78	20	64	66	30	0	168
Grp Sat Flow(s),veh/h/ln	1223	1763	1802	1134	1763	1819	1207	1763	1752	1249	0	1820
Q Serve(g_s), s	0.7	1.5	1.5	0.6	0.9	0.9	0.4	0.8	0.8	0.5	0.0	2.0
Cycle Q Clear(g_c), s	1.7	1.5	1.5	2.1	0.9	0.9	2.4	0.8	0.8	1.3	0.0	2.0
Prop In Lane	1.00		0.15	1.00		0.10	1.00		0.30	1.00		0.11
Lane Grp Cap(c), veh/h	571	532	544	525	532	549	563	591	587	626	0	610
V/C Ratio(X)	0.07	0.22	0.22	0.06	0.14	0.14	0.04	0.11	0.11	0.05	0.00	0.28
Avail Cap(c_a), veh/h	1423	1760	1800	1316	1760	1816	1966	2640	2624	2078	0	2726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	7.8	7.8	8.6	7.6	7.7	8.2	6.9	6.9	7.3	0.0	7.3
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	8.0	8.0	8.7	7.8	7.8	8.2	7.0	7.0	7.4	0.0	7.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		276			183			150			198	
Approach Delay, s/veh		8.1			7.9			7.1			7.5	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.3		13.8		16.3		13.8				
Change Period (Y+Rc), s		6.2		* 4.7		6.2		* 4.7				
Max Green Setting (Gmax), s		45.0		* 30		45.0		* 30				
Max Q Clear Time (g_c+I1), s		4.4		3.7		4.0		4.1				
Green Ext Time (p_c), s		0.8		1.4		0.9		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	210	420	90	90	70	270	880	200	70	881	100
Future Volume (veh/h)	140	210	420	90	90	70	270	880	200	70	881	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	140	210	64	90	90	9	270	880	0	70	881	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	349	274	271	308	137	322	1148		1384	2758	856
Arrive On Green	0.08	0.10	0.10	0.08	0.09	0.09	0.19	0.45	0.00	0.40	0.54	0.54
Sat Flow, veh/h	3428	3526	2768	3428	3526	1567	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	140	210	64	90	90	9	270	880	0	70	881	47
Grp Sat Flow(s),veh/h/ln	1714	1763	1384	1714	1763	1567	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	4.7	6.8	1.1	3.0	2.9	0.5	9.1	17.5	0.0	1.5	11.5	1.7
Cycle Q Clear(g_c), s	4.7	6.8	1.1	3.0	2.9	0.5	9.1	17.5	0.0	1.5	11.5	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	349	274	271	308	137	322	1148		1384	2758	856
V/C Ratio(X)	0.49	0.60	0.23	0.33	0.29	0.07	0.84	0.77		0.05	0.32	0.05
Avail Cap(c_a), veh/h	286	1116	876	286	1116	496	486	1689		1384	2758	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	51.8	9.7	52.2	51.3	31.9	47.8	30.2	0.0	21.8	15.1	12.8
Incr Delay (d2), s/veh	0.5	2.0	0.5	0.3	0.6	0.2	4.6	4.6	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.1	0.9	1.3	1.3	0.3	3.7	5.7	0.0	0.6	4.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	53.8	10.2	52.5	51.9	32.1	52.5	34.8	0.0	21.8	15.4	13.0
LnGrp LOS	D	D	B	D	D	C	D	C		C	B	B
Approach Vol, veh/h		414			189			1150	A		998	
Approach Delay, s/veh		46.8			51.3			38.9			15.7	
Approach LOS		D			D			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	33.2	15.9	16.5	16.3	71.3	14.5	17.9
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	* 40	10.0	* 38	17.0	33.0	10.0	38.0
Max Q Clear Time (g_c+I1), s	13.5	19.5	6.7	4.9	11.1	13.5	5.0	8.8
Green Ext Time (p_c), s	0.0	7.7	0.0	0.6	0.2	7.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	310	0	168	0	1182	930	0	1190	201
Future Volume (veh/h)	0	0	0	310	0	168	0	1182	930	0	1190	201
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	0	1856	1856	0	1856	1856
Adj Flow Rate, veh/h				335	0	53	0	1182	0	0	1190	125
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	0	3	3	0	3	3
Cap, veh/h				478	0	213	0	3402		0	3402	1056
Arrive On Green				0.14	0.00	0.14	0.00	0.89	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3534	0	1572	0	5233	1572	0	5233	1572
Grp Volume(v), veh/h				335	0	53	0	1182	0	0	1190	125
Grp Sat Flow(s),veh/h/ln				1767	0	1572	0	1689	1572	0	1689	1572
Q Serve(g_s), s				5.4	0.0	1.8	0.0	2.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				5.4	0.0	1.8	0.0	2.2	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				478	0	213	0	3402		0	3402	1056
V/C Ratio(X)				0.70	0.00	0.25	0.00	0.35		0.00	0.35	0.12
Avail Cap(c_a), veh/h				954	0	425	0	3402		0	3402	1056
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.33	1.33	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh				24.8	0.0	23.2	0.0	1.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.5	0.0	0.2	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	0.6	0.0	0.3	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.2	0.0	23.7	0.0	1.4	0.0	0.0	0.3	0.2
LnGrp LOS				C	A	C	A	A		A	A	A
Approach Vol, veh/h					388			1182	A		1315	
Approach Delay, s/veh					25.8			1.4			0.3	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	46.1		46.1		13.9			
Change Period (Y+Rc), s	5.8		5.8		5.8			
Max Green Setting (Gmax), s	32.2		32.2		16.2			
Max Q Clear Time (g_c+I1), s	4.2		2.0		7.4			
Green Ext Time (p_c), s	7.2		7.8		0.7			

Intersection Summary	
HCM 6th Ctrl Delay	4.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	216	1150	180	1896	1264	236
Future Volume (veh/h)	216	1150	180	1896	1264	236
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	216	1150	180	1896	1264	74
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1097	1149	326	2465	1587	493
Arrive On Green	0.32	0.32	0.10	0.49	0.21	0.21
Sat Flow, veh/h	3428	2768	3428	5233	5233	1572
Grp Volume(v), veh/h	216	1150	180	1896	1264	74
Grp Sat Flow(s),veh/h/ln	1714	1384	1714	1689	1689	1572
Q Serve(g_s), s	2.7	19.2	3.0	18.4	14.2	2.3
Cycle Q Clear(g_c), s	2.7	19.2	3.0	18.4	14.2	2.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1097	1149	326	2465	1587	493
V/C Ratio(X)	0.20	1.00	0.55	0.77	0.80	0.15
Avail Cap(c_a), veh/h	1097	1149	931	2465	1587	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	14.8	17.5	25.9	12.6	21.9	17.2
Incr Delay (d2), s/veh	0.1	26.8	1.1	2.4	3.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	19.4	1.1	5.6	5.9	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	44.4	27.0	15.0	25.8	17.8
LnGrp LOS	B	F	C	B	C	B
Approach Vol, veh/h	1366			2076	1338	
Approach Delay, s/veh	39.7			16.1	25.4	
Approach LOS	D			B	C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	35.0		25.0	10.4	24.6
Change Period (Y+Rc), s	5.8		5.8	* 4.7	5.8
Max Green Setting (Gmax), s	29.2		19.2	* 16	8.2
Max Q Clear Time (g_c+I1), s	20.4		21.2	5.0	16.2
Green Ext Time (p_c), s	6.3		0.0	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1245	410	310	951	1164	1430
Future Volume (veh/h)	1245	410	310	951	1164	1430
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1245	389	310	951	1164	1403
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1585	1183	375	1942	1415	2580
Arrive On Green	0.10	0.10	0.11	0.55	0.40	0.40
Sat Flow, veh/h	4983	2768	3428	3618	3618	3585
Grp Volume(v), veh/h	1245	389	310	951	1164	1403
Grp Sat Flow(s),veh/h/ln	1661	1384	1714	1763	1763	1195
Q Serve(g_s), s	24.4	11.1	8.9	16.6	29.5	18.0
Cycle Q Clear(g_c), s	24.4	11.1	8.9	16.6	29.5	18.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1585	1183	375	1942	1415	2580
V/C Ratio(X)	0.79	0.33	0.83	0.49	0.82	0.54
Avail Cap(c_a), veh/h	1585	1183	446	2027	1428	2592
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	25.7	43.6	13.8	26.7	6.5
Incr Delay (d2), s/veh	3.2	0.6	9.0	0.4	4.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	3.9	4.0	5.8	12.2	10.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.7	26.3	52.6	14.2	31.2	6.9
LnGrp LOS	D	C	D	B	C	A
Approach Vol, veh/h	1634			1261	2567	
Approach Delay, s/veh	40.3			23.6	17.9	
Approach LOS	D			C	B	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.9	45.6			60.6	37.0
Change Period (Y+Rc), s	4.0	5.5			5.5	5.2
Max Green Setting (Gmax), s	13.0	40.5			57.5	31.8
Max Q Clear Time (g_c+I1), s	10.9	31.5			18.6	26.4
Green Ext Time (p_c), s	0.1	8.6			14.4	3.9

Intersection Summary		
HCM 6th Ctrl Delay	25.9	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	370	650	60	90	40	410	1240	20	60	1516	364
Future Volume (veh/h)	495	370	650	60	90	40	410	1240	20	60	1516	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	495	370	597	60	90	3	410	1240	10	60	1516	279
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	566	740	554	111	269	9	488	2741	851	111	2133	922
Arrive On Green	0.17	0.21	0.21	0.03	0.08	0.08	0.14	0.54	0.54	0.01	0.14	0.14
Sat Flow, veh/h	3428	3526	1572	3428	3482	116	3428	5066	1572	3428	5066	1572
Grp Volume(v), veh/h	495	370	597	60	45	48	410	1240	10	60	1516	279
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1835	1714	1689	1572	1714	1689	1572
Q Serve(g_s), s	14.1	9.3	21.0	1.7	2.4	2.5	11.6	14.9	0.3	1.7	28.6	11.6
Cycle Q Clear(g_c), s	14.1	9.3	21.0	1.7	2.4	2.5	11.6	14.9	0.3	1.7	28.6	11.6
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	566	740	554	111	136	142	488	2741	851	111	2133	922
V/C Ratio(X)	0.87	0.50	1.08	0.54	0.33	0.34	0.84	0.45	0.01	0.54	0.71	0.30
Avail Cap(c_a), veh/h	679	740	554	267	159	165	850	2741	851	267	2133	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	40.7	34.9	32.4	47.6	43.7	43.7	41.8	13.9	10.6	48.7	37.2	16.3
Incr Delay (d2), s/veh	9.5	0.2	60.7	1.5	0.5	0.5	1.5	0.5	0.0	1.2	1.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	3.9	21.5	0.7	1.1	1.1	4.8	5.0	0.1	0.7	13.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	35.1	93.1	49.2	44.2	44.2	43.3	14.5	10.6	50.0	38.9	17.0
LnGrp LOS	D	D	F	D	D	D	D	B	B	D	D	B
Approach Vol, veh/h		1462			153			1660			1855	
Approach Delay, s/veh		63.9			46.2			21.6			36.0	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	26.2	19.2	47.3	20.5	12.9	7.2	59.3
Change Period (Y+Rc), s	4.0	5.2	5.0	5.2	4.0	5.2	4.0	5.2
Max Green Setting (Gmax), s	7.8	21.0	24.8	27.0	19.8	9.0	7.8	45.0
Max Q Clear Time (g_c+I1), s	3.7	23.0	13.6	30.6	16.1	4.5	3.7	16.9
Green Ext Time (p_c), s	0.0	0.0	0.6	0.0	0.4	0.1	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	930	310	300	560	120	310	1060	390	130	1399	287
Future Volume (veh/h)	330	930	310	300	560	120	310	1060	390	130	1399	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	330	930	108	300	560	85	310	1060	170	130	1399	97
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	396	1208	375	371	1029	154	353	1535	476	492	1815	564
Arrive On Green	0.12	0.24	0.24	0.11	0.23	0.23	0.10	0.30	0.30	0.14	0.36	0.36
Sat Flow, veh/h	3428	5066	1572	3428	4448	665	3428	5066	1571	3428	5066	1572
Grp Volume(v), veh/h	330	930	108	300	423	222	310	1060	170	130	1399	97
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1736	1714	1689	1571	1714	1689	1572
Q Serve(g_s), s	9.4	17.1	5.6	8.6	11.0	11.3	8.9	18.4	6.0	3.4	24.5	4.2
Cycle Q Clear(g_c), s	9.4	17.1	5.6	8.6	11.0	11.3	8.9	18.4	6.0	3.4	24.5	4.2
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	1208	375	371	781	401	353	1535	476	492	1815	564
V/C Ratio(X)	0.83	0.77	0.29	0.81	0.54	0.55	0.88	0.69	0.36	0.26	0.77	0.17
Avail Cap(c_a), veh/h	446	1317	409	549	979	503	353	1535	476	492	1815	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	35.5	31.1	43.6	33.8	33.9	44.2	30.7	13.7	38.1	28.4	21.9
Incr Delay (d2), s/veh	10.5	3.3	0.9	3.3	1.3	2.5	20.7	2.6	2.1	0.1	3.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	7.0	2.1	3.6	4.4	4.8	4.6	7.2	3.1	1.4	9.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	38.8	32.0	46.9	35.0	36.4	64.9	33.3	15.8	38.2	31.7	22.6
LnGrp LOS	D	D	C	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		1368			945			1540			1626	
Approach Delay, s/veh		41.9			39.1			37.7			31.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	35.8	14.8	29.5	14.3	41.3	15.5	28.8
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.7	4.0	5.5	4.0	5.7
Max Green Setting (Gmax), s	8.5	* 30	16.0	26.0	10.3	28.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	5.4	20.4	10.6	19.1	10.9	26.5	11.4	13.3
Green Ext Time (p_c), s	0.1	7.0	0.3	4.7	0.0	1.8	0.1	5.8

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

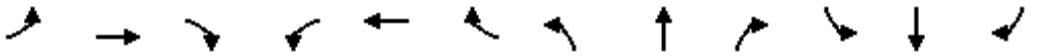
Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	370	286	160	130	378
Future Vol, veh/h	70	370	286	160	130	378
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	70	370	286	160	130	378

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	815	223	0	0	446	0
Stage 1	366	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	6.86	6.96	-	-	4.16	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	-	-	2.23	-
Pot Cap-1 Maneuver	313	777	-	-	1104	-
Stage 1	669	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	276	777	-	-	1104	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	2.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	276	777	1104	-
HCM Lane V/C Ratio	-	-	0.254	0.476	0.118	-
HCM Control Delay (s)	-	-	22.4	13.8	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1	2.6	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	330	210	180	190	113	160	583	280	231	427	80
Future Volume (veh/h)	160	330	210	180	190	113	160	583	280	231	427	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	160	330	38	180	190	16	160	583	71	231	427	68
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	227	692	214	446	659	54	822	845	377	371	640	101
Arrive On Green	0.13	0.14	0.14	0.13	0.14	0.14	0.24	0.24	0.24	0.21	0.21	0.21
Sat Flow, veh/h	1767	5066	1569	3428	4768	394	3428	3526	1572	1767	3049	482
Grp Volume(v), veh/h	160	330	38	180	133	73	160	583	71	231	246	249
Grp Sat Flow(s),veh/h/ln	1767	1689	1569	1714	1689	1785	1714	1763	1572	1767	1763	1769
Q Serve(g_s), s	6.5	4.5	1.6	3.6	2.7	2.7	2.8	11.3	2.7	8.9	9.6	9.7
Cycle Q Clear(g_c), s	6.5	4.5	1.6	3.6	2.7	2.7	2.8	11.3	2.7	8.9	9.6	9.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	227	692	214	446	467	247	822	845	377	371	370	371
V/C Ratio(X)	0.70	0.48	0.18	0.40	0.29	0.29	0.19	0.69	0.19	0.62	0.66	0.67
Avail Cap(c_a), veh/h	471	2361	731	913	1574	832	1141	1174	523	588	587	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	29.9	28.7	30.0	29.0	29.1	22.8	26.0	22.7	27.0	27.2	27.3
Incr Delay (d2), s/veh	1.5	0.7	0.6	0.2	0.5	0.9	0.2	1.4	0.3	2.4	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.7	0.6	1.4	1.0	1.1	1.1	4.5	1.0	3.7	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	30.7	29.2	30.2	29.5	30.0	22.9	27.4	23.1	29.4	30.1	30.3
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		528			386			814			726	
Approach Delay, s/veh		31.2			29.9			26.2			30.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	16.3		21.2	14.1	16.4		23.4				
Change Period (Y+Rc), s	4.5	* 6		5.4	4.5	6.0		5.4				
Max Green Setting (Gmax), s	20.0	* 35		25.0	20.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s	5.6	6.5		11.7	8.5	4.7		13.3				
Green Ext Time (p_c), s	0.2	3.0		4.0	0.1	1.6		4.7				

Intersection Summary		
HCM 6th Ctrl Delay		29.0
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	10	440	0	40	30	913	360	10	757	50
Future Volume (veh/h)	70	0	10	440	0	40	30	913	360	10	757	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1856	1870	1856	1856	1856	1856	1870
Adj Flow Rate, veh/h	70	0	2	440	0	10	30	913	112	10	757	44
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	3	2	3	2	3	3	3	3	2
Cap, veh/h	224	0	100	741	0	328	61	1707	529	89	1611	93
Arrive On Green	0.06	0.00	0.06	0.21	0.00	0.21	0.03	0.34	0.34	0.03	0.33	0.33
Sat Flow, veh/h	3563	0	1585	3534	0	1566	1781	5066	1570	3428	4898	284
Grp Volume(v), veh/h	70	0	2	440	0	10	30	913	112	10	521	280
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1767	0	1566	1781	1689	1570	1714	1689	1804
Q Serve(g_s), s	0.9	0.0	0.1	5.7	0.0	0.3	0.8	7.4	2.6	0.1	6.2	6.2
Cycle Q Clear(g_c), s	0.9	0.0	0.1	5.7	0.0	0.3	0.8	7.4	2.6	0.1	6.2	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	224	0	100	741	0	328	61	1707	529	89	1111	594
V/C Ratio(X)	0.31	0.00	0.02	0.59	0.00	0.03	0.50	0.53	0.21	0.11	0.47	0.47
Avail Cap(c_a), veh/h	1306	0	581	2661	0	1179	215	2519	781	679	1940	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	22.2	18.0	0.0	15.9	24.0	13.5	11.9	24.0	13.4	13.5
Incr Delay (d2), s/veh	0.8	0.0	0.1	0.3	0.0	0.0	6.1	0.4	0.3	0.2	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.1	0.0	0.1	0.4	2.3	0.8	0.1	1.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	22.3	18.3	0.0	15.9	30.1	13.9	12.2	24.2	13.9	14.3
LnGrp LOS	C	A	C	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		72			450			1055			811	
Approach Delay, s/veh		23.4			18.2			14.2			14.1	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	21.9		7.7	6.2	21.5		15.1
Change Period (Y+Rc), s	4.5	4.9		4.5	4.5	4.9		4.5
Max Green Setting (Gmax), s	10.3	25.1		18.5	6.1	29.0		38.0
Max Q Clear Time (g_c+I1), s	2.1	9.4		2.9	2.8	8.2		7.7
Green Ext Time (p_c), s	0.0	7.6		0.1	0.0	6.8		0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	440	0	206	280	1097	0	0	987	220
Future Volume (veh/h)	0	0	0	440	0	206	280	1097	0	0	987	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1856	1856	1856	0	0	1856	1856
Adj Flow Rate, veh/h				440	0	0	280	1097	0	0	987	109
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				552	0		827	2441	0	0	1954	870
Arrive On Green				0.16	0.00	0.00	0.09	0.92	0.00	0.00	0.55	0.55
Sat Flow, veh/h				3534	0	1572	3428	3618	0	0	3618	1570
Grp Volume(v), veh/h				440	0	0	280	1097	0	0	987	109
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1714	1763	0	0	1763	1570
Q Serve(g_s), s				8.4	0.0	0.0	2.2	2.9	0.0	0.0	12.1	2.3
Cycle Q Clear(g_c), s				8.4	0.0	0.0	2.2	2.9	0.0	0.0	12.1	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				552	0		827	2441	0	0	1954	870
V/C Ratio(X)				0.80	0.00		0.34	0.45	0.00	0.00	0.51	0.13
Avail Cap(c_a), veh/h				742	0		1332	2441	0	0	1954	870
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.77	0.77	0.00	0.00	0.85	0.85
Uniform Delay (d), s/veh				28.5	0.0	0.0	6.4	1.0	0.0	0.0	9.7	7.5
Incr Delay (d2), s/veh				3.9	0.0	0.0	0.1	0.5	0.0	0.0	0.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.5	0.0	0.0	0.5	0.6	0.0	0.0	3.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.4	0.0	0.0	6.5	1.4	0.0	0.0	10.5	7.7
LnGrp LOS				C	A		A	A	A	A	B	A
Approach Vol, veh/h					440	A		1377			1096	
Approach Delay, s/veh					32.4			2.5			10.2	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	53.8		9.7	44.1		16.2
Change Period (Y+Rc), s	5.3		* 4.7	5.3		5.3
Max Green Setting (Gmax), s	44.7		* 15	24.7		14.7
Max Q Clear Time (g_c+I1), s	4.9		4.2	14.1		10.4
Green Ext Time (p_c), s	7.4		0.5	4.3		0.5

Intersection Summary		
HCM 6th Ctrl Delay		9.9
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	0	410	0	0	0	0	1007	670	229	1198	0
Future Volume (veh/h)	370	0	410	0	0	0	0	1007	670	229	1198	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1856	1856	1856	1856	0
Adj Flow Rate, veh/h	370	0	328				0	1007	451	229	1198	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	852	0	379				0	1656	739	628	2142	0
Arrive On Green	0.24	0.00	0.24				0.00	0.47	0.47	0.07	0.61	0.00
Sat Flow, veh/h	3534	0	1572				0	3618	1572	3428	3618	0
Grp Volume(v), veh/h	370	0	328				0	1007	451	229	1198	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1763	1572	1714	1763	0
Q Serve(g_s), s	6.2	0.0	14.0				0.0	14.8	14.9	2.2	14.1	0.0
Cycle Q Clear(g_c), s	6.2	0.0	14.0				0.0	14.8	14.9	2.2	14.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	852	0	379				0	1656	739	628	2142	0
V/C Ratio(X)	0.43	0.00	0.87				0.00	0.61	0.61	0.36	0.56	0.00
Avail Cap(c_a), veh/h	1020	0	454				0	1656	739	636	2142	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.77	0.77	0.00
Uniform Delay (d), s/veh	22.5	0.0	25.5				0.0	13.8	13.8	10.0	8.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	13.3				0.0	1.7	3.7	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	6.0				0.0	5.3	5.2	0.6	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	38.8				0.0	15.4	17.5	10.2	9.0	0.0
LnGrp LOS	C	A	D				A	B	B	B	A	A
Approach Vol, veh/h		698						1458			1427	
Approach Delay, s/veh		30.3						16.1			9.2	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	38.2		22.2		47.8
Change Period (Y+Rc), s	* 4.7	5.3		5.3		5.3
Max Green Setting (Gmax), s	* 5.1	29.4		20.2		39.2
Max Q Clear Time (g_c+I1), s	4.2	16.9		16.0		16.1
Green Ext Time (p_c), s	0.1	5.6		0.9		7.4

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	160	360	385	70	180	470	
Future Volume (veh/h)	160	360	385	70	180	470	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	160	92	385	53	180	470	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Percent Heavy Veh, %	3	3	3	3	3	3	
Cap, veh/h	266	237	960	131	236	2036	
Arrive On Green	0.15	0.15	0.31	0.31	0.13	0.58	
Sat Flow, veh/h	1767	1572	3207	426	1767	3618	
Grp Volume(v), veh/h	160	92	217	221	180	470	
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1777	1767	1763	
Q Serve(g_s), s	2.8	1.7	3.2	3.3	3.3	2.2	
Cycle Q Clear(g_c), s	2.8	1.7	3.2	3.3	3.3	2.2	
Prop In Lane	1.00	1.00		0.24	1.00		
Lane Grp Cap(c), veh/h	266	237	543	548	236	2036	
V/C Ratio(X)	0.60	0.39	0.40	0.40	0.76	0.23	
Avail Cap(c_a), veh/h	2243	1996	1678	1692	561	4954	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	13.1	12.7	9.0	9.0	13.8	3.4	
Incr Delay (d2), s/veh	2.2	1.0	0.5	0.5	5.1	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.9	0.5	0.8	0.8	1.2	0.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	15.3	13.7	9.5	9.5	18.9	3.5	
LnGrp LOS	B	B	A	A	B	A	
Approach Vol, veh/h	252		438			650	
Approach Delay, s/veh	14.7		9.5			7.8	
Approach LOS	B		A			A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	14.7				23.6	9.5
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	10.5	31.5				46.5	42.0
Max Q Clear Time (g_c+I1), s	5.3	5.3				4.2	4.8
Green Ext Time (p_c), s	0.2	2.4				3.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	370	286	160	130	378
Future Volume (veh/h)	70	370	286	160	130	378
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	70	73	286	77	130	378
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	204	182	909	240	194	2072
Arrive On Green	0.12	0.12	0.33	0.33	0.11	0.59
Sat Flow, veh/h	1767	1572	2851	729	1767	3618
Grp Volume(v), veh/h	70	73	181	182	130	378
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1724	1767	1763
Q Serve(g_s), s	1.1	1.3	2.3	2.4	2.1	1.5
Cycle Q Clear(g_c), s	1.1	1.3	2.3	2.4	2.1	1.5
Prop In Lane	1.00	1.00		0.42	1.00	
Lane Grp Cap(c), veh/h	204	182	581	569	194	2072
V/C Ratio(X)	0.34	0.40	0.31	0.32	0.67	0.18
Avail Cap(c_a), veh/h	2447	2178	1831	1791	612	5405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.4	7.6	7.6	13.0	2.9
Incr Delay (d2), s/veh	1.0	1.4	0.3	0.3	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.5	0.5	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.3	13.9	7.9	7.9	16.9	2.9
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	143		363			508
Approach Delay, s/veh	13.6		7.9			6.5
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.8	14.5			22.3	8.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	31.5			46.5	42.0
Max Q Clear Time (g_c+I1), s	4.1	4.4			3.5	3.3
Green Ext Time (p_c), s	0.1	1.9			2.4	0.4

Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	52	51	98.3%	94.1	47.4	F
	Through	635	653	102.9%	113.5	44.6	F
	Right Turn	77	80	103.9%	12.2	11.3	B
	Subtotal	764	784	102.6%	103.9	41.6	F
SB	Left Turn	189	195	103.0%	29.4	11.6	C
	Through	722	740	102.5%	21.6	15.1	C
	Right Turn	68	68	100.3%	18.6	11.9	B
	Subtotal	979	1,003	102.5%	22.8	14.0	C
EB	Left Turn	19	22	114.7%	36.1	17.2	D
	Through	33	35	105.8%	29.8	6.1	C
	Right Turn	41	40	97.3%	7.6	1.7	A
	Subtotal	93	97	103.9%	21.9	4.4	C
WB	Left Turn	88	94	106.6%	35.3	5.2	D
	Through	85	85	99.4%	38.9	4.7	D
	Right Turn	288	291	100.9%	22.7	5.7	C
	Subtotal	461	469	101.7%	28.3	4.7	C
Total		2,297	2,353	102.4%	54.1	17.8	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	4	4	95.0%	4.7	9.6	A
	Through						
	Right Turn	20	20	101.0%	1.0	0.8	A
	Subtotal	24	24	100.0%	1.5	1.2	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	295	304	103.0%	0.9	0.2	A
	Right Turn	4	4	105.0%	0.7	0.8	A
	Subtotal	299	308	103.0%	0.9	0.2	A
WB	Left Turn	15	15	102.0%	2.2	0.9	A
	Through	457	462	101.1%	0.9	0.2	A
	Right Turn						
	Subtotal	472	477	101.1%	0.9	0.2	A
Total		795	809	101.8%	0.9	0.1	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Existing Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	99	99	100.1%	22.5	10.0	C
	Through						
	Right Turn	53	53	99.6%	9.7	6.4	A
	Subtotal	152	152	99.9%	18.5	8.6	B
EB	Left Turn	24	23	95.8%	12.5	6.5	B
	Through	291	301	103.4%	7.6	1.2	A
	Right Turn						
	Subtotal	315	324	102.8%	8.0	1.1	A
WB	Left Turn						
	Through	419	424	101.2%	7.5	1.5	A
	Right Turn	173	176	101.5%	3.8	0.8	A
	Subtotal	592	600	101.3%	6.4	1.2	A
Total		1,059	1,075	101.5%	8.5	1.6	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	1	0	1	2	55	15	23	68	NO
	Through	1,200	342	103	152	472	1,312	252	996	1,632	MAX
	Right Turn	1,200	1	0	1	2	57	19	43	103	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	10	2	7	14	185	39	122	244	NO
	Through	2,500	110	64	46	278	1,112	261	551	1,417	NO
	Right Turn	2,500	109	64	45	277	1,112	261	551	1,416	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	3	1	1	6	51	15	40	88	NO
	Through	5,000	6	1	5	9	86	19	61	126	NO
	Right Turn	5,000	4	1	3	6	86	19	61	126	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	15	3	12	19	137	36	89	195	NO
	Through	4,500	13	1	11	15	126	17	94	147	NO
	Right Turn	175	32	6	23	40	281	68	179	400	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	26	11	12	45	NO
	Through										
	Right Turn	100	0	0	0	0	21	11	0	44	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	23	10	0	38	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	6	1	4	8	128	74	67	291	NO
	Through										
	Right Turn	150	1	0	1	1	57	14	40	79	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	0	0	0	1	34	10	22	45	NO
	Through	500	5	0	5	6	155	37	108	207	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	0	2	5	0	12	NO
	Through	2,500	7	2	5	11	222	65	129	328	NO
	Right Turn	2,500	2	0	2	3	94	20	57	122	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	72	77	106.3%	38.3	15.4	D
	Through	561	574	102.3%	50.9	13.2	D
	Right Turn	121	124	102.7%	5.5	0.8	A
	Subtotal	754	775	102.7%	42.0	11.3	D
SB	Left Turn	211	224	105.9%	23.6	2.9	C
	Through	647	671	103.6%	15.6	2.4	B
	Right Turn	41	40	97.3%	13.5	2.6	B
	Subtotal	899	934	103.9%	17.4	2.1	B
EB	Left Turn	27	28	104.8%	33.1	8.7	C
	Through	74	74	100.4%	32.3	6.2	C
	Right Turn	82	81	98.7%	16.9	4.6	B
	Subtotal	183	184	100.3%	25.3	5.0	C
WB	Left Turn	96	90	93.9%	34.6	6.3	C
	Through	70	63	89.9%	34.6	6.2	C
	Right Turn	129	120	93.3%	12.6	3.0	B
	Subtotal	295	273	92.6%	25.0	3.3	C
Total		2,131	2,165	101.6%	29.4	5.5	C

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	12	12	99.2%	1.6	1.2	A
	Through						
	Right Turn	21	20	96.7%	1.0	0.4	A
	Subtotal	33	32	97.6%	1.4	0.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	400	417	104.1%	1.3	0.2	A
	Right Turn	6	6	106.7%	0.8	0.7	A
	Subtotal	406	423	104.2%	1.3	0.2	A
WB	Left Turn	19	19	98.9%	3.6	2.1	A
	Through	283	260	92.0%	0.8	0.2	A
	Right Turn						
	Subtotal	302	279	92.4%	1.0	0.2	A
Total		741	734	99.1%	1.2	0.1	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Existing Conditions**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	1	1	50.0%	0.3	1.1	A
	Through						
	Right Turn						
	Subtotal	1	1	50.0%	0.3	1.1	A
SB	Left Turn	176	171	97.1%	21.8	14.9	C
	Through						
	Right Turn	46	46	100.9%	14.6	18.2	B
	Subtotal	222	217	97.9%	20.1	15.6	C
EB	Left Turn	50	59	118.2%	8.8	2.8	A
	Through	371	377	101.7%	10.0	1.0	B
	Right Turn						
	Subtotal	421	436	103.6%	9.9	0.8	A
WB	Left Turn	1	1	100.0%	0.8	2.5	A
	Through	255	232	91.1%	8.0	1.3	A
	Right Turn	106	107	101.0%	3.4	0.7	A
	Subtotal	362	340	94.0%	6.5	1.1	A
Total		1,006	995	98.9%	11.6	3.7	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	3	1	2	4	76	24	45	124	NO
	Through	1,200	195	52	123	264	985	77	873	1,122	NO
	Right Turn	1,200	2	0	1	3	67	26	45	116	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	13	2	10	17	206	64	121	356	NO
	Through	2,500	91	23	67	144	1,016	218	592	1,269	NO
	Right Turn	2,500	90	23	66	143	1,016	218	592	1,269	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	4	1	2	5	58	13	44	83	NO
	Through	5,000	16	2	13	19	166	26	136	209	NO
	Right Turn	5,000	14	2	10	15	166	26	135	209	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	13	2	10	17	127	15	111	156	NO
	Through	4,500	8	1	6	10	105	35	68	178	NO
	Right Turn	175	6	1	4	8	115	22	66	154	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	25	19	0	57	NO
	Through										
	Right Turn	100	0	0	0	0	26	17	0	56	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	22	2	20	26	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	11	3	7	16	198	126	91	492	MAX
	Through										
	Right Turn	150	1	0	0	1	58	19	40	91	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	1	2	62	9	45	70	NO
	Through	500	9	1	8	11	206	37	160	276	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	0	10	8	0	23	NO
	Through	2,500	5	1	3	6	121	37	81	212	NO
	Right Turn	2,500	2	0	1	2	82	15	64	106	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	93	92.6%	298.6	30.0	F
	Through	740	696	94.0%	308.0	26.2	F
	Right Turn	90	92	102.1%	101.0	8.3	F
	Subtotal	930	880	94.6%	282.8	25.5	F
SB	Left Turn	220	223	101.5%	123.0	35.0	F
	Through	800	829	103.6%	119.5	34.7	F
	Right Turn	90	90	100.3%	123.3	36.7	F
	Subtotal	1,110	1,142	102.9%	120.4	34.2	F
EB	Left Turn	30	35	115.3%	40.7	8.1	D
	Through	40	43	106.8%	35.4	9.9	D
	Right Turn	60	59	98.0%	11.6	5.0	B
	Subtotal	130	136	104.7%	26.4	5.8	C
WB	Left Turn	100	102	102.4%	38.4	3.9	D
	Through	140	145	103.4%	39.1	6.2	D
	Right Turn	320	327	102.1%	21.6	6.0	C
	Subtotal	560	574	102.4%	29.2	2.3	C
Total		2,730	2,732	100.1%	150.8	13.3	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	111.0%	4.8	2.0	A
	Through						
	Right Turn	20	22	108.5%	1.4	0.8	A
	Subtotal	30	33	109.3%	2.5	0.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	340	350	103.1%	1.2	0.4	A
	Right Turn	10	11	108.0%	1.0	1.0	A
	Subtotal	350	361	103.2%	1.2	0.4	A
WB	Left Turn	30	29	97.0%	2.6	1.4	A
	Through	550	561	102.0%	1.0	0.1	A
	Right Turn						
	Subtotal	580	590	101.8%	1.0	0.2	A
Total		960	984	102.5%	1.1	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term without Project Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	110	104	94.5%	28.4	17.5	C
	Through						
	Right Turn	70	72	102.7%	18.3	19.0	B
	Subtotal	180	176	97.7%	24.4	18.0	C
EB	Left Turn	30	30	99.0%	14.9	7.8	B
	Through	330	343	103.8%	7.2	2.0	A
	Right Turn						
	Subtotal	360	372	103.4%	7.8	1.9	A
WB	Left Turn						
	Through	510	518	101.5%	8.1	1.7	A
	Right Turn	200	206	103.0%	4.1	1.1	A
	Subtotal	710	724	101.9%	7.0	1.5	A
Total		1,250	1,272	101.8%	9.5	2.4	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	4	1	2	5	102	39	68	207	NO
	Through	1,200	1,105	42	1,027	1,172	1,646	10	1,631	1,654	MAX
	Right Turn	1,200	2	0	1	3	65	15	46	90	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	16	2	14	18	214	36	162	290	NO
	Through	2,500	517	124	346	696	1,738	225	1,391	2,110	NO
	Right Turn	2,500	517	124	346	696	1,738	225	1,391	2,110	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	6	1	4	8	71	13	48	90	NO
	Through	5,000	9	3	7	16	123	41	68	193	NO
	Right Turn	5,000	7	2	5	14	123	41	68	192	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	19	2	15	23	147	28	128	220	NO
	Through	4,500	25	3	21	30	205	48	135	283	NO
	Right Turn	175	39	8	27	51	342	82	239	503	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	33	16	19	59	NO
	Through										
	Right Turn	100	0	0	0	0	33	15	19	58	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	27	9	21	44	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	8	1	6	11	129	34	85	197	NO
	Through										
	Right Turn	150	1	0	1	2	65	18	46	109	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	0	0	0	1	38	14	22	63	NO
	Through	500	6	1	4	7	174	43	118	276	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	0	5	6	0	12	NO
	Through	2,500	10	2	8	13	263	55	178	361	NO
	Right Turn	2,500	3	1	2	4	104	27	67	161	NO
	Second Right										

Vissim Post-Processor | **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs | **Near-Term without Project Conditions**
Volume and Delay by Movement | **PM Peak Hour**

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	90	91	101.2%	265.4	59.2	F
	Through	670	669	99.8%	285.6	63.0	F
	Right Turn	140	152	108.9%	73.2	37.5	E
	Subtotal	900	912	101.4%	245.9	55.3	F
SB	Left Turn	240	252	105.1%	112.2	54.1	F
	Through	720	757	105.2%	104.6	53.2	F
	Right Turn	50	51	102.2%	99.6	45.3	F
	Subtotal	1,010	1,061	105.0%	106.2	53.0	F
EB	Left Turn	50	53	105.4%	37.3	9.8	D
	Through	100	102	102.0%	39.3	5.9	D
	Right Turn	120	122	101.8%	23.5	8.6	C
	Subtotal	270	277	102.5%	31.8	6.6	C
WB	Left Turn	110	111	101.3%	39.8	5.3	D
	Through	90	92	102.3%	33.6	7.1	C
	Right Turn	150	151	100.8%	10.2	1.5	B
	Subtotal	350	355	101.3%	25.5	3.7	C
Total		2,530	2,604	102.9%	139.2	12.5	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.0%	2.3	1.0	A
	Through						
	Right Turn	30	29	97.3%	1.7	0.9	A
	Subtotal	50	51	101.6%	2.0	0.6	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	470	496	105.4%	1.4	0.4	A
	Right Turn	10	10	103.0%	1.5	1.3	A
	Subtotal	480	506	105.4%	1.4	0.4	A
WB	Left Turn	30	29	97.0%	5.2	3.7	A
	Through	330	334	101.1%	0.8	0.1	A
	Right Turn						
	Subtotal	360	363	100.8%	1.0	0.1	A
Total		890	919	103.3%	1.3	0.3	A

Vissim Post-Processor | **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs | **Near-Term without Project Conditions**
Volume and Delay by Movement | **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	22.3	5.9	C
	Through						
	Right Turn						
	Subtotal	10	11	106.0%	22.3	5.9	C
SB	Left Turn	200	193	96.6%	25.4	17.0	C
	Through						
	Right Turn	60	59	99.0%	12.0	12.3	B
	Subtotal	260	253	97.1%	22.1	15.6	C
EB	Left Turn	60	59	99.0%	13.2	3.3	B
	Through	440	466	106.0%	12.4	2.2	B
	Right Turn						
	Subtotal	500	526	105.1%	12.6	2.0	B
WB	Left Turn	10	11	109.0%	11.4	9.5	B
	Through	290	294	101.2%	9.2	1.3	A
	Right Turn	120	124	103.0%	3.4	0.9	A
	Subtotal	420	428	101.9%	7.7	0.8	A
Total		1,190	1,217	102.3%	13.6	4.3	B

Vissim Post-Processor | **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs | **Near-Term without Project Conditions**
Queue Length | **PM Peak Hour**

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	5	1	3	7	116	36	81	178	NO
	Through	1,200	1,181	199	736	1,420	1,630	42	1,512	1,654	MAX
	Right Turn	1,200	4	1	2	5	114	41	74	206	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	27	4	22	37	279	78	192	466	NO
	Through	2,500	446	169	143	692	1,626	353	1,062	2,359	NO
	Right Turn	2,500	446	169	143	691	1,626	353	1,062	2,359	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	11	89	24	49	131	NO
	Through	5,000	34	7	25	47	281	83	185	461	NO
	Right Turn	5,000	32	7	24	45	281	83	185	461	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	21	3	17	25	157	30	110	221	MAX
	Through	4,500	14	2	12	18	118	20	90	150	NO
	Right Turn	175	7	2	5	12	133	48	85	233	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	33	17	20	57	NO
	Through										
	Right Turn	100	0	0	0	0	32	17	18	56	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	41	16	21	68	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	16	3	14	22	218	149	112	622	MAX
	Through										
	Right Turn	150	1	0	1	1	55	23	24	96	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	2	1	1	3	63	13	45	87	NO
	Through	500	17	2	13	19	279	61	198	381	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	0	24	12	0	48	NO
	Through	2,500	8	1	6	10	153	45	116	271	NO
	Right Turn	2,500	2	0	2	3	75	14	63	102	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	89	88.7%	321.2	30.6	F
	Through	744	662	89.0%	339.0	27.0	F
	Right Turn	137	128	93.1%	105.2	8.5	F
	Subtotal	981	879	89.6%	299.3	26.9	F
SB	Left Turn	220	224	101.9%	202.6	54.6	F
	Through	811	840	103.6%	204.2	59.5	F
	Right Turn	92	93	100.5%	202.6	57.5	F
	Subtotal	1,123	1,157	103.0%	203.8	58.1	F
EB	Left Turn	32	36	113.8%	42.8	11.2	D
	Through	52	56	108.5%	34.1	6.8	C
	Right Turn	60	58	96.2%	13.6	4.7	B
	Subtotal	144	151	104.5%	28.9	5.8	C
WB	Left Turn	188	188	99.8%	41.6	6.5	D
	Through	173	179	103.6%	37.1	6.0	D
	Right Turn	320	328	102.5%	18.0	5.1	B
	Subtotal	681	695	102.0%	29.5	3.5	C
Total		2,929	2,881	98.4%	184.5	23.8	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	111.0%	3.2	1.5	A
	Through						
	Right Turn	20	22	108.5%	2.4	2.0	A
	Subtotal	30	33	109.3%	2.5	1.3	A
SB	Left Turn	38	39	102.1%	13.3	2.5	B
	Through						
	Right Turn	85	87	102.8%	10.4	0.9	B
	Subtotal	123	126	102.6%	11.4	1.2	B
EB	Left Turn	42	41	96.7%	11.2	4.1	B
	Through	357	360	101.0%	1.2	0.2	A
	Right Turn	10	10	101.0%	1.1	0.7	A
	Subtotal	409	411	100.5%	2.1	0.5	A
WB	Left Turn	30	29	96.0%	2.0	0.8	A
	Through	586	598	102.1%	2.0	0.4	A
	Right Turn	18	18	99.4%	1.1	0.2	A
	Subtotal	634	645	101.7%	2.0	0.4	A
Total		1,196	1,215	101.6%	3.1	0.5	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (TWSC)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	142	136	95.7%	31.3	19.6	C
	Through						
	Right Turn	106	107	101.2%	20.9	20.9	C
	Subtotal	248	243	98.1%	26.7	20.1	C
EB	Left Turn	47	44	94.0%	15.9	6.2	B
	Through	368	376	102.2%	8.1	1.7	A
	Right Turn						
	Subtotal	415	420	101.3%	8.9	1.7	A
WB	Left Turn						
	Through	528	536	101.5%	9.1	1.5	A
	Right Turn	217	223	102.5%	4.7	0.9	A
	Subtotal	745	758	101.8%	7.8	1.1	A
Total		1,408	1,422	101.0%	11.3	3.8	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	5	1	3	6	99	27	68	160	NO
	Through	1,200	1,169	71	1,080	1,280	1,646	8	1,633	1,654	MAX
	Right Turn	1,200	3	1	2	4	103	13	85	123	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	18	2	15	23	208	42	149	270	NO
	Through	2,500	810	198	548	1,084	2,092	265	1,576	2,594	NO
	Right Turn	2,500	809	198	547	1,084	2,092	265	1,576	2,594	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	6	2	4	9	78	11	64	92	NO
	Through	5,000	12	2	9	17	143	44	96	249	NO
	Right Turn	5,000	9	2	6	14	143	44	96	249	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	40	5	32	49	286	94	212	544	MAX
	Through	4,500	32	4	26	40	252	106	194	542	NO
	Right Turn	175	31	7	21	45	240	51	180	357	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	34	14	20	57	NO
	Through										
	Right Turn	100	0	0	0	0	33	14	19	56	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	2	0	1	2	48	12	24	64	NO
	Through										
	Right Turn	100	3	0	3	4	74	22	44	118	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	2	53	17	26	72	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	32	15	0	54	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	12	2	10	16	177	130	92	540	MAX
	Through										
	Right Turn	150	2	1	1	4	99	34	46	144	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	0	1	45	9	25	59	NO
	Through	500	7	1	5	8	168	30	137	221	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	13	3	8	17	257	42	151	300	NO
	Right Turn	2,500	4	1	3	5	129	52	79	259	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	90	84	93.3%	324.3	35.1	F
	Through	683	624	91.4%	346.5	30.5	F
	Right Turn	247	250	101.3%	106.4	11.4	F
	Subtotal	1,020	958	93.9%	281.9	25.6	F
SB	Left Turn	240	252	105.1%	156.2	59.9	F
	Through	728	763	104.8%	150.0	59.4	F
	Right Turn	52	53	101.3%	146.9	62.7	F
	Subtotal	1,020	1,068	104.7%	151.4	59.6	F
EB	Left Turn	52	54	103.5%	37.4	4.6	D
	Through	126	130	103.1%	46.1	9.8	D
	Right Turn	120	123	102.2%	33.5	9.4	C
	Subtotal	298	306	102.8%	39.4	7.9	D
WB	Left Turn	173	177	102.5%	53.4	15.5	D
	Through	113	118	104.7%	38.1	4.6	D
	Right Turn	150	151	100.5%	9.8	1.8	A
	Subtotal	436	446	102.4%	34.2	7.3	C
Total		2,774	2,779	100.2%	165.4	21.3	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.5%	1.8	1.1	A
	Through						
	Right Turn	30	29	97.7%	1.3	0.6	A
	Subtotal	50	51	102.0%	1.7	0.6	A
SB	Left Turn	26	26	101.5%	11.7	3.6	B
	Through						
	Right Turn	60	63	105.3%	6.4	0.5	A
	Subtotal	86	90	104.2%	7.9	0.9	A
EB	Left Turn	94	96	102.0%	4.0	1.1	A
	Through	509	530	104.1%	1.7	0.3	A
	Right Turn	10	11	105.0%	1.3	1.1	A
	Subtotal	613	636	103.8%	2.0	0.3	A
WB	Left Turn	30	32	105.7%	3.3	1.4	A
	Through	356	363	101.9%	1.4	0.3	A
	Right Turn	41	40	98.0%	1.1	0.4	A
	Subtotal	427	435	101.8%	1.5	0.3	A
Total		1,176	1,212	103.0%	2.2	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (TWSC)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	107.0%	23.1	9.9	C
	Through						
	Right Turn						
	Subtotal	10	11	107.0%	23.1	9.9	C
SB	Left Turn	222	220	99.1%	24.1	10.5	C
	Through						
	Right Turn	86	89	103.1%	14.0	18.8	B
	Subtotal	308	309	100.2%	21.1	12.9	C
EB	Left Turn	99	98	99.3%	14.3	3.5	B
	Through	466	487	104.5%	12.3	1.9	B
	Right Turn						
	Subtotal	565	586	103.6%	12.6	1.7	B
WB	Left Turn	10	10	100.0%	11.1	12.2	B
	Through	331	336	101.6%	13.1	6.0	B
	Right Turn	155	160	103.1%	5.3	4.5	A
	Subtotal	496	506	102.0%	10.7	5.4	B
Total		1,379	1,411	102.3%	14.4	3.7	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	6	1	5	8	112	20	87	159	NO
	Through	1,200	1,410	32	1,352	1,450	1,650	7	1,631	1,654	AVG
	Right Turn	1,200	14	5	9	25	208	74	149	356	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	27	6	18	36	286	57	217	358	NO
	Through	2,500	581	163	255	809	1,849	316	1,266	2,467	NO
	Right Turn	2,500	580	163	255	808	1,849	316	1,266	2,467	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	7	12	98	18	65	118	NO
	Through	5,000	45	6	35	52	336	91	215	512	NO
	Right Turn	5,000	44	6	34	52	336	91	215	512	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	51	6	40	63	250	44	196	334	MAX
	Through	4,500	19	3	14	23	153	27	114	187	NO
	Right Turn	175	7	1	5	9	133	34	87	183	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	43	19	19	63	NO
	Through										
	Right Turn	100	0	0	0	0	42	19	17	62	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	39	14	22	66	NO
	Through										
	Right Turn	100	2	0	1	2	56	15	42	86	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	2	1	1	3	72	16	48	95	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	42	16	30	77	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	21	2	19	24	193	62	136	329	MAX
	Through										
	Right Turn	150	1	0	1	2	60	14	44	84	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	4	1	3	6	82	16	64	106	NO
	Through	500	18	3	14	22	317	100	237	514	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	1	26	7	21	45	NO
	Through	2,500	10	1	8	12	195	45	123	284	NO
	Right Turn	2,500	3	1	2	4	102	25	78	152	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	170	173	101.5%	67.0	9.2	E
	Through	910	952	104.6%	42.8	9.6	D
	Right Turn	110	120	109.4%	4.9	0.5	A
	Subtotal	1,190	1,244	104.6%	42.6	7.7	D
SB	Left Turn	250	258	103.1%	64.1	17.4	E
	Through	930	967	104.0%	31.4	3.0	C
	Right Turn	110	114	103.7%	29.2	3.8	C
	Subtotal	1,290	1,339	103.8%	37.8	4.9	D
EB	Left Turn	30	32	106.0%	53.7	13.4	D
	Through	60	61	101.0%	41.5	6.9	D
	Right Turn	90	85	94.1%	13.8	3.1	B
	Subtotal	180	177	98.4%	30.6	4.1	C
WB	Left Turn	120	122	101.5%	71.2	25.4	E
	Through	230	243	105.6%	47.6	5.1	D
	Right Turn	370	378	102.2%	29.3	4.3	C
	Subtotal	720	743	103.1%	42.3	6.4	D
Total		3,380	3,503	103.6%	40.2	3.5	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	111.0%	10.5	3.1	B
	Through						
	Right Turn	20	19	92.5%	8.4	0.6	A
	Subtotal	30	30	98.7%	9.4	1.9	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	410	429	104.6%	0.5	0.1	A
	Right Turn	10	12	118.0%	1.8	1.4	A
	Subtotal	420	441	105.0%	0.5	0.1	A
WB	Left Turn	30	28	93.7%	4.2	1.4	A
	Through	710	733	103.3%	0.8	0.1	A
	Right Turn						
	Subtotal	740	761	102.9%	1.0	0.1	A
Total		1,190	1,232	103.5%	1.0	0.1	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year No Project**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	130	133	102.4%	19.8	2.9	B
	Through						
	Right Turn	80	79	99.0%	5.0	0.5	A
	Subtotal	210	212	101.1%	13.9	1.7	B
EB	Left Turn	40	40	100.8%	12.8	3.3	B
	Through	390	406	104.2%	6.2	1.1	A
	Right Turn						
	Subtotal	430	447	103.9%	6.8	1.1	A
WB	Left Turn						
	Through	660	682	103.4%	7.8	1.7	A
	Right Turn	230	241	104.9%	5.2	2.1	A
	Subtotal	890	923	103.8%	7.1	1.8	A
Total		1,530	1,582	103.4%	8.0	1.2	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	53	7	42	63	451	193	222	747	MAX
	Through	1,200	123	23	91	157	828	252	495	1,367	NO
	Right Turn	1,200	1	0	1	2	63	13	46	87	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	80	16	63	111	411	108	285	628	MAX
	Through	2,500	95	9	83	107	598	73	471	707	NO
	Right Turn	2,500	96	9	84	109	599	73	473	708	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	8	1	5	10	81	16	48	106	NO
	Through	5,000	15	2	13	18	132	24	109	170	NO
	Right Turn	5,000	15	2	13	18	132	24	109	171	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	41	17	25	85	246	81	180	449	MAX
	Through	4,500	31	3	26	34	171	30	133	232	NO
	Right Turn	175	40	5	30	49	383	55	285	484	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	2	0	1	2	70	9	60	81	NO
	Through										
	Right Turn	100	1	0	1	2	69	9	59	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	34	15	21	65	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	11	1	9	13	126	27	89	169	NO
	Through										
	Right Turn	150	1	0	0	1	52	14	37	79	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	0	2	48	11	24	66	NO
	Through	500	4	1	3	5	130	17	106	154	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	8	1	7	9	130	17	110	168	NO
	Right Turn	2,500	4	1	3	6	128	53	87	259	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	120	127	105.8%	58.4	6.8	E
	Through	870	901	103.5%	36.4	3.3	D
	Right Turn	170	178	104.7%	5.1	0.8	A
	Subtotal	1,160	1,205	103.9%	34.0	3.0	C
SB	Left Turn	280	290	103.6%	77.6	17.4	E
	Through	830	858	103.4%	29.2	2.7	C
	Right Turn	50	49	98.0%	27.0	6.7	C
	Subtotal	1,160	1,198	103.2%	40.3	4.1	D
EB	Left Turn	70	72	102.9%	50.4	7.6	D
	Through	130	132	101.5%	41.1	3.3	D
	Right Turn	180	180	99.8%	23.0	3.1	C
	Subtotal	380	384	100.9%	34.4	2.6	C
WB	Left Turn	130	133	102.2%	67.5	11.1	E
	Through	100	101	100.7%	43.2	7.8	D
	Right Turn	170	172	101.1%	8.6	1.9	A
	Subtotal	400	405	101.4%	38.6	6.5	D
Total		3,100	3,192	103.0%	37.4	2.0	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	104.5%	9.7	2.8	A
	Through						
	Right Turn	30	28	92.3%	9.0	0.5	A
	Subtotal	50	49	97.2%	9.6	1.2	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	570	591	103.6%	0.3	0.1	A
	Right Turn	10	11	108.0%	0.2	0.3	A
	Subtotal	580	601	103.7%	0.3	0.1	A
WB	Left Turn	30	29	96.0%	2.9	0.8	A
	Through	380	384	101.2%	0.8	0.1	A
	Right Turn						
	Subtotal	410	413	100.8%	1.0	0.1	A
Total		1,040	1,063	102.2%	1.0	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year No Project**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	10	103.0%	26.5	8.9	C
	Through						
	Right Turn						
	Subtotal	10	10	103.0%	26.5	8.9	C
SB	Left Turn	230	227	98.9%	18.2	2.1	B
	Through						
	Right Turn	70	67	96.1%	4.3	0.7	A
	Subtotal	300	295	98.2%	15.0	1.6	B
EB	Left Turn	70	70	99.7%	12.5	2.5	B
	Through	530	551	103.9%	9.9	2.0	A
	Right Turn						
	Subtotal	600	621	103.4%	10.3	1.9	B
WB	Left Turn	10	12	116.0%	14.3	10.5	B
	Through	330	336	101.8%	9.4	1.5	A
	Right Turn	140	143	102.3%	4.1	0.9	A
	Subtotal	480	491	102.2%	8.0	1.0	A
Total		1,390	1,416	101.9%	10.8	1.3	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	37	6	28	50	310	179	153	624	MAX
	Through	1,200	109	9	94	123	639	100	490	842	NO
	Right Turn	1,200	3	1	2	4	83	16	64	110	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	113	24	84	153	546	94	381	685	MAX
	Through	2,500	79	7	71	90	493	57	408	571	NO
	Right Turn	2,500	80	7	72	91	495	57	410	573	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	19	4	11	24	157	32	110	198	MAX
	Through	5,000	34	3	29	40	220	33	164	283	NO
	Right Turn	5,000	34	3	30	40	220	33	165	283	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	43	4	36	48	238	40	172	297	MAX
	Through	4,500	14	2	11	17	86	15	67	111	NO
	Right Turn	175	9	3	6	14	168	61	94	258	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	2	0	2	3	69	9	59	81	NO
	Through										
	Right Turn	100	2	0	2	3	69	9	58	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	25	6	21	42	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	2	50	34	22	97	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	19	3	16	24	191	38	136	275	MAX
	Through										
	Right Turn	150	1	0	0	1	48	14	22	64	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	3	0	2	3	80	15	65	109	NO
	Through	500	10	2	8	13	168	33	122	222	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	2,500	0	0	0	1	33	13	22	57	NO
	Through	2,500	6	1	5	7	94	16	70	127	NO
	Right Turn	2,500	3	0	2	4	95	23	68	150	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	170	177	103.9%	60.1	11.7	E
	Through	914	950	103.9%	35.7	7.8	D
	Right Turn	157	169	107.8%	5.0	1.1	A
	Subtotal	1,241	1,296	104.4%	35.1	7.1	D
SB	Left Turn	250	258	103.3%	51.7	6.8	D
	Through	941	979	104.0%	28.8	5.5	C
	Right Turn	112	115	102.2%	24.7	7.9	C
	Subtotal	1,303	1,352	103.7%	33.1	4.4	C
EB	Left Turn	32	33	104.4%	43.7	21.3	D
	Through	72	76	105.7%	46.4	9.9	D
	Right Turn	90	87	96.9%	18.5	10.4	B
	Subtotal	194	197	101.4%	34.5	10.7	C
WB	Left Turn	208	212	102.1%	253.2	61.5	F
	Through	263	285	108.4%	44.1	6.1	D
	Right Turn	370	381	102.9%	21.8	9.1	C
	Subtotal	841	878	104.4%	91.8	18.8	F
Total		3,579	3,722	104.0%	48.5	4.3	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	9.7	3.0	A
	Through						
	Right Turn	20	19	93.0%	9.1	1.6	A
	Subtotal	30	29	97.3%	9.3	1.5	A
SB	Left Turn	38	37	96.1%	11.4	2.0	B
	Through						
	Right Turn	85	88	103.8%	9.8	1.0	A
	Subtotal	123	125	101.4%	10.3	1.0	B
EB	Left Turn	42	40	94.8%	4.9	1.9	A
	Through	427	455	106.5%	0.5	0.1	A
	Right Turn	10	10	103.0%	0.8	1.1	A
	Subtotal	479	505	105.4%	0.9	0.3	A
WB	Left Turn	30	28	94.3%	3.1	1.4	A
	Through	746	776	104.0%	1.2	0.2	A
	Right Turn	18	18	98.3%	1.5	0.7	A
	Subtotal	794	822	103.5%	1.2	0.2	A
Total		1,426	1,481	103.8%	2.0	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (TWSC)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	162	161	99.6%	21.1	3.4	C
	Through						
	Right Turn	116	117	101.1%	5.9	1.7	A
	Subtotal	278	279	100.3%	15.0	3.1	B
EB	Left Turn	57	57	100.2%	13.9	4.6	B
	Through	428	455	106.4%	6.5	0.8	A
	Right Turn						
	Subtotal	485	513	105.7%	7.4	1.2	A
WB	Left Turn						
	Through	678	706	104.1%	9.1	0.9	A
	Right Turn	247	255	103.4%	5.5	1.3	A
	Subtotal	925	961	103.9%	8.1	0.9	A
Total		1,688	1,752	103.8%	9.0	0.9	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	60	16	42	91	497	227	214	803	MAX
	Through	1,200	128	38	89	217	828	258	559	1,476	NO
	Right Turn	1,200	3	0	2	3	80	18	47	109	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	74	8	65	92	391	56	314	480	MAX
	Through	2,500	105	15	88	140	693	192	554	1,213	NO
	Right Turn	2,500	106	15	90	141	694	192	555	1,215	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	11	79	16	64	106	NO
	Through	5,000	18	2	17	22	136	26	100	179	NO
	Right Turn	5,000	18	2	17	22	136	26	100	179	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	199	64	99	313	659	170	432	914	AVG
	Through	4,500	36	2	33	39	195	21	159	230	NO
	Right Turn	175	40	13	31	72	398	110	279	646	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	2	68	10	58	81	NO
	Through										
	Right Turn	100	1	0	1	2	68	10	57	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	2	47	13	28	76	NO
	Through										
	Right Turn	100	3	0	2	3	74	23	45	121	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	2	48	16	29	76	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	27	7	19	41	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	14	1	12	17	153	41	110	224	MAX
	Through										
	Right Turn	150	1	0	1	2	66	17	44	90	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	1	2	59	10	45	73	NO
	Through	500	5	1	4	7	137	32	94	183	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	9	1	7	11	140	17	113	173	NO
	Right Turn	2,500	5	1	3	6	136	44	67	212	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	120	124	103.6%	56.5	7.9	E
	Through	883	906	102.6%	37.6	3.2	D
	Right Turn	277	294	106.2%	7.0	2.1	A
	Subtotal	1,280	1,325	103.5%	32.9	2.8	C
SB	Left Turn	280	292	104.3%	85.5	15.6	F
	Through	838	878	104.7%	33.5	3.3	C
	Right Turn	52	49	94.8%	31.9	8.5	C
	Subtotal	1,170	1,219	104.2%	45.3	4.8	D
EB	Left Turn	72	77	106.4%	52.8	6.9	D
	Through	156	159	101.7%	44.4	5.1	D
	Right Turn	180	183	101.7%	27.7	6.8	C
	Subtotal	408	418	102.5%	38.5	3.8	D
WB	Left Turn	193	197	101.9%	267.9	53.3	F
	Through	123	127	103.6%	45.1	7.4	D
	Right Turn	170	173	102.0%	8.3	1.7	A
	Subtotal	486	497	102.3%	120.9	26.0	F
Total		3,344	3,459	103.4%	50.0	2.3	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	105.0%	11.5	4.1	B
	Through						
	Right Turn	30	28	94.7%	9.2	0.9	A
	Subtotal	50	49	98.8%	10.2	2.0	B
SB	Left Turn	26	26	100.8%	9.4	1.7	A
	Through						
	Right Turn	60	63	104.5%	8.0	0.6	A
	Subtotal	86	89	103.4%	8.4	0.7	A
EB	Left Turn	94	99	105.1%	2.7	0.9	A
	Through	609	637	104.6%	0.6	0.1	A
	Right Turn	10	10	104.0%	0.4	0.6	A
	Subtotal	713	746	104.7%	0.9	0.1	A
WB	Left Turn	30	31	103.0%	3.5	1.1	A
	Through	406	413	101.7%	0.8	0.1	A
	Right Turn	41	42	103.2%	1.5	0.4	A
	Subtotal	477	486	101.9%	1.1	0.2	A
Total		1,326	1,371	103.4%	1.9	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (TWSC)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	9	91.0%	27.9	13.7	C
	Through						
	Right Turn						
	Subtotal	10	9	91.0%	27.9	13.7	C
SB	Left Turn	252	247	97.9%	19.3	3.1	B
	Through						
	Right Turn	96	98	101.7%	4.8	0.6	A
	Subtotal	348	344	98.9%	15.2	2.0	B
EB	Left Turn	109	110	100.7%	12.0	2.8	B
	Through	556	580	104.3%	9.3	1.7	A
	Right Turn						
	Subtotal	665	690	103.7%	9.8	1.7	A
WB	Left Turn	10	11	113.0%	11.5	10.5	B
	Through	371	379	102.1%	10.5	2.3	B
	Right Turn	175	177	101.1%	4.1	1.5	A
	Subtotal	556	567	102.0%	8.6	2.0	A
Total		1,579	1,610	102.0%	10.8	1.6	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	36	5	29	44	250	95	195	469	MAX
	Through	1,200	116	12	107	144	674	116	560	909	NO
	Right Turn	1,200	9	2	6	13	160	37	109	219	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	130	42	101	245	587	224	398	1,190	MAX
	Through	2,500	89	7	77	97	620	143	445	912	NO
	Right Turn	2,500	90	7	78	99	622	143	447	913	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	21	3	18	26	160	41	111	240	MAX
	Through	5,000	43	4	40	53	256	53	197	364	NO
	Right Turn	5,000	44	4	40	54	256	53	198	364	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	242	85	121	411	596	140	368	857	AVG
	Through	4,500	18	2	15	20	108	22	86	153	NO
	Right Turn	175	9	2	6	14	150	48	109	264	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	2	0	2	3	73	8	59	81	NO
	Through										
	Right Turn	100	2	0	2	3	72	8	58	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	45	8	31	51	NO
	Through										
	Right Turn	100	1	0	1	2	55	14	45	88	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	1	49	13	32	75	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	46	17	24	71	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	48	35	22	99	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	22	2	19	26	198	34	149	268	MAX
	Through										
	Right Turn	150	1	0	0	1	56	9	42	66	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	4	1	4	5	95	18	69	117	NO
	Through	500	10	1	8	12	158	28	110	215	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	2,500	0	0	0	1	28	9	21	48	NO
	Through	2,500	7	1	5	8	98	19	68	126	NO
	Right Turn	2,500	4	0	3	4	90	10	81	107	NO
	Second Right										

Appendix C:
Peak Hour Signal Warrants

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	AM

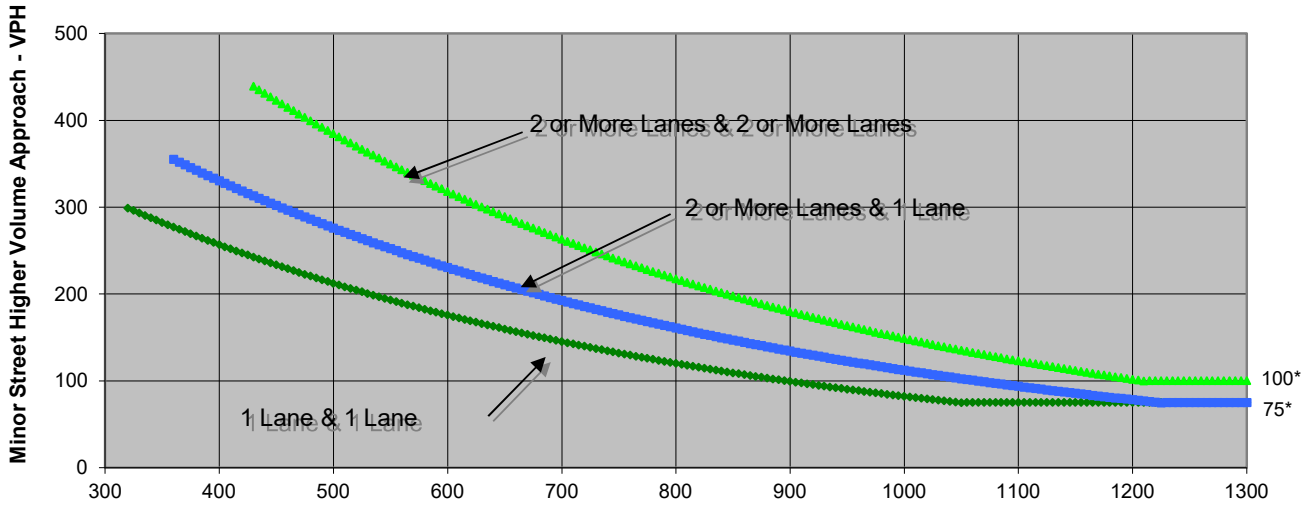
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	9	0
Through	0	0	76	182
Right	0	22	0	13
Total	0	54	85	195

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**280**	**54**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	9	0
Through	0	0	76	182
Right	0	22	0	13
Total	0	54	85	195

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11.5
Approach with Worst Case Delay	WB
Total Vehicles on Approach	195

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0.6**	**54**	**334**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

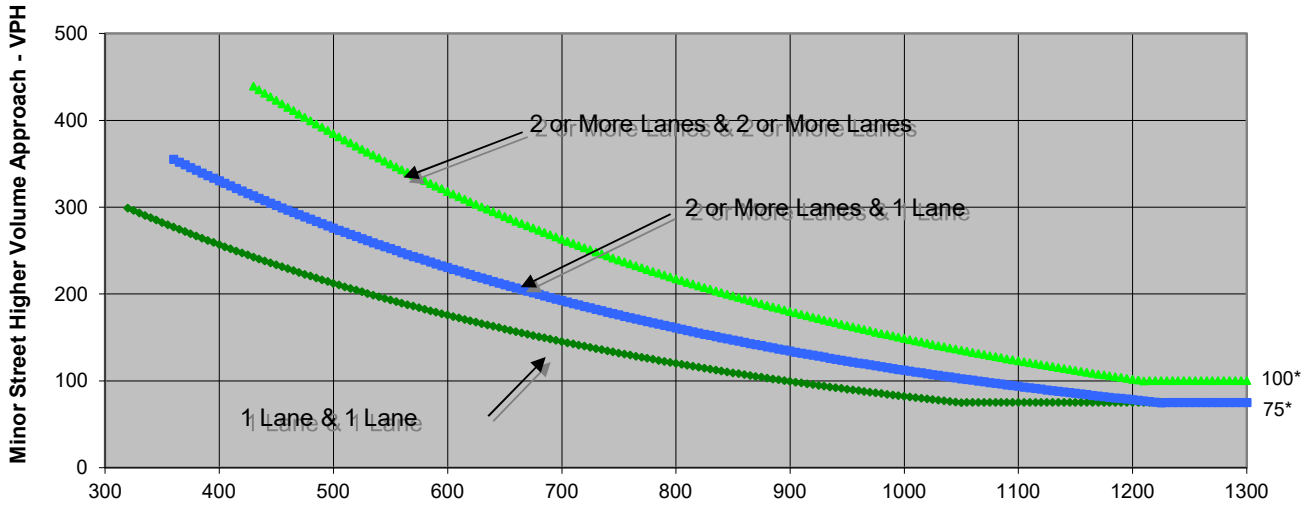
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	31	0
Through	0	0	42	27
Right	0	10	0	29
Total	0	34	73	56

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**129**	**34**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	31	0
Through	0	0	42	27
Right	0	10	0	29
Total	0	34	73	56

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	7.6
Approach with Worst Case Delay	WB
Total Vehicles on Approach	56

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0.1**	**34**	**163**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	AM

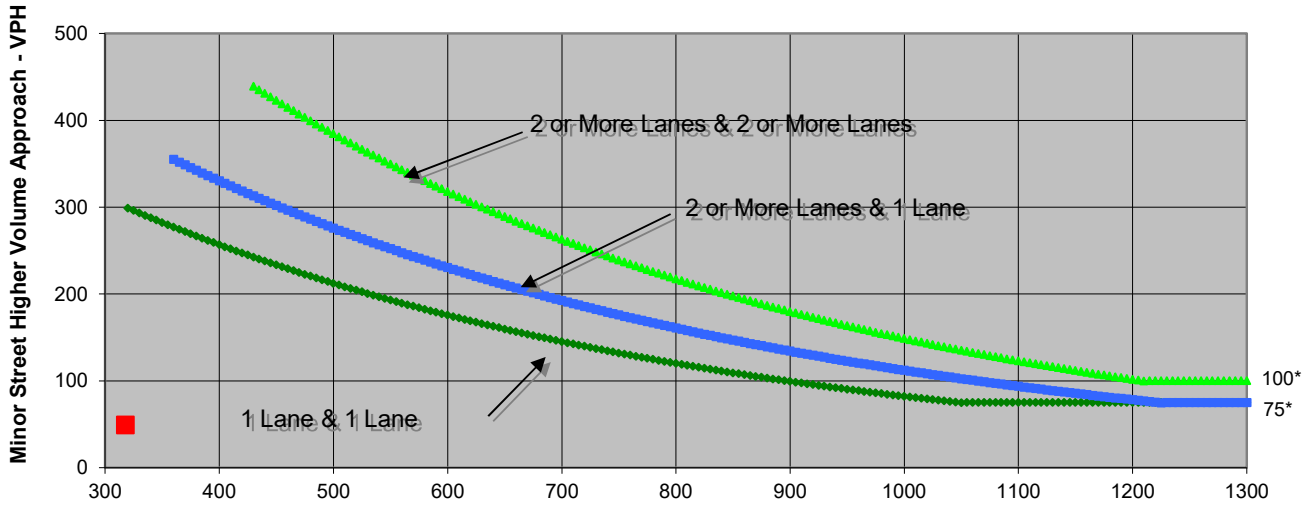
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	0	48
Through	190	113	0	0
Right	14	0	0	1
Total	204	114	0	49

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**318**	**49**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development		
Major Street	Madison St	Scenario	Existing (2022)
Minor Street	Sun City Blvd/Project Driveway	Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	0	48
Through	190	113	0	0
Right	14	0	0	1
Total	204	114	0	49

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11.8
Approach with Worst Case Delay	WB
Total Vehicles on Approach	49

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0.2**	**49**	**367**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

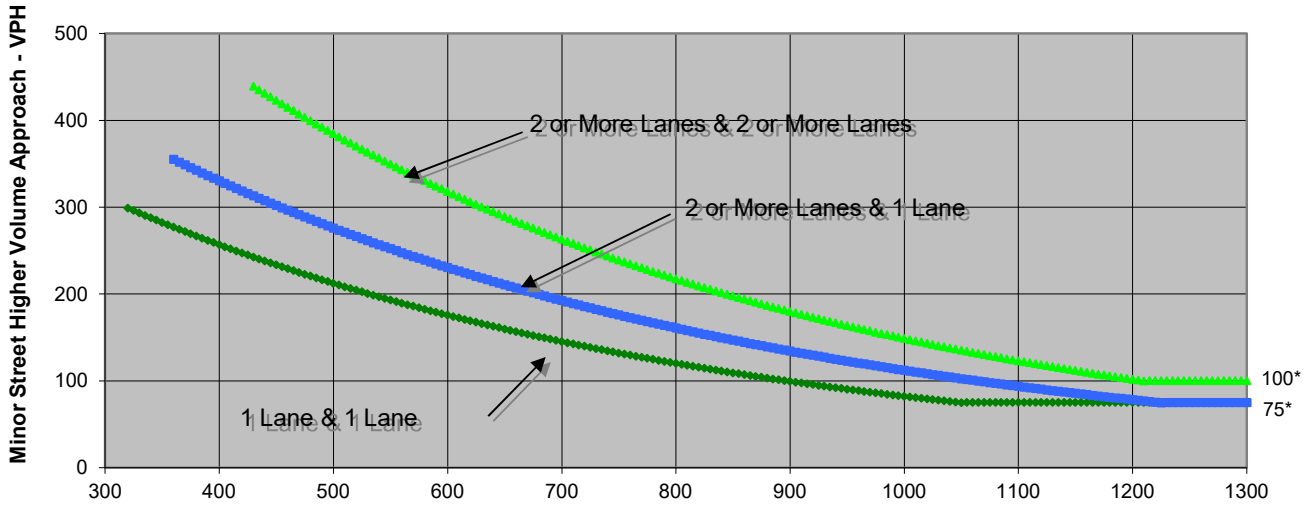
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	33
Through	69	73	0	0
Right	35	0	0	1
Total	104	76	0	34

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**180**	**34**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	33
Through	69	73	0	0
Right	35	0	0	1
Total	104	76	0	34

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9.9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	34

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0.1**	**34**	**214**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Existing (2022)
		Peak Hour	AM

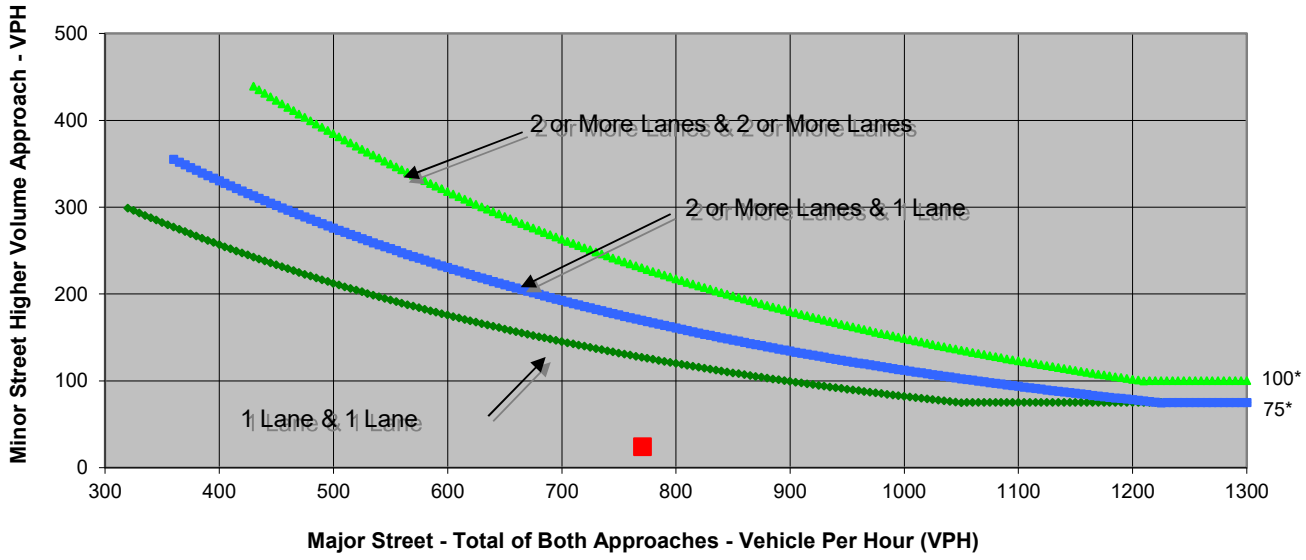
Turn Movement Volumes

	NB	SB	EB	WB
Left	4			15
Through			295	457
Right	20		4	
Total	24	0	299	472

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**771**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Existing (2022)
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	0	0	15
Through	0	0	295	457
Right	20	0	4	0
Total	24	0	299	472

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	1.4
Approach with Worst Case Delay	NB
Total Vehicles on Approach	24

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0**	**24**	**795**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

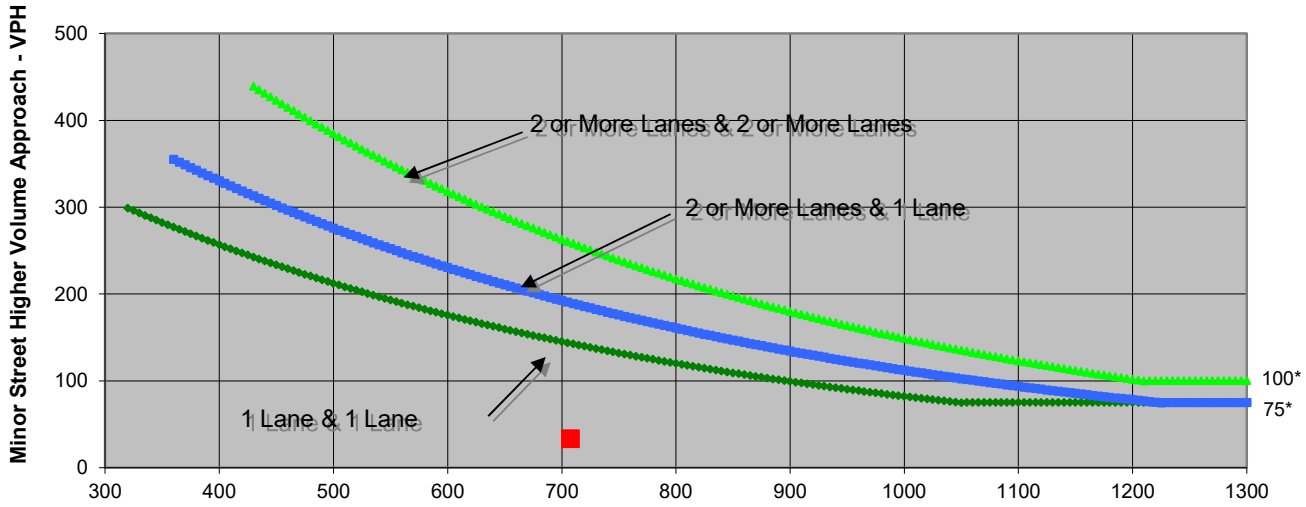
Turn Movement Volumes

	NB	SB	EB	WB
Left	12			19
Through			400	283
Right	21		6	
Total	33	0	406	302

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**708**	**33**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Existing (2022)
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	0	0	19
Through	0	0	400	283
Right	21	0	6	0
Total	33	0	406	302

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	1.8
Approach with Worst Case Delay	NB
Total Vehicles on Approach	33

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0**	**33**	**741**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Existing (2022)
		Peak Hour	AM

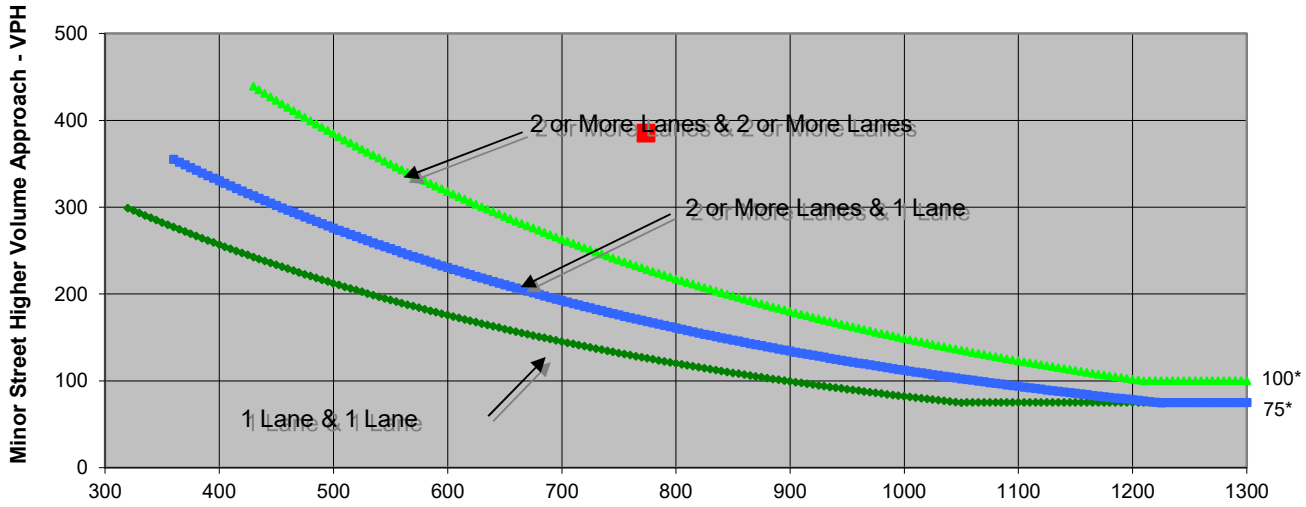
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	132	0	111
Through	291	301	0	0
Right	50	0	0	274
Total	341	433	0	385

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Monroe St	Avenue 41	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**774**	**385**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Scenario	Existing (2022)
Peak Hour	AM

Major Street	Monroe St
Minor Street	Avenue 41

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	132	0	111
Through	291	301	0	0
Right	50	0	0	274
Total	341	433	0	385

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	19.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	385

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**2.1**	**385**	**1,159**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Existing (2022)
		Peak Hour	PM

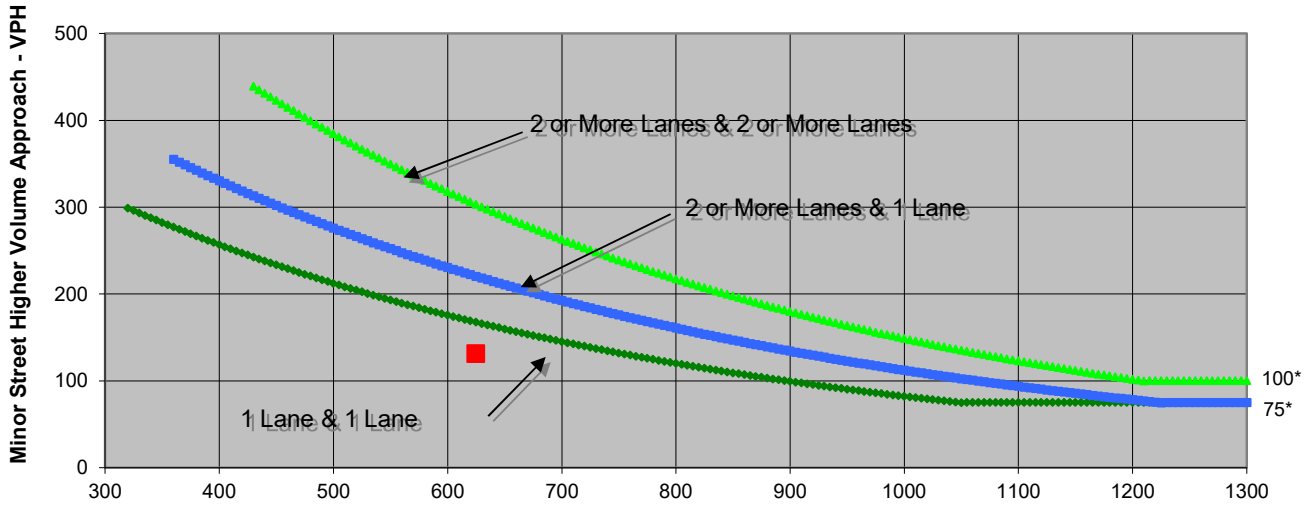
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	97	0	48
Through	157	253	0	0
Right	118	0	0	83
Total	275	350	0	131

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Monroe St	Avenue 41	
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**625**	**131**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Existing (2022)
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	97	0	48
Through	157	253	0	0
Right	118	0	0	83
Total	275	350	0	131

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12.2
Approach with Worst Case Delay	WB
Total Vehicles on Approach	131

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing (2022)	**0.4**	**131**	**756**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	AM

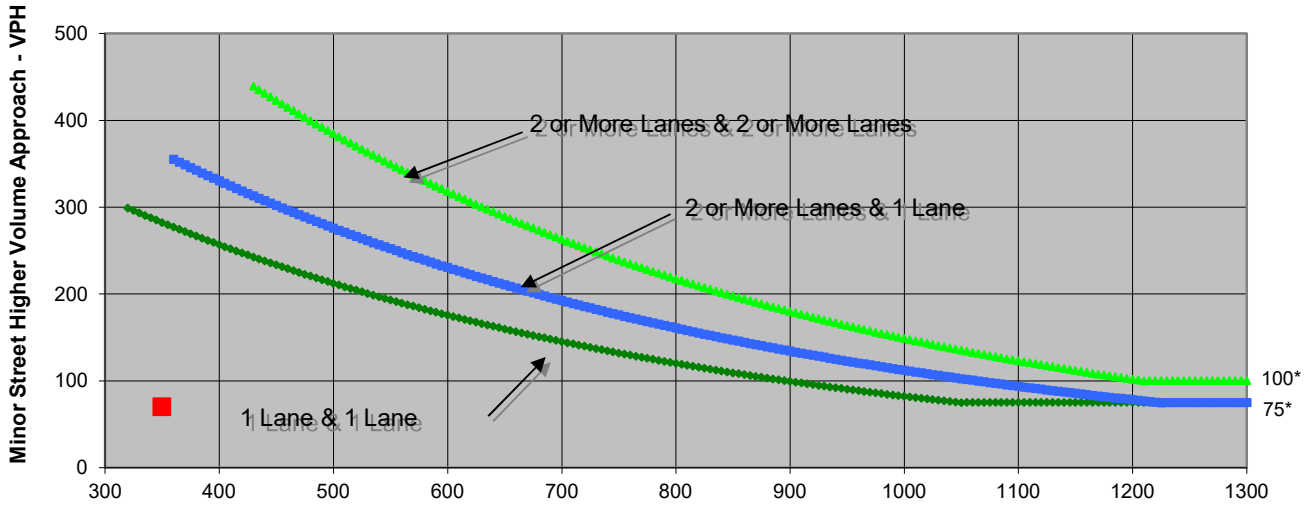
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	20	0
Through	0	0	100	210
Right	0	30	0	20
Total	0	70	120	230

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**350**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Avenue 38
Scenario	Near-Term (2030) No Project
Minor Street	Talavera Blvd/Project Driveway
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	20	0
Through	0	0	100	210
Right	0	30	0	20
Total	0	70	120	230

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13.6
Approach with Worst Case Delay	WB
Total Vehicles on Approach	230

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0.9**	**70**	**420**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

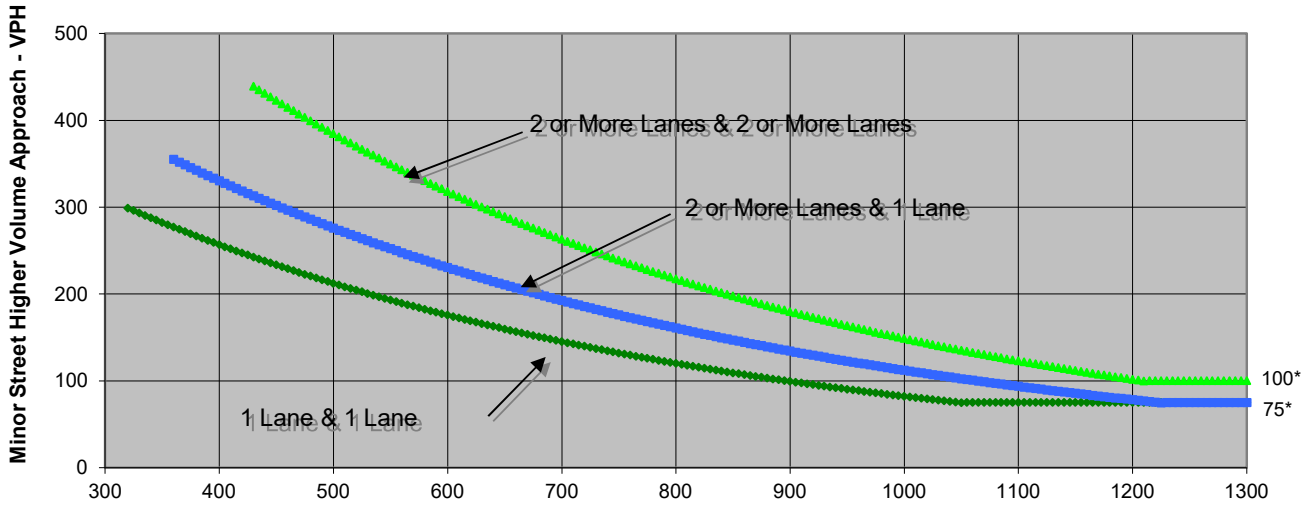
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	40	0
Through	0	0	60	50
Right	0	20	0	40
Total	0	50	100	90

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**190**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	40	0
Through	0	0	60	50
Right	0	20	0	40
Total	0	50	100	90

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	8.1
Approach with Worst Case Delay	WB
Total Vehicles on Approach	90

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0.2**	**50**	**240**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	AM

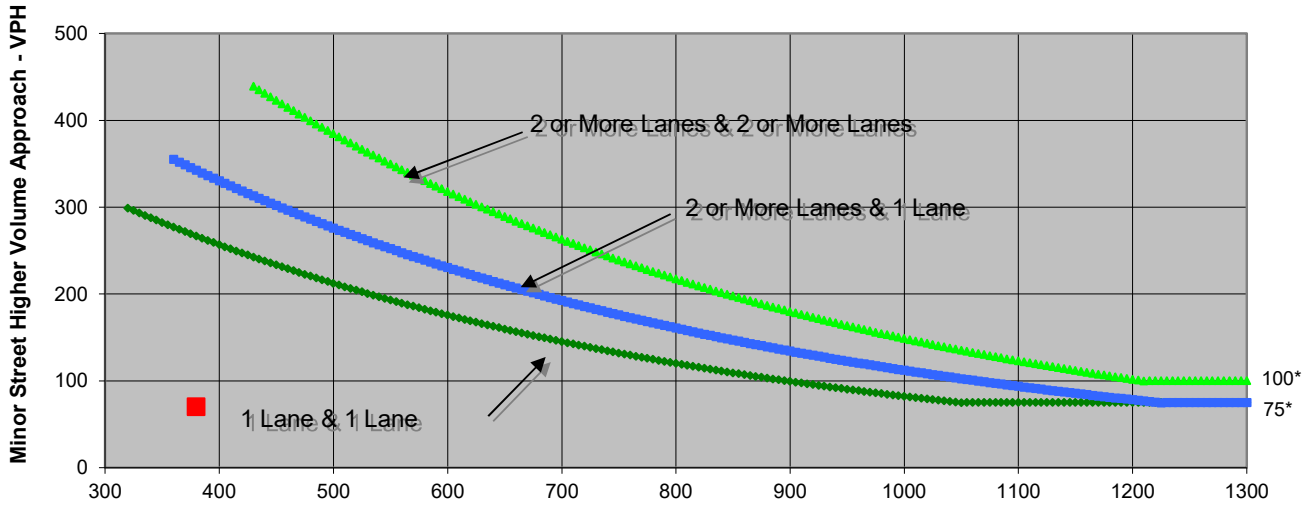
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	60
Through	220	130	0	0
Right	20	0	0	10
Total	240	140	0	70

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**380**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Madison St
Scenario	Near-Term (2030) No Project
Minor Street	Sun City Blvd/Project Driveway
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	60
Through	220	130	0	0
Right	20	0	0	10
Total	240	140	0	70

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	70

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0.2**	**70**	**450**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

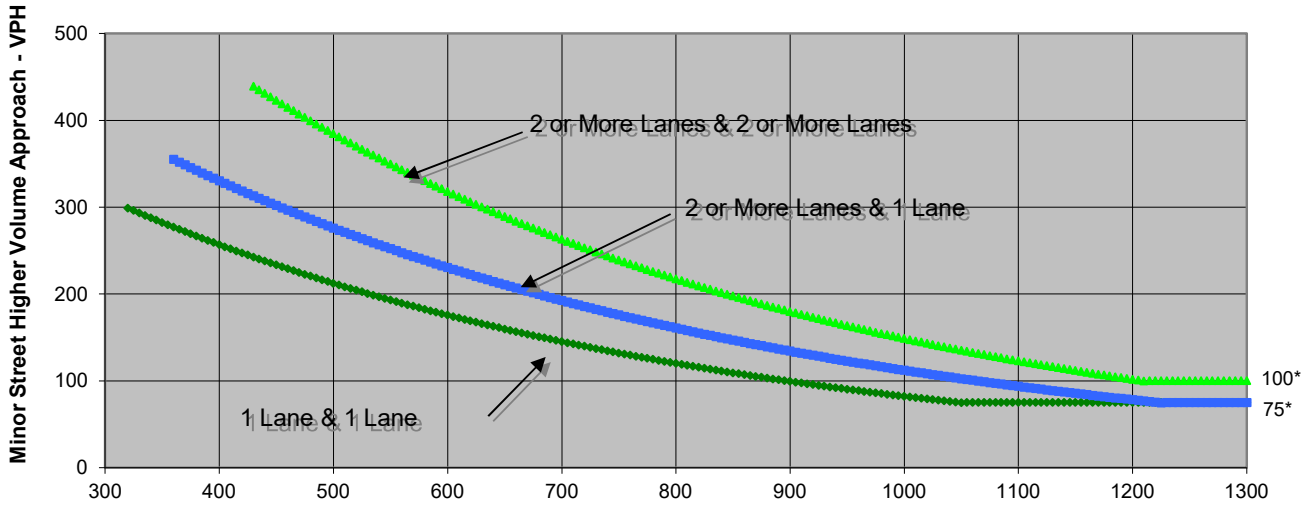
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	50
Through	80	90	0	0
Right	50	0	0	10
Total	130	100	0	60

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**230**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Madison St
Scenario	Near-Term (2030) No Project
Minor Street	Sun City Blvd/Project Driveway
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	50
Through	80	90	0	0
Right	50	0	0	10
Total	130	100	0	60

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	10.2
Approach with Worst Case Delay	WB
Total Vehicles on Approach	60

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0.2**	**60**	**290**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	AM

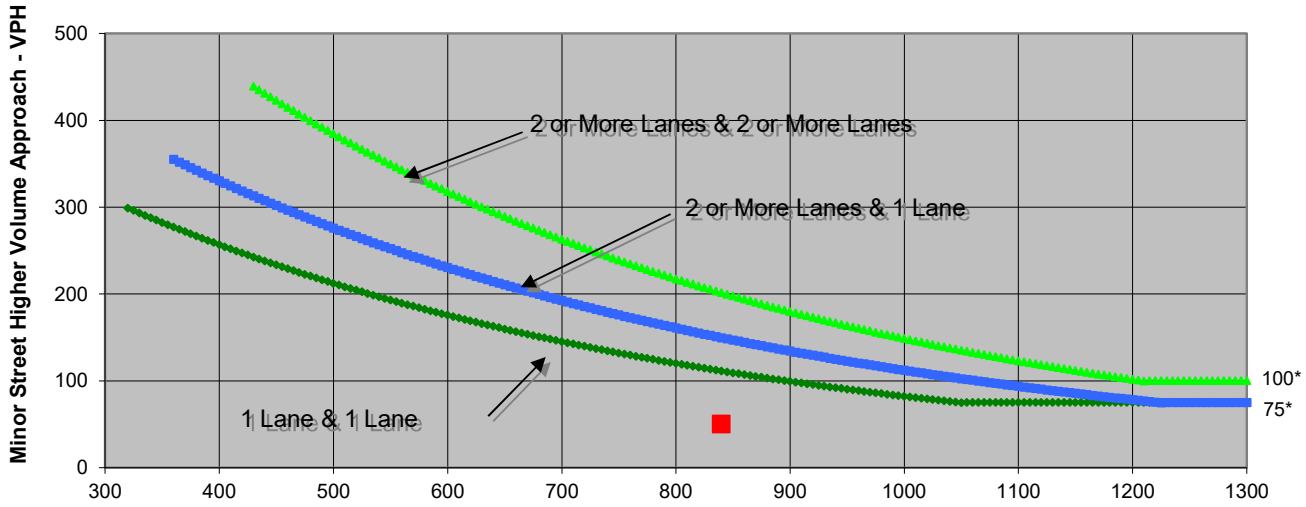
Turn Movement Volumes

	NB	SB	EB	WB
Left	20			30
Through			470	330
Right	30		10	
Total	50	0	480	360

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**840**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	30
Through	0	0	470	330
Right	30	0	10	0
Total	50	0	480	360

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	1.9
Approach with Worst Case Delay	NB
Total Vehicles on Approach	50

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0**	**50**	**890**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

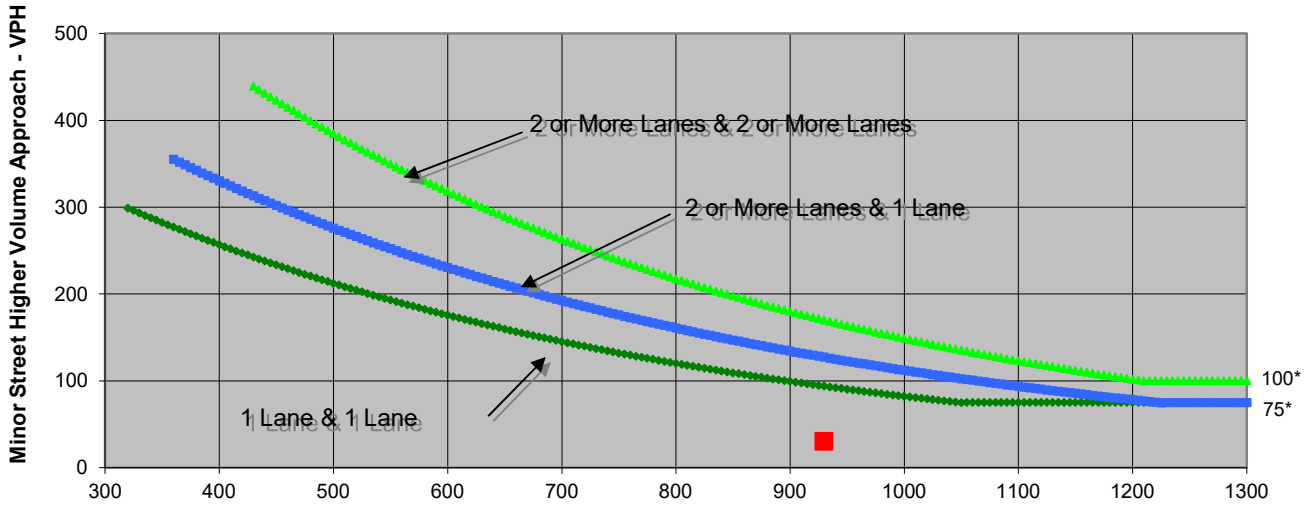
Turn Movement Volumes

	NB	SB	EB	WB
Left	10			30
Through			340	550
Right	20		10	
Total	30	0	350	580

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**930**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	30
Through	0	0	340	550
Right	20	0	10	0
Total	30	0	350	580

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	1.9
Approach with Worst Case Delay	NB
Total Vehicles on Approach	30

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0**	**30**	**960**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Near-Term (2030) No Project
		Peak Hour	PM

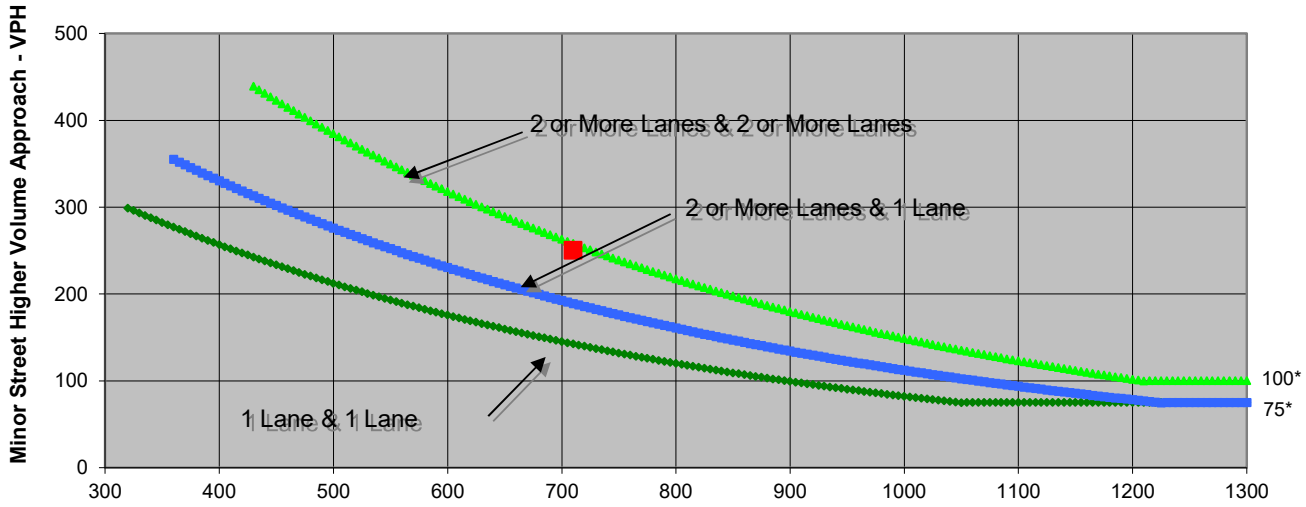
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	60
Through	180	280	0	0
Right	140	0	0	190
Total	320	390	0	250

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Monroe St	Avenue 41	
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**710**	**250**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Monroe St
Scenario	Near-Term (2030) No Project
Minor Street	Avenue 41
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	60
Through	180	280	0	0
Right	140	0	0	190
Total	320	390	0	250

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13
Approach with Worst Case Delay	WB
Total Vehicles on Approach	250

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) No Project	**0.9**	**250**	**960**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) With Project
		Peak Hour	AM

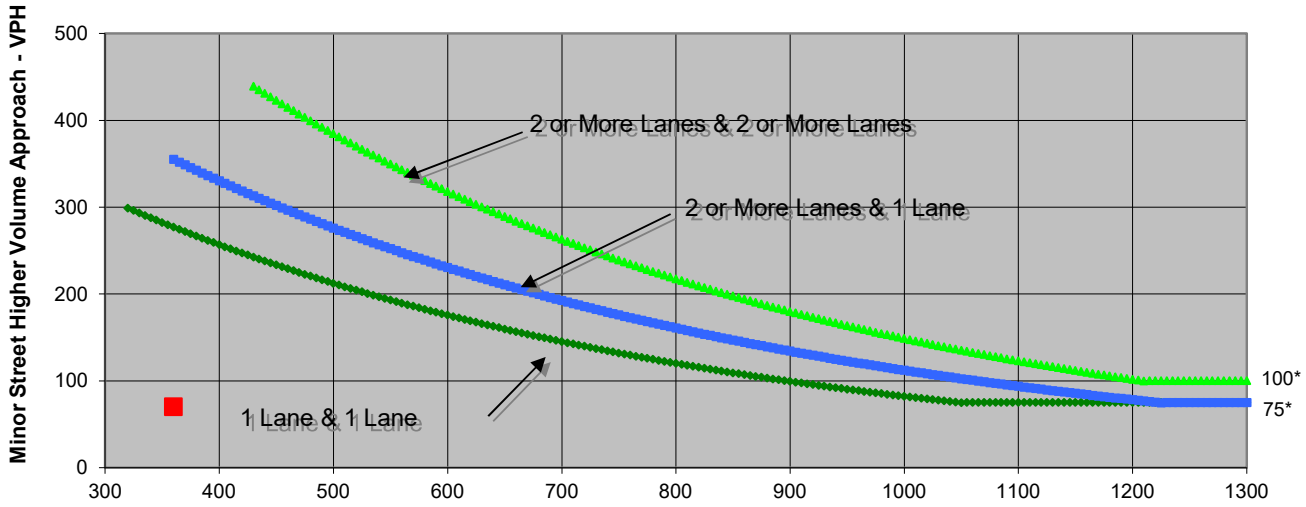
Turn Movement Volumes

	NB	SB	EB	WB
Left	13	40	20	4
Through	0	0	100	210
Right	7	30	6	20
Total	20	70	126	234

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**360**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) With Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	13	40	20	4
Through	0	0	100	210
Right	7	30	6	20
Total	20	70	126	234

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	14.4
Approach with Worst Case Delay	WB
Total Vehicles on Approach	234

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) With Project	**0.9**	**70**	**450**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

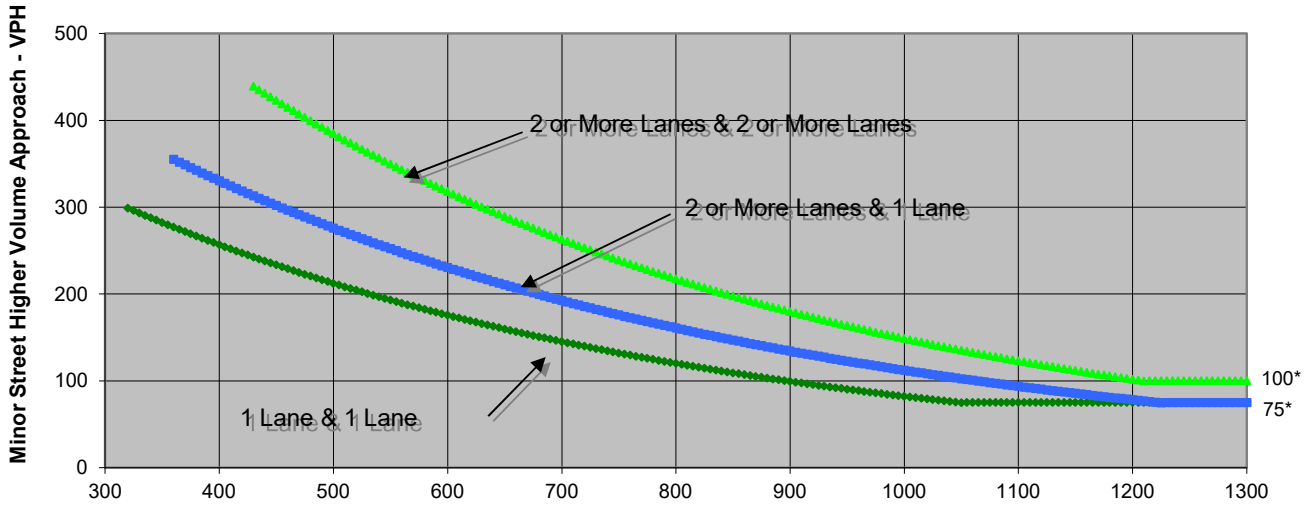
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	30	40	7
Through	0	0	60	50
Right	5	20	15	40
Total	14	50	115	97

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**212**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	9	30	40	7
Through	0	0	60	50
Right	5	20	15	40
Total	14	50	115	97

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	8.2
Approach with Worst Case Delay	WB
Total Vehicles on Approach	97

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**0.2**	**50**	**276**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	AM

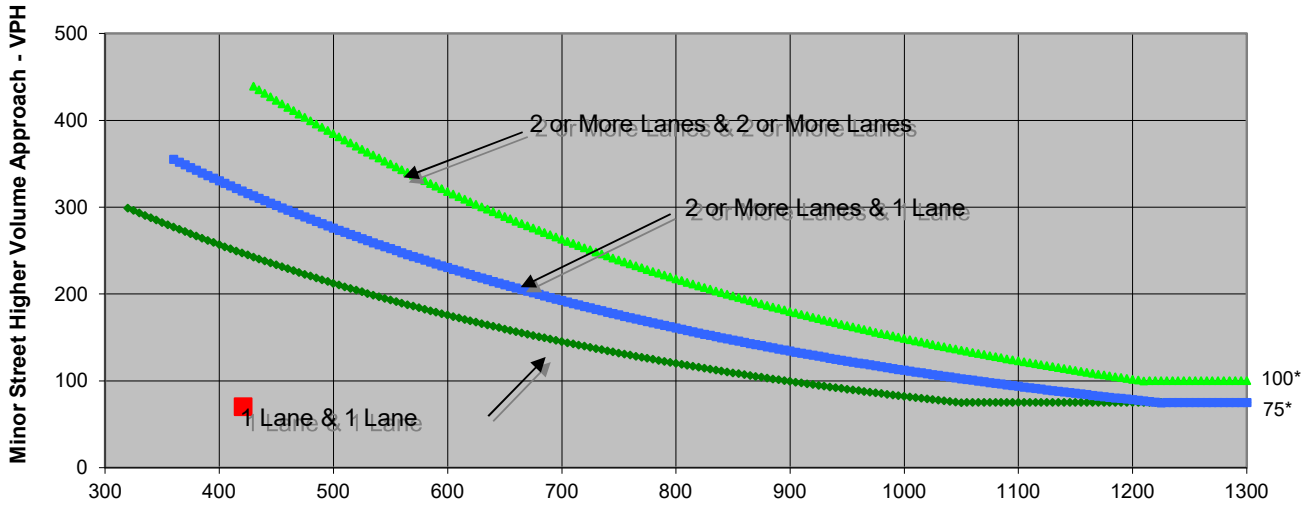
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	10	0	60
Through	224	137	0	0
Right	20	0	61	10
Total	274	147	61	70

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**421**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	10	0	60
Through	224	137	0	0
Right	20	0	61	10
Total	274	147	61	70

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	16.9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	70

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**0.3**	**70**	**552**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

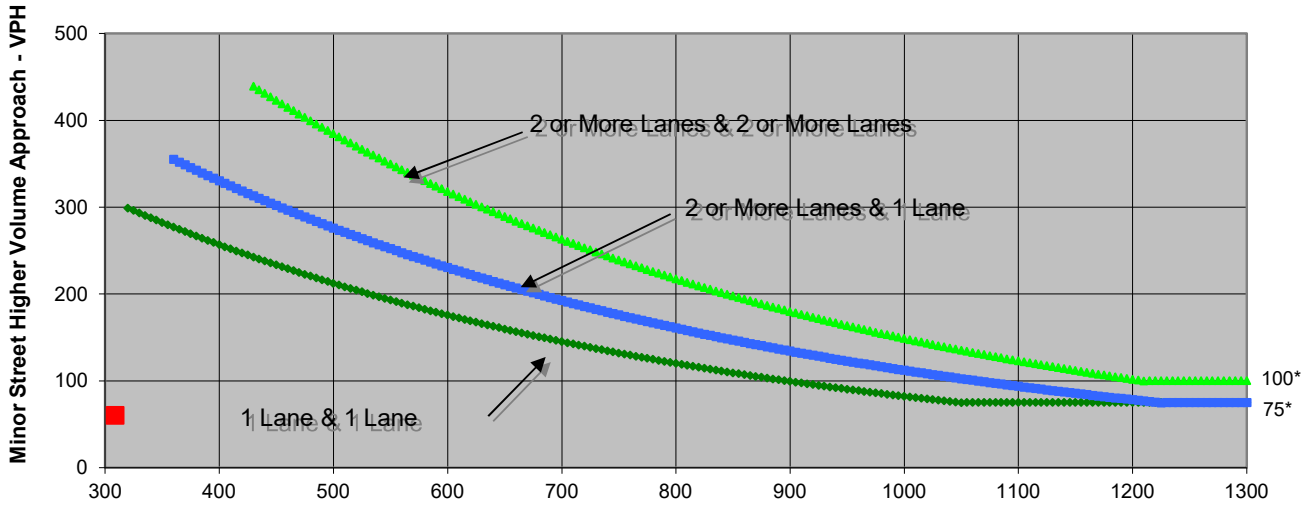
Turn Movement Volumes

	NB	SB	EB	WB
Left	67	10	0	50
Through	87	95	0	0
Right	50	0	43	10
Total	204	105	43	60

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**309**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	67	10	0	50
Through	87	95	0	0
Right	50	0	43	10
Total	204	105	43	60

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13.1
Approach with Worst Case Delay	WB
Total Vehicles on Approach	60

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**0.2**	**60**	**412**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	AM

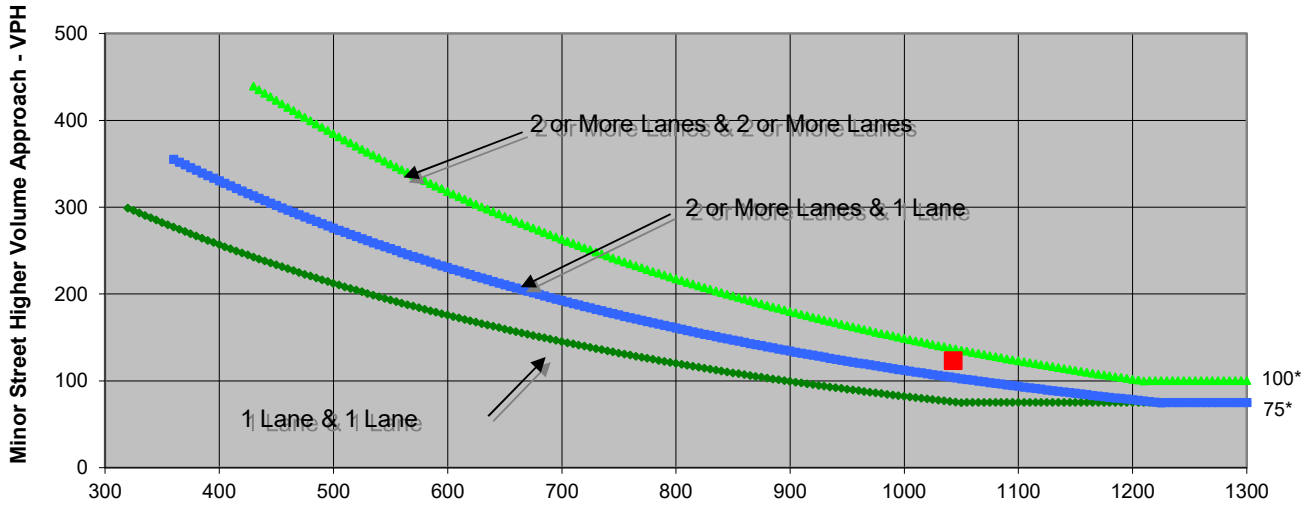
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	38	42	30
Through			357	586
Right	20	85	10	18
Total	30	123	409	634

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,043**	**123**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	38	42	30
Through	0	0	357	586
Right	20	85	10	18
Total	30	123	409	634

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11.4
Approach with Worst Case Delay	SB
Total Vehicles on Approach	123

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**0.4**	**123**	**1,196**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

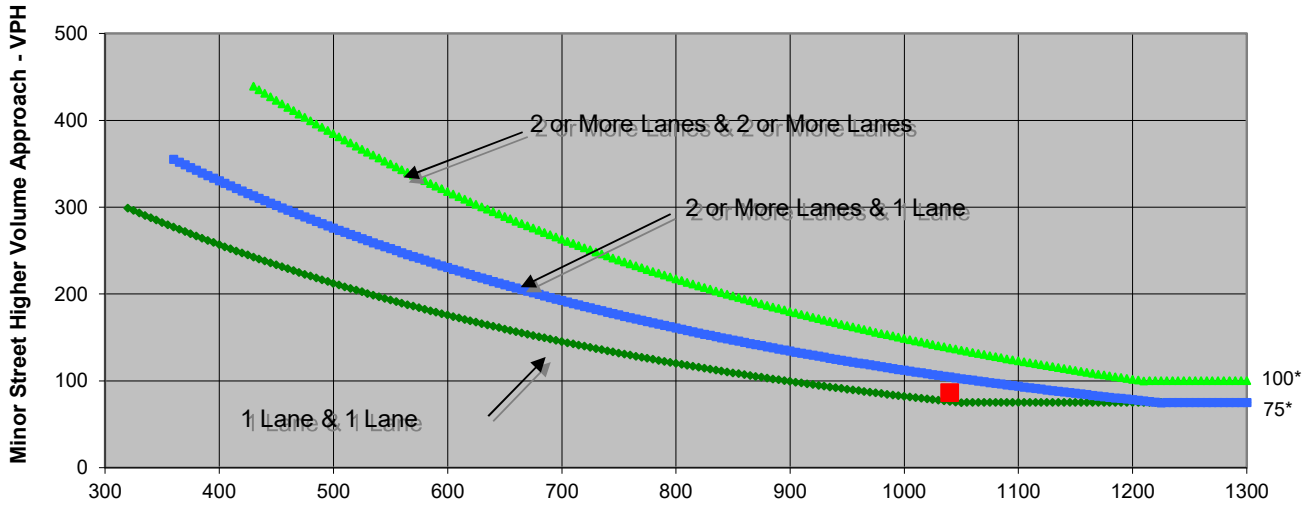
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	26	94	30
Through			509	356
Right	30	60	10	41
Total	50	86	613	427

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,040**	**86**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	26	94	30
Through	0	0	509	356
Right	30	60	10	41
Total	50	86	613	427

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	7.9
Approach with Worst Case Delay	SB
Total Vehicles on Approach	86

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**0.2**	**86**	**1,176**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Near-Term (2030) Plus Project
		Peak Hour	PM

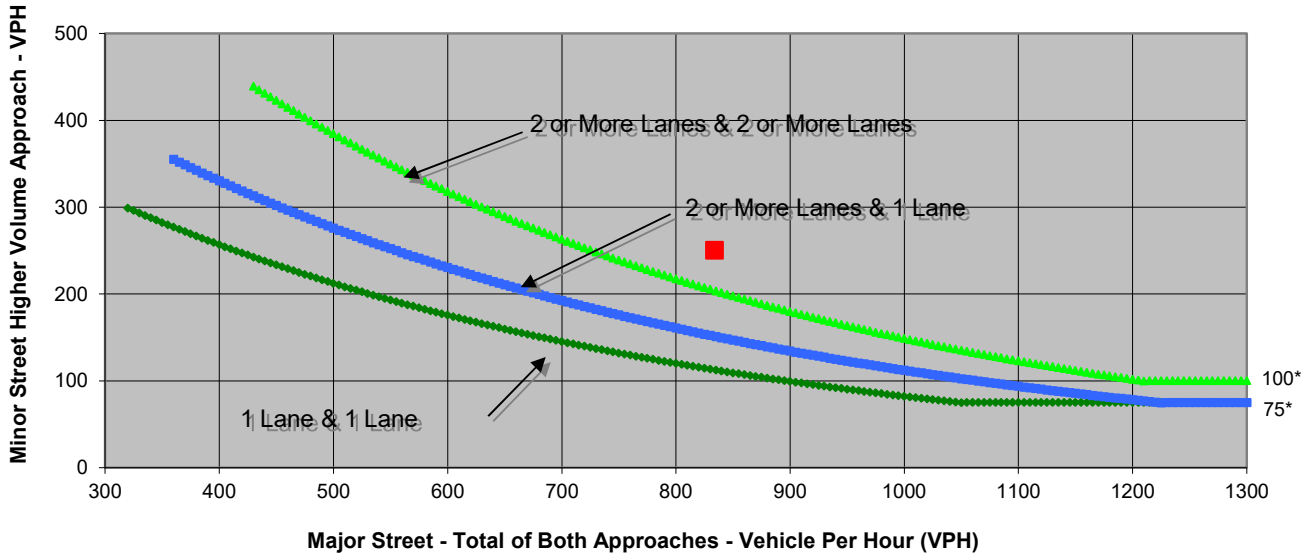
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	60
Through	256	328	0	0
Right	140	0	0	190
Total	396	438	0	250

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Monroe St	Avenue 41	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**834**	**250**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Project	Pulte Homes Development
Scenario	Near-Term (2030) Plus Project
Peak Hour	PM

Major Street	Monroe St
Minor Street	Avenue 41

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	60
Through	256	328	0	0
Right	140	0	0	190
Total	396	438	0	250

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	14.4
Approach with Worst Case Delay	WB
Total Vehicles on Approach	250

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Near-Term (2030) Plus Project	**1**	**250**	**1,084**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	AM

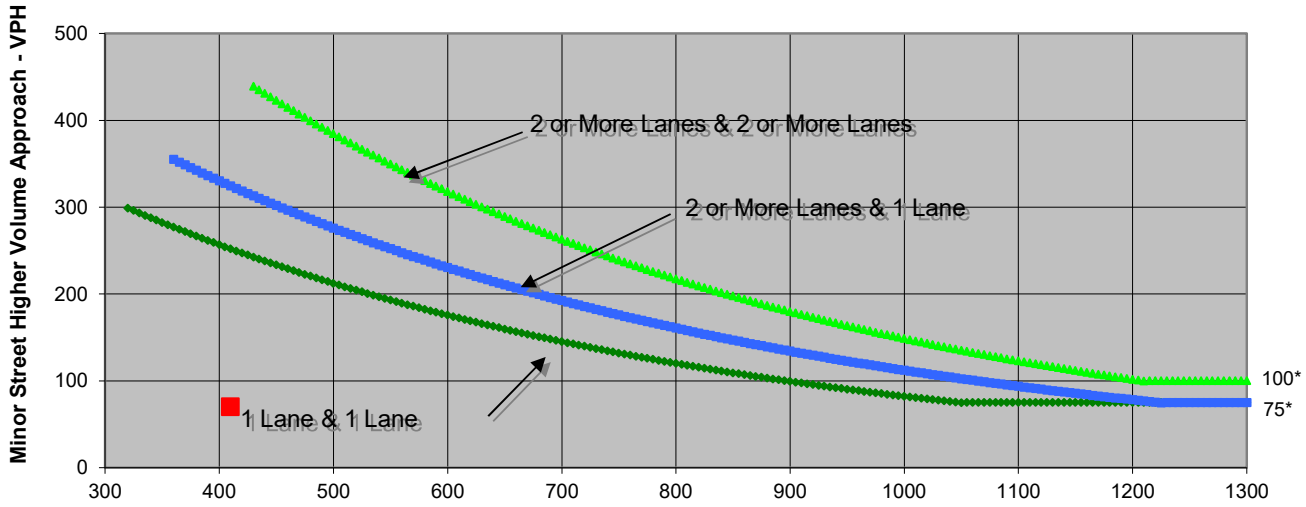
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	20	0
Through	0	0	130	240
Right	0	30	0	20
Total	0	70	150	260

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**410**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	20	0
Through	0	0	130	240
Right	0	30	0	20
Total	0	70	150	260

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	8.6
Approach with Worst Case Delay	WB
Total Vehicles on Approach	260

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.6**	**70**	**480**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

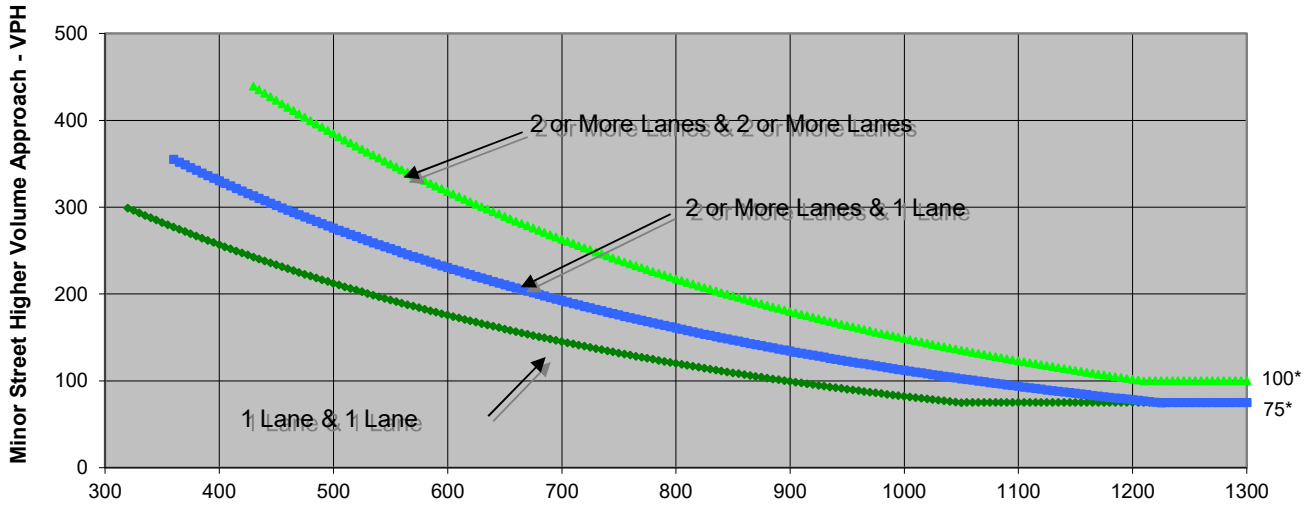
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	40	0
Through	0	0	80	80
Right	0	20	0	40
Total	0	50	120	120

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**240**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	40	0
Through	0	0	80	80
Right	0	20	0	40
Total	0	50	120	120

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	7.6
Approach with Worst Case Delay	WB
Total Vehicles on Approach	120

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.3**	**50**	**290**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	AM

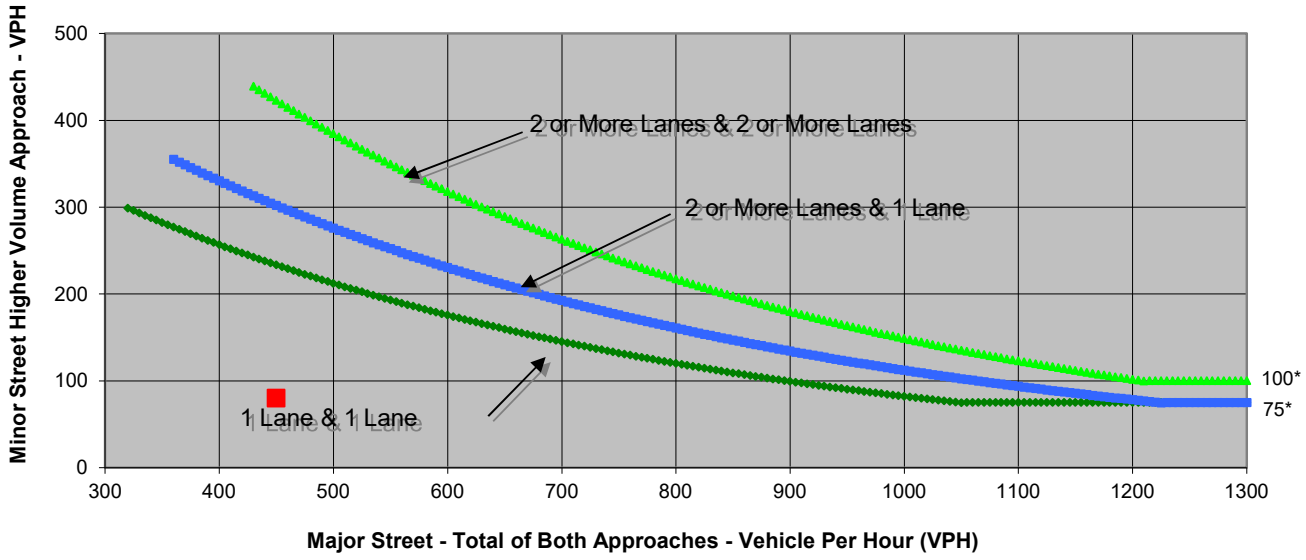
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	70
Through	250	160	0	0
Right	30	0	0	10
Total	280	170	0	80

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**450**	**80**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Madison St
Scenario	Cumulative (2045) No Project
Minor Street	Sun City Blvd/Project Driveway
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	70
Through	250	160	0	0
Right	30	0	0	10
Total	280	170	0	80

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11.5
Approach with Worst Case Delay	WB
Total Vehicles on Approach	80

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.3**	**80**	**530**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

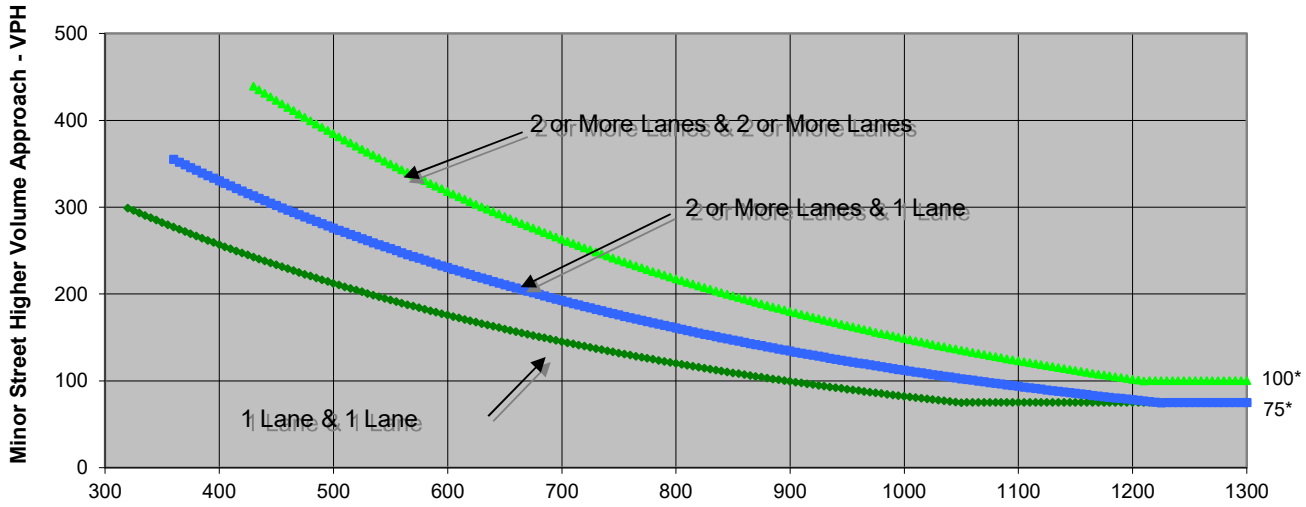
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	60
Through	90	110	0	0
Right	60	0	0	10
Total	150	120	0	70

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**270**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Project	Pulte Homes Development		
Major Street	Madison St	Scenario	Cumulative (2045) No Project
Minor Street	Sun City Blvd/Project Driveway	Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	60
Through	90	110	0	0
Right	60	0	0	10
Total	150	120	0	70

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9.9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	70

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.2**	**70**	**340**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	AM

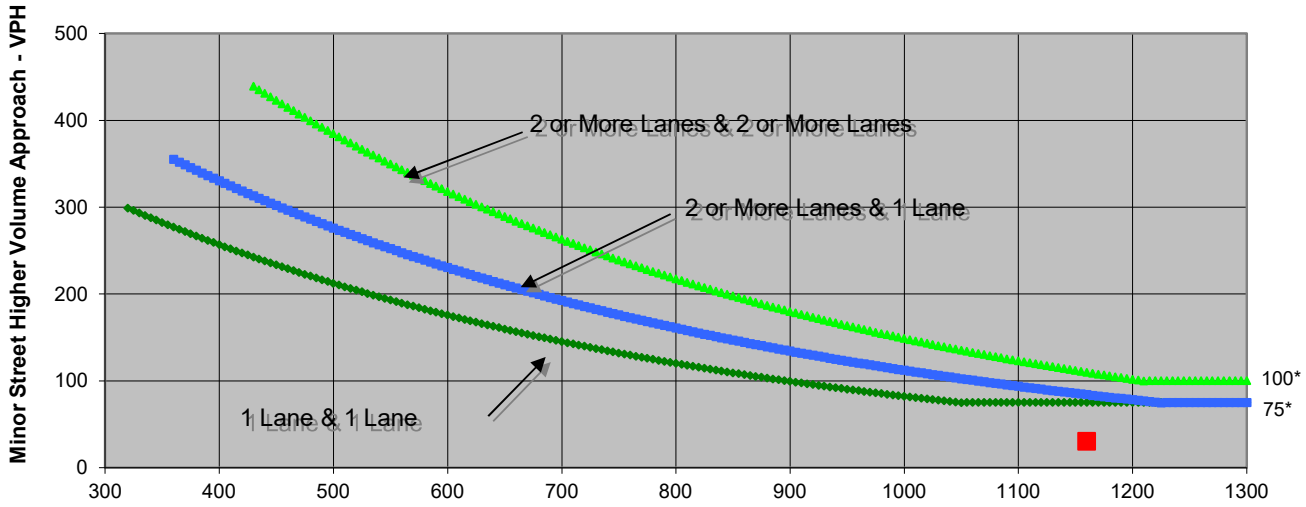
Turn Movement Volumes

	NB	SB	EB	WB
Left	10			30
Through			410	710
Right	20		10	
Total	30	0	420	740

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,160**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	30
Through	0	0	410	710
Right	20	0	10	0
Total	30	0	420	740

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9.4
Approach with Worst Case Delay	NB
Total Vehicles on Approach	30

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.1**	**30**	**1,190**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

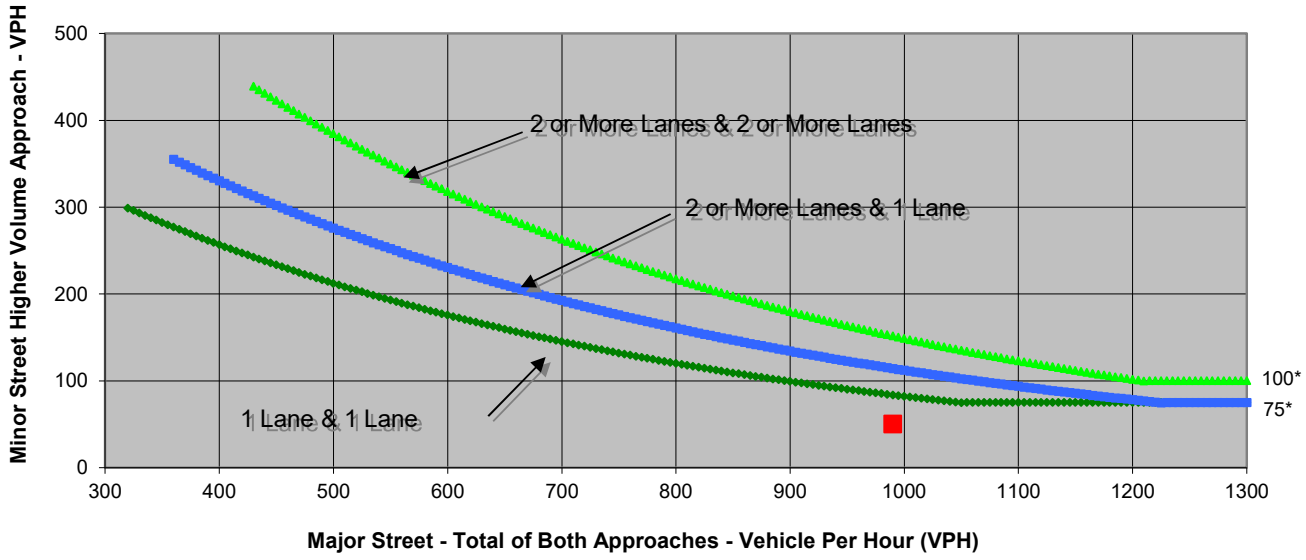
Turn Movement Volumes

	NB	SB	EB	WB
Left	20			30
Through			570	380
Right	30		10	
Total	50	0	580	410

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 40	Camino De Gregorio/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**990**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 40	Project	Pulte Homes Development
Minor Street	Camino De Gregorio/Project Driveway	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	30
Through	0	0	570	380
Right	30	0	10	0
Total	50	0	580	410

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9.6
Approach with Worst Case Delay	NB
Total Vehicles on Approach	50

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**0.1**	**50**	**1,040**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Monroe St	Project	Pulte Homes Development
Minor Street	Avenue 41	Scenario	Cumulative (2045) No Project
		Peak Hour	PM

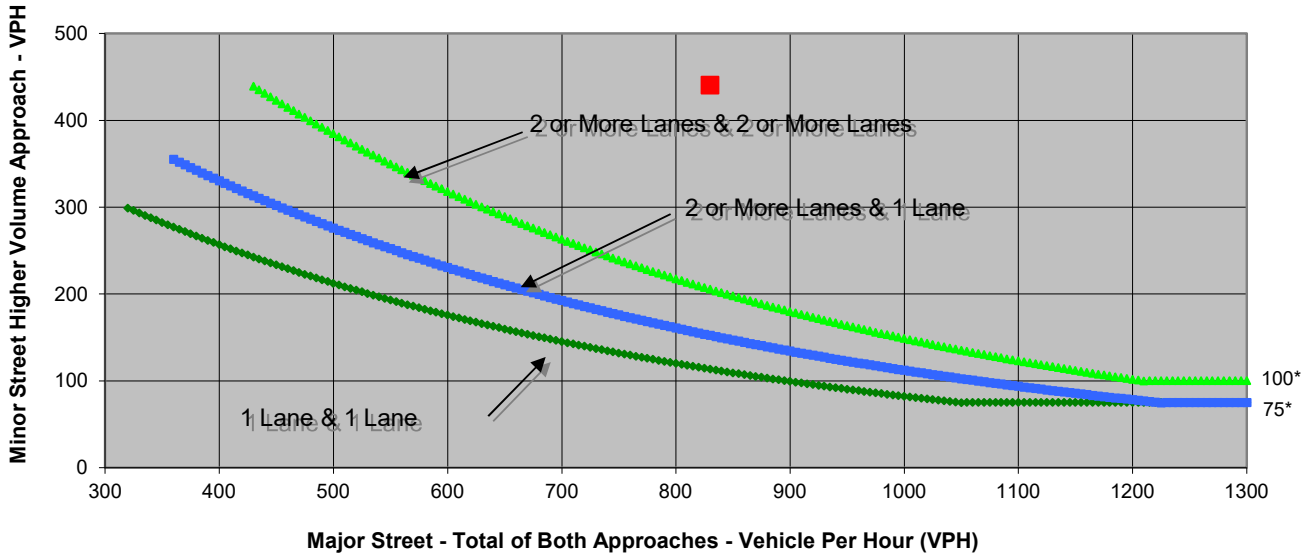
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	130	0	70
Through	210	330	0	0
Right	160	0	0	370
Total	370	460	0	440

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Monroe St	Avenue 41	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**830**	**440**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Scenario	Cumulative (2045) No Project
Peak Hour	PM

Major Street	Monroe St
Minor Street	Avenue 41

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	130	0	70
Through	210	330	0	0
Right	160	0	0	370
Total	370	460	0	440

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13.9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	440

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) No Project	**1.7**	**440**	**1,270**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	AM

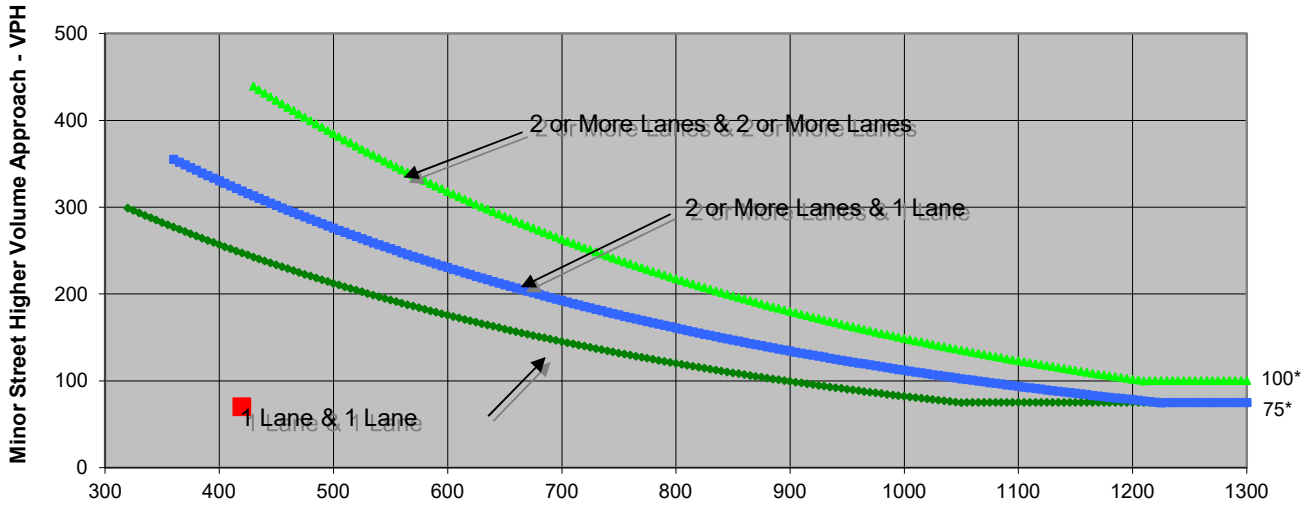
Turn Movement Volumes

	NB	SB	EB	WB
Left	13	40	20	4
Through	0	0	130	240
Right	7	30	6	20
Total	20	70	156	264

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**420**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Pulte Homes Development
Major Street	Avenue 38
Scenario	Cumulative (2045) Plus Project
Minor Street	Talavera Blvd/Project Driveway
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	13	40	20	4
Through	0	0	130	240
Right	7	30	6	20
Total	20	70	156	264

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	8.8
Approach with Worst Case Delay	WB
Total Vehicles on Approach	264

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) Plus Project	**0.6**	**70**	**510**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	PM

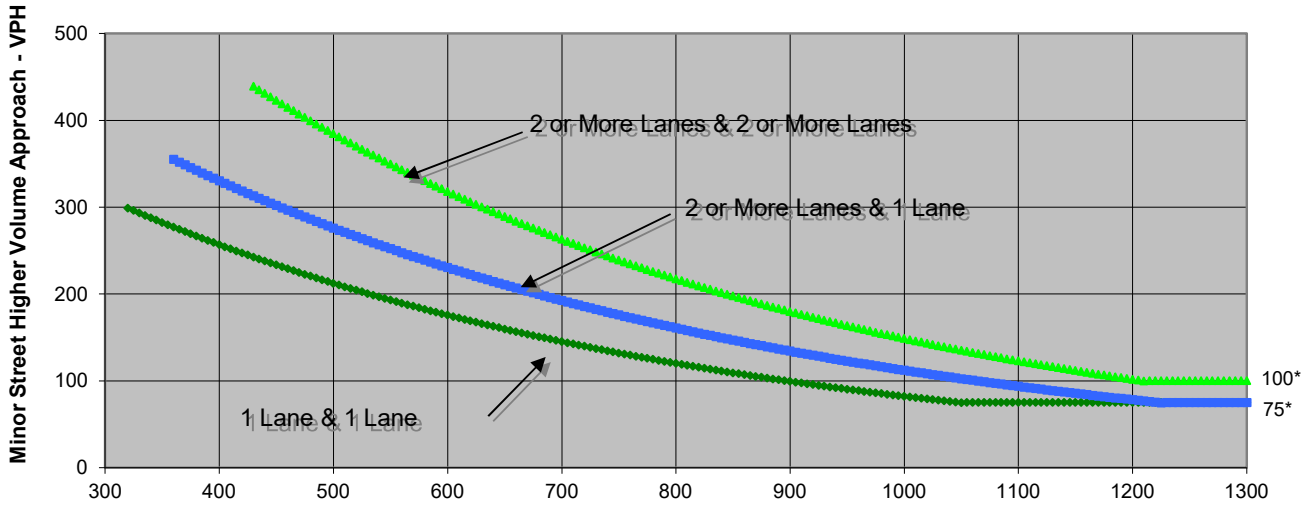
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	30	40	7
Through	0	0	80	80
Right	5	20	15	40
Total	14	50	135	127

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Avenue 38	Talavera Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**262**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Avenue 38	Project	Pulte Homes Development
Minor Street	Talavera Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	9	30	40	7
Through	0	0	80	80
Right	5	20	15	40
Total	14	50	135	127

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	7.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	127

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) Plus Project	**0.3**	**50**	**326**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	AM

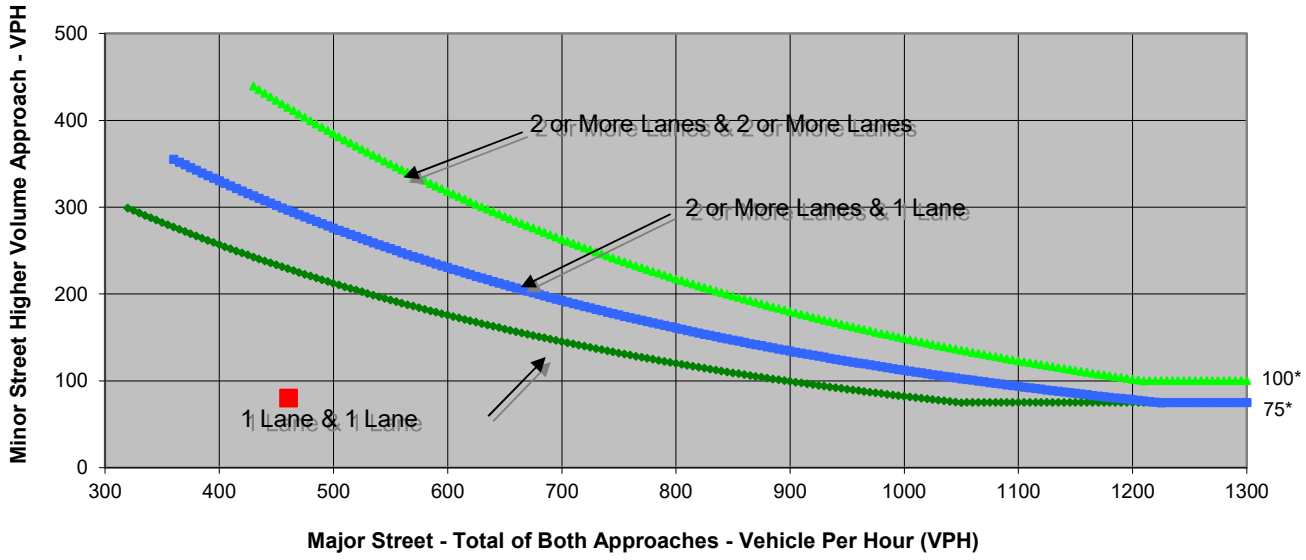
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	70
Through	254	167	0	0
Right	30	0	61	10
Total	284	177	61	80

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**461**	**80**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	70
Through	254	167	0	0
Right	30	0	61	10
Total	284	177	61	80

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13.6
Approach with Worst Case Delay	WB
Total Vehicles on Approach	80

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) Plus Project	**0.3**	**80**	**602**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	PM

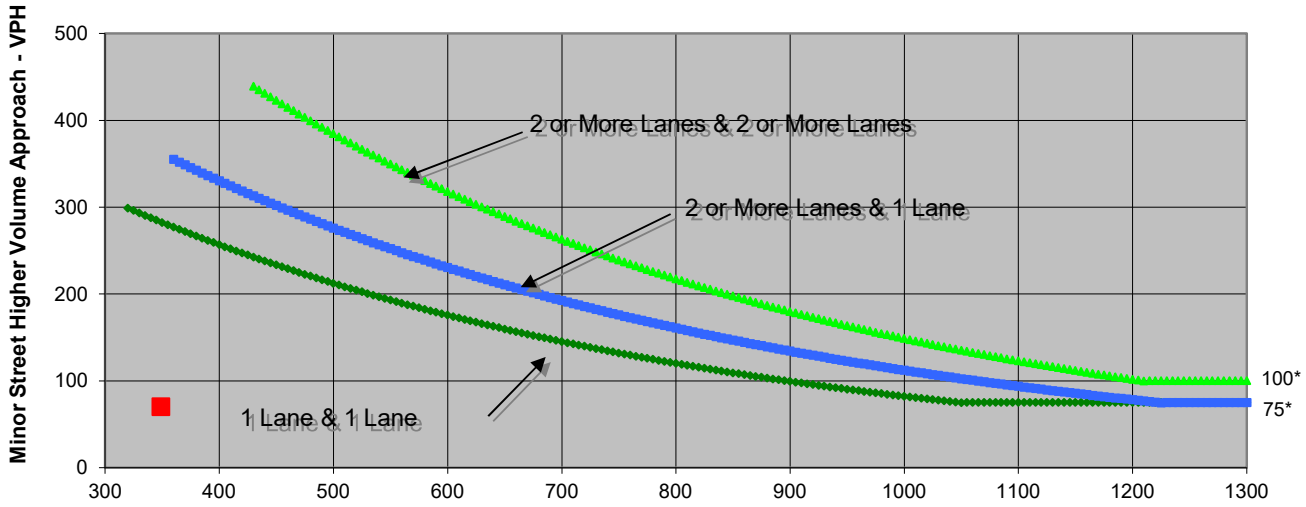
Turn Movement Volumes

	NB	SB	EB	WB
Left	67	10	0	60
Through	97	115	0	0
Right	60	0	43	10
Total	224	125	43	70

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Madison St	Sun City Blvd/Project Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**349**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Major Street	Madison St	Project	Pulte Homes Development
Minor Street	Sun City Blvd/Project Driveway	Scenario	Cumulative (2045) Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	67	10	0	60
Through	97	115	0	0
Right	60	0	43	10
Total	224	125	43	70

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12
Approach with Worst Case Delay	WB
Total Vehicles on Approach	70

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative (2045) Plus Project	**0.2**	**70**	**462**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Not Met**	**Not Met**	**Not Met**
Warrant Met	**NO**		

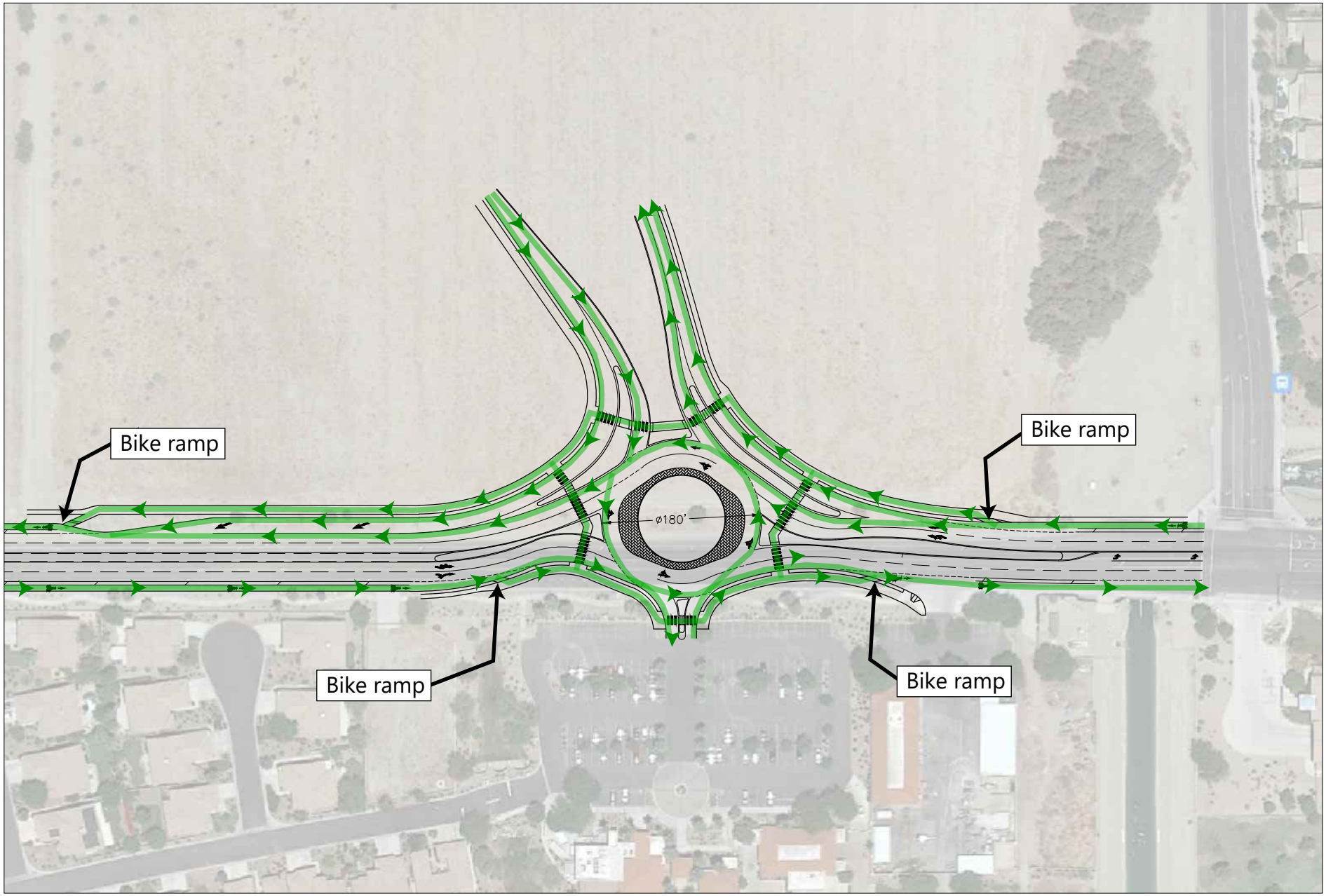
Appendix D:
Avenue 40/Project Driveway Roundabout Conceptual Design

Appendix D.1

Concept Map

Appendix D.2

Concept Map: Vehicular Circulation



Appendix D.3

Concept Map: Bicycle and Golf Cart Circulation

Appendix D.4

Concept Map: Pedestrian Circulation

Appendix E:
Intersection Control Evaluation

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	89	88.7%	321.2	30.6	F
	Through	744	662	89.0%	339.0	27.0	F
	Right Turn	137	128	93.1%	105.2	8.5	F
	Subtotal	981	879	89.6%	299.3	26.9	F
SB	Left Turn	220	224	101.9%	202.6	54.6	F
	Through	811	840	103.6%	204.2	59.5	F
	Right Turn	92	93	100.5%	202.6	57.5	F
	Subtotal	1,123	1,157	103.0%	203.8	58.1	F
EB	Left Turn	32	36	113.8%	42.8	11.2	D
	Through	52	56	108.5%	34.1	6.8	C
	Right Turn	60	58	96.2%	13.6	4.7	B
	Subtotal	144	151	104.5%	28.9	5.8	C
WB	Left Turn	188	188	99.8%	41.6	6.5	D
	Through	173	179	103.6%	37.1	6.0	D
	Right Turn	320	328	102.5%	18.0	5.1	B
	Subtotal	681	695	102.0%	29.5	3.5	C
Total		2,929	2,881	98.4%	184.5	23.8	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	111.0%	3.2	1.5	A
	Through						
	Right Turn	20	22	108.5%	2.4	2.0	A
	Subtotal	30	33	109.3%	2.5	1.3	A
SB	Left Turn	38	39	102.1%	13.3	2.5	B
	Through						
	Right Turn	85	87	102.8%	10.4	0.9	B
	Subtotal	123	126	102.6%	11.4	1.2	B
EB	Left Turn	42	41	96.7%	11.2	4.1	B
	Through	357	360	101.0%	1.2	0.2	A
	Right Turn	10	10	101.0%	1.1	0.7	A
	Subtotal	409	411	100.5%	2.1	0.5	A
WB	Left Turn	30	29	96.0%	2.0	0.8	A
	Through	586	598	102.1%	2.0	0.4	A
	Right Turn	18	18	99.4%	1.1	0.2	A
	Subtotal	634	645	101.7%	2.0	0.4	A
Total		1,196	1,215	101.6%	3.1	0.5	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (TWSC)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	142	136	95.7%	31.3	19.6	C
	Through						
	Right Turn	106	107	101.2%	20.9	20.9	C
	Subtotal	248	243	98.1%	26.7	20.1	C
EB	Left Turn	47	44	94.0%	15.9	6.2	B
	Through	368	376	102.2%	8.1	1.7	A
	Right Turn						
	Subtotal	415	420	101.3%	8.9	1.7	A
WB	Left Turn						
	Through	528	536	101.5%	9.1	1.5	A
	Right Turn	217	223	102.5%	4.7	0.9	A
	Subtotal	745	758	101.8%	7.8	1.1	A
Total		1,408	1,422	101.0%	11.3	3.8	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	5	1	3	6	99	27	68	160	NO
	Through	1,200	1,169	71	1,080	1,280	1,646	8	1,633	1,654	MAX
	Right Turn	1,200	3	1	2	4	103	13	85	123	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	18	2	15	23	208	42	149	270	NO
	Through	2,500	810	198	548	1,084	2,092	265	1,576	2,594	NO
	Right Turn	2,500	809	198	547	1,084	2,092	265	1,576	2,594	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	6	2	4	9	78	11	64	92	NO
	Through	5,000	12	2	9	17	143	44	96	249	NO
	Right Turn	5,000	9	2	6	14	143	44	96	249	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	40	5	32	49	286	94	212	544	MAX
	Through	4,500	32	4	26	40	252	106	194	542	NO
	Right Turn	175	31	7	21	45	240	51	180	357	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	34	14	20	57	NO
	Through										
	Right Turn	100	0	0	0	0	33	14	19	56	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	2	0	1	2	48	12	24	64	NO
	Through										
	Right Turn	100	3	0	3	4	74	22	44	118	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	2	53	17	26	72	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	32	15	0	54	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	12	2	10	16	177	130	92	540	MAX
	Through										
	Right Turn	150	2	1	1	4	99	34	46	144	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	0	1	45	9	25	59	NO
	Through	500	7	1	5	8	168	30	137	221	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	13	3	8	17	257	42	151	300	NO
	Right Turn	2,500	4	1	3	5	129	52	79	259	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	90	84	93.3%	324.3	35.1	F
	Through	683	624	91.4%	346.5	30.5	F
	Right Turn	247	250	101.3%	106.4	11.4	F
	Subtotal	1,020	958	93.9%	281.9	25.6	F
SB	Left Turn	240	252	105.1%	156.2	59.9	F
	Through	728	763	104.8%	150.0	59.4	F
	Right Turn	52	53	101.3%	146.9	62.7	F
	Subtotal	1,020	1,068	104.7%	151.4	59.6	F
EB	Left Turn	52	54	103.5%	37.4	4.6	D
	Through	126	130	103.1%	46.1	9.8	D
	Right Turn	120	123	102.2%	33.5	9.4	C
	Subtotal	298	306	102.8%	39.4	7.9	D
WB	Left Turn	173	177	102.5%	53.4	15.5	D
	Through	113	118	104.7%	38.1	4.6	D
	Right Turn	150	151	100.5%	9.8	1.8	A
	Subtotal	436	446	102.4%	34.2	7.3	C
Total		2,774	2,779	100.2%	165.4	21.3	F

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.5%	1.8	1.1	A
	Through						
	Right Turn	30	29	97.7%	1.3	0.6	A
	Subtotal	50	51	102.0%	1.7	0.6	A
SB	Left Turn	26	26	101.5%	11.7	3.6	B
	Through						
	Right Turn	60	63	105.3%	6.4	0.5	A
	Subtotal	86	90	104.2%	7.9	0.9	A
EB	Left Turn	94	96	102.0%	4.0	1.1	A
	Through	509	530	104.1%	1.7	0.3	A
	Right Turn	10	11	105.0%	1.3	1.1	A
	Subtotal	613	636	103.8%	2.0	0.3	A
WB	Left Turn	30	32	105.7%	3.3	1.4	A
	Through	356	363	101.9%	1.4	0.3	A
	Right Turn	41	40	98.0%	1.1	0.4	A
	Subtotal	427	435	101.8%	1.5	0.3	A
Total		1,176	1,212	103.0%	2.2	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (TWSC)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	107.0%	23.1	9.9	C
	Through						
	Right Turn						
	Subtotal	10	11	107.0%	23.1	9.9	C
SB	Left Turn	222	220	99.1%	24.1	10.5	C
	Through						
	Right Turn	86	89	103.1%	14.0	18.8	B
	Subtotal	308	309	100.2%	21.1	12.9	C
EB	Left Turn	99	98	99.3%	14.3	3.5	B
	Through	466	487	104.5%	12.3	1.9	B
	Right Turn						
	Subtotal	565	586	103.6%	12.6	1.7	B
WB	Left Turn	10	10	100.0%	11.1	12.2	B
	Through	331	336	101.6%	13.1	6.0	B
	Right Turn	155	160	103.1%	5.3	4.5	A
	Subtotal	496	506	102.0%	10.7	5.4	B
Total		1,379	1,411	102.3%	14.4	3.7	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	6	1	5	8	112	20	87	159	NO
	Through	1,200	1,410	32	1,352	1,450	1,650	7	1,631	1,654	AVG
	Right Turn	1,200	14	5	9	25	208	74	149	356	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	27	6	18	36	286	57	217	358	NO
	Through	2,500	581	163	255	809	1,849	316	1,266	2,467	NO
	Right Turn	2,500	580	163	255	808	1,849	316	1,266	2,467	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	7	12	98	18	65	118	NO
	Through	5,000	45	6	35	52	336	91	215	512	NO
	Right Turn	5,000	44	6	34	52	336	91	215	512	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	51	6	40	63	250	44	196	334	MAX
	Through	4,500	19	3	14	23	153	27	114	187	NO
	Right Turn	175	7	1	5	9	133	34	87	183	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	43	19	19	63	NO
	Through										
	Right Turn	100	0	0	0	0	42	19	17	62	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	39	14	22	66	NO
	Through										
	Right Turn	100	2	0	1	2	56	15	42	86	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	2	1	1	3	72	16	48	95	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	42	16	30	77	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	21	2	19	24	193	62	136	329	MAX
	Through										
	Right Turn	150	1	0	1	2	60	14	44	84	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	4	1	3	6	82	16	64	106	NO
	Through	500	18	3	14	22	317	100	237	514	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	1	26	7	21	45	NO
	Through	2,500	10	1	8	12	195	45	123	284	NO
	Right Turn	2,500	3	1	2	4	102	25	78	152	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	89	89.0%	323.6	26.4	F
	Through	744	665	89.4%	331.9	24.0	F
	Right Turn	137	128	93.4%	104.5	9.6	F
	Subtotal	981	882	89.9%	294.3	23.8	F
SB	Left Turn	220	225	102.2%	222.4	67.8	F
	Through	811	842	103.8%	222.3	67.0	F
	Right Turn	92	92	100.3%	221.7	63.6	F
	Subtotal	1,123	1,159	103.2%	222.3	66.7	F
EB	Left Turn	32	36	113.4%	41.7	13.6	D
	Through	52	56	107.3%	36.2	7.4	D
	Right Turn	60	58	95.8%	14.7	3.8	B
	Subtotal	144	150	103.9%	29.3	5.7	C
WB	Left Turn	188	188	99.9%	42.3	6.6	D
	Through	173	179	103.2%	35.5	6.9	D
	Right Turn	320	328	102.4%	18.4	3.5	B
	Subtotal	681	694	101.9%	29.5	3.2	C
Total		2,929	2,885	98.5%	190.4	26.6	F

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	41.9	14.9	D
	Through						
	Right Turn	20	21	106.0%	9.9	3.5	A
	Subtotal	30	32	106.0%	21.8	7.3	C
SB	Left Turn	38	39	102.4%	41.1	7.8	D
	Through						
	Right Turn	85	87	102.7%	10.2	2.1	B
	Subtotal	123	126	102.6%	20.6	3.5	C
EB	Left Turn	42	41	97.6%	42.8	11.3	D
	Through	357	359	100.5%	9.1	1.7	A
	Right Turn	10	10	99.0%	6.6	7.4	A
	Subtotal	409	410	100.2%	11.9	2.1	B
WB	Left Turn	30	29	97.0%	38.2	9.6	D
	Through	586	599	102.2%	8.1	1.8	A
	Right Turn	18	18	99.4%	5.3	3.8	A
	Subtotal	634	646	101.8%	9.3	1.7	A
Total		1,196	1,214	101.5%	11.6	1.8	B

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (Signal)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	142	135	95.3%	49.0	21.0	D
	Through						
	Right Turn	106	107	101.3%	22.5	22.8	C
	Subtotal	248	243	97.9%	37.0	22.0	D
EB	Left Turn	47	44	93.2%	10.9	4.2	B
	Through	368	375	101.9%	3.4	1.7	A
	Right Turn						
	Subtotal	415	419	100.9%	4.2	1.5	A
WB	Left Turn						
	Through	528	535	101.3%	7.7	2.1	A
	Right Turn	217	223	102.6%	3.6	0.8	A
	Subtotal	745	758	101.7%	6.5	1.6	A
Total		1,408	1,419	100.8%	10.9	3.6	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	5	1	3	7	115	29	66	165	NO
	Through	1,200	1,171	82	1,065	1,303	1,652	3	1,647	1,654	MAX
	Right Turn	1,200	3	1	2	5	96	18	74	127	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	20	3	15	23	221	47	159	298	NO
	Through	2,500	883	240	461	1,186	2,212	318	1,624	2,550	NO
	Right Turn	2,500	883	240	460	1,186	2,212	318	1,624	2,550	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	6	1	4	7	69	15	45	88	NO
	Through	5,000	12	3	9	16	140	43	86	222	NO
	Right Turn	5,000	10	2	6	13	140	43	86	222	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	41	6	29	50	249	50	174	347	MAX
	Through	4,500	32	5	23	41	209	58	154	345	NO
	Right Turn	175	36	7	29	49	297	74	204	443	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	4	1	3	5	61	9	53	76	NO
	Through										
	Right Turn	100	4	1	3	6	65	9	57	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	9	2	6	12	90	18	66	116	NO
	Through										
	Right Turn	100	3	1	2	4	73	25	49	119	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	9	2	5	11	82	16	66	107	NO
	Through	4,500	10	3	6	17	222	51	140	298	NO
	Right Turn	4,500	11	3	7	19	239	51	157	315	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	6	2	4	11	116	120	46	381	MAX
	Through	500	18	4	14	24	458	108	353	661	NO
	Right Turn	500	18	4	14	26	475	108	370	678	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	30	4	24	35	220	133	153	591	MAX
	Through										
	Right Turn	150	3	1	1	4	95	32	49	144	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	0	0	0	1	38	9	23	49	NO
	Through	500	3	1	1	5	156	68	70	320	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	10	2	6	14	259	58	156	335	NO
	Right Turn	2,500	2	0	2	3	97	22	64	130	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	90	85	94.0%	324.8	26.6	F
	Through	683	624	91.4%	338.8	18.6	F
	Right Turn	247	251	101.7%	99.0	12.9	F
	Subtotal	1,020	960	94.1%	275.7	17.1	F
SB	Left Turn	240	252	105.0%	154.4	51.6	F
	Through	728	762	104.7%	147.1	51.8	F
	Right Turn	52	52	100.4%	144.6	52.1	F
	Subtotal	1,020	1,066	104.5%	148.8	51.5	F
EB	Left Turn	52	53	102.7%	39.3	10.4	D
	Through	126	129	102.4%	42.8	11.6	D
	Right Turn	120	123	102.8%	28.2	9.0	C
	Subtotal	298	306	102.6%	36.1	9.4	D
WB	Left Turn	173	178	102.8%	54.2	14.1	D
	Through	113	119	105.6%	32.3	7.4	C
	Right Turn	150	151	100.8%	11.1	3.0	B
	Subtotal	436	448	102.8%	33.6	6.7	C
Total		2,774	2,780	100.2%	163.1	20.4	F

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.5%	44.7	12.5	D
	Through						
	Right Turn	30	29	97.3%	13.5	6.9	B
	Subtotal	50	51	101.8%	27.4	9.4	C
SB	Left Turn	26	27	102.3%	55.5	12.7	E
	Through						
	Right Turn	60	63	105.3%	6.4	1.1	A
	Subtotal	86	90	104.4%	18.7	6.5	B
EB	Left Turn	94	96	101.9%	54.6	7.0	D
	Through	509	530	104.1%	11.1	2.7	B
	Right Turn	10	11	106.0%	8.0	8.3	A
	Subtotal	613	636	103.8%	17.8	3.6	B
WB	Left Turn	30	32	107.3%	41.7	11.6	D
	Through	356	363	102.0%	7.4	1.5	A
	Right Turn	41	41	99.0%	3.7	1.7	A
	Subtotal	427	436	102.1%	9.4	1.4	A
Total		1,176	1,213	103.1%	15.4	2.3	B

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (Signal)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	10	103.0%	44.7	20.3	D
	Through						
	Right Turn						
	Subtotal	10	10	103.0%	44.7	20.3	D
SB	Left Turn	222	219	98.6%	47.5	12.0	D
	Through						
	Right Turn	86	89	103.3%	17.3	22.8	B
	Subtotal	308	308	99.9%	38.6	15.3	D
EB	Left Turn	99	98	99.2%	7.3	2.2	A
	Through	466	487	104.5%	5.3	1.8	A
	Right Turn						
	Subtotal	565	585	103.6%	5.7	1.8	A
WB	Left Turn	10	10	99.0%	12.6	10.5	B
	Through	331	337	101.7%	12.1	6.3	B
	Right Turn	155	160	103.2%	4.7	3.3	A
	Subtotal	496	507	102.1%	9.9	5.3	A
Total		1,379	1,410	102.2%	15.9	4.1	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	6	0	5	6	107	28	69	159	NO
	Through	1,200	1,410	39	1,329	1,464	1,642	9	1,631	1,654	AVG
	Right Turn	1,200	15	2	10	18	195	28	155	232	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	28	5	20	36	263	70	198	445	NO
	Through	2,500	575	171	241	828	1,854	302	1,274	2,490	NO
	Right Turn	2,500	575	171	241	827	1,854	302	1,274	2,489	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	13	95	17	70	116	NO
	Through	5,000	44	12	29	66	313	104	194	512	NO
	Right Turn	5,000	42	12	28	65	313	104	194	512	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	49	12	34	78	251	70	172	352	MAX
	Through	4,500	18	3	13	23	155	34	89	208	NO
	Right Turn	175	7	2	4	11	126	27	82	177	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	8	2	4	10	68	9	55	76	NO
	Through										
	Right Turn	100	9	2	5	11	72	9	59	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	7	2	5	11	74	18	48	108	NO
	Through										
	Right Turn	100	2	0	1	2	54	12	44	78	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	33	6	25	43	430	139	260	691	MAX
	Through	4,500	20	4	13	26	411	102	244	555	NO
	Right Turn	4,500	22	5	15	29	429	102	261	572	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	7	2	5	10	118	93	46	331	MAX
	Through	500	10	2	6	14	263	47	207	332	NO
	Right Turn	500	10	2	7	14	280	47	224	349	NO
	Second Right										

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (Signal)**
Queue Length **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	55	5	48	62	368	70	226	464	MAX
	Through										
	Right Turn	150	2	2	1	8	112	125	46	464	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	2	1	1	4	75	24	46	112	NO
	Through	500	8	3	4	15	262	47	211	353	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	1	30	15	21	60	NO
	Through	2,500	10	1	8	13	224	65	154	375	NO
	Right Turn	2,500	2	0	2	3	101	30	67	169	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	89	88.8%	325.4	31.8	F
	Through	744	659	88.6%	335.3	32.2	F
	Right Turn	137	127	92.7%	105.9	11.1	F
	Subtotal	981	875	89.2%	297.1	27.5	F
SB	Left Turn	220	223	101.5%	208.9	63.8	F
	Through	811	832	102.6%	212.7	66.9	F
	Right Turn	92	92	99.5%	211.8	62.0	F
	Subtotal	1,123	1,147	102.1%	212.0	65.8	F
EB	Left Turn	32	37	115.9%	36.3	8.2	D
	Through	52	56	108.5%	34.6	5.0	C
	Right Turn	60	57	95.7%	11.6	3.5	B
	Subtotal	144	151	104.8%	26.4	4.7	C
WB	Left Turn	188	189	100.7%	40.0	3.2	D
	Through	173	179	103.5%	38.7	4.2	D
	Right Turn	320	328	102.6%	16.9	3.4	B
	Subtotal	681	697	102.3%	28.9	2.9	C
Total		2,929	2,870	98.0%	186.7	23.0	F

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	111.0%	1.6	1.4	A
	Through						
	Right Turn	20	22	108.5%	2.0	1.6	A
	Subtotal	30	33	109.3%	1.8	0.8	A
SB	Left Turn	38	39	101.3%	13.9	6.0	B
	Through						
	Right Turn	85	87	102.6%	0.3	0.1	A
	Subtotal	123	126	102.2%	5.2	2.6	A
EB	Left Turn	42	41	97.4%	6.3	3.2	A
	Through	357	357	100.0%	6.0	1.8	A
	Right Turn	10	10	98.0%	5.3	3.9	A
	Subtotal	409	408	99.7%	6.0	1.9	A
WB	Left Turn	30	29	95.7%	10.2	2.9	B
	Through	586	599	102.3%	10.8	2.9	B
	Right Turn	18	18	100.0%	7.2	3.0	A
	Subtotal	634	646	101.9%	10.7	2.8	B
Total		1,196	1,212	101.4%	8.5	2.1	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (Roundabout)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	142	136	96.1%	31.7	18.9	C
	Through						
	Right Turn	106	107	101.3%	21.9	20.4	C
	Subtotal	248	244	98.3%	27.3	19.4	C
EB	Left Turn	47	44	93.2%	24.4	7.2	C
	Through	368	374	101.5%	7.6	1.8	A
	Right Turn						
	Subtotal	415	418	100.6%	9.3	1.6	A
WB	Left Turn						
	Through	528	536	101.5%	9.1	2.0	A
	Right Turn	217	222	102.5%	5.1	1.7	A
	Subtotal	745	758	101.8%	8.0	1.8	A
Total		1,408	1,420	100.8%	11.5	3.6	B

Vissim Post-Processor | **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs | **Near-Term Plus Project (Roundabout)**
Queue Length | **AM Peak Hour**

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	6	2	4	9	114	45	67	221	NO
	Through	1,200	1,160	81	1,053	1,291	1,649	7	1,632	1,654	MAX
	Right Turn	1,200	3	1	2	7	97	42	44	201	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	18	3	11	23	191	42	112	255	NO
	Through	2,500	867	236	556	1,190	2,105	327	1,677	2,597	NO
	Right Turn	2,500	866	236	555	1,190	2,105	327	1,676	2,597	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	6	1	4	8	72	16	46	104	NO
	Through	5,000	12	3	8	16	130	26	105	196	NO
	Right Turn	5,000	9	2	6	12	130	26	105	196	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	39	6	29	47	243	45	189	320	MAX
	Through	4,500	30	3	27	37	220	35	173	285	NO
	Right Turn	175	28	5	22	38	216	40	151	275	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	19	22	0	53	NO
	Through										
	Right Turn	100	0	0	0	0	19	22	0	53	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	1	1	3	52	22	23	87	NO
	Through										
	Right Turn	100	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	4,500	3	1	2	6	183	60	121	295	NO
	Through	4,500	3	1	2	6	183	60	121	295	NO
	Right Turn	4,500	3	1	2	6	188	62	121	295	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	16	5	8	23	441	125	283	637	NO
	Through	500	16	5	8	23	441	125	283	637	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	12	2	9	17	181	129	110	540	MAX
	Through										
	Right Turn	150	2	1	1	3	90	32	46	143	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	2	1	1	3	100	24	67	138	NO
	Through	500	7	2	5	10	166	44	112	251	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	12	2	9	17	255	58	175	330	NO
	Right Turn	2,500	4	1	2	5	123	66	66	243	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	90	85	94.8%	320.9	29.6	F
	Through	683	627	91.8%	341.9	16.0	F
	Right Turn	247	251	101.5%	104.1	7.8	F
	Subtotal	1,020	963	94.4%	279.0	14.6	F
SB	Left Turn	240	252	105.0%	144.8	44.2	F
	Through	728	762	104.7%	142.0	42.9	F
	Right Turn	52	52	100.6%	135.7	42.9	F
	Subtotal	1,020	1,067	104.6%	142.5	42.7	F
EB	Left Turn	52	53	102.7%	37.9	9.7	D
	Through	126	129	102.6%	42.6	11.8	D
	Right Turn	120	123	102.7%	26.2	9.6	C
	Subtotal	298	306	102.7%	35.0	9.8	D
WB	Left Turn	173	176	101.9%	61.2	26.4	E
	Through	113	118	104.4%	30.4	6.3	C
	Right Turn	150	151	100.7%	8.5	2.4	A
	Subtotal	436	445	102.2%	35.5	10.1	D
Total		2,774	2,781	100.3%	161.2	18.4	F

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.0%	0.3	0.3	A
	Through						
	Right Turn	30	29	97.3%	0.9	1.4	A
	Subtotal	50	51	101.6%	0.6	0.5	A
SB	Left Turn	26	26	101.2%	4.8	4.5	A
	Through						
	Right Turn	60	63	105.2%	0.2	0.1	A
	Subtotal	86	89	104.0%	1.5	1.2	A
EB	Left Turn	94	96	102.1%	5.6	1.3	A
	Through	509	529	104.0%	6.0	1.2	A
	Right Turn	10	11	106.0%	6.0	4.0	A
	Subtotal	613	636	103.7%	6.0	1.2	A
WB	Left Turn	30	32	105.7%	10.5	5.1	B
	Through	356	362	101.8%	8.1	2.7	A
	Right Turn	41	40	98.3%	4.2	2.7	A
	Subtotal	427	434	101.7%	7.7	2.6	A
Total		1,176	1,210	102.9%	6.2	1.3	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Near-Term Plus Project (Roundabout)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	107.0%	24.4	8.3	C
	Through						
	Right Turn						
	Subtotal	10	11	107.0%	24.4	8.3	C
SB	Left Turn	222	220	98.9%	24.7	11.9	C
	Through						
	Right Turn	86	89	103.4%	14.8	20.1	B
	Subtotal	308	308	100.1%	21.7	14.3	C
EB	Left Turn	99	98	98.8%	15.6	6.1	B
	Through	466	486	104.2%	10.7	1.1	B
	Right Turn						
	Subtotal	565	584	103.3%	11.5	1.5	B
WB	Left Turn	10	10	100.0%	9.8	13.2	A
	Through	331	336	101.4%	12.5	6.5	B
	Right Turn	155	160	103.1%	5.2	3.9	A
	Subtotal	496	506	101.9%	10.3	5.6	B
Total		1,379	1,408	102.1%	14.0	4.1	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	6	1	5	8	111	23	86	157	NO
	Through	1,200	1,413	24	1,372	1,447	1,647	9	1,632	1,654	AVG
	Right Turn	1,200	14	2	10	17	181	34	131	239	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	28	3	24	33	259	50	210	383	NO
	Through	2,500	551	147	313	823	1,823	336	1,354	2,490	NO
	Right Turn	2,500	551	147	312	822	1,823	336	1,354	2,490	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	5	13	88	20	65	118	NO
	Through	5,000	49	18	31	88	368	148	215	656	NO
	Right Turn	5,000	47	18	29	87	368	148	215	655	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	54	15	39	84	275	53	194	353	MAX
	Through	4,500	18	3	14	25	156	27	108	195	NO
	Right Turn	175	6	2	4	9	115	34	81	180	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	33	24	0	53	NO
	Through										
	Right Turn	100	0	0	0	0	33	24	0	53	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	33	12	21	51	NO
	Through										
	Right Turn	100	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	4,500	8	2	6	13	257	45	206	345	NO
	Through	4,500	8	2	6	13	257	45	206	345	NO
	Right Turn	4,500	7	2	6	13	257	45	206	345	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	10	3	6	16	248	82	155	406	NO
	Through	500	10	3	6	16	248	82	155	406	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	21	2	18	26	207	62	151	329	MAX
	Through										
	Right Turn	150	2	1	1	3	88	70	46	281	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	5	1	4	7	114	25	80	152	NO
	Through	500	18	3	13	23	305	81	217	452	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	200	0	0	0	1	23	1	21	24	NO
	Through	2,500	10	2	8	14	180	54	126	284	NO
	Right Turn	2,500	3	0	2	4	93	22	77	154	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	170	177	103.9%	60.1	11.7	E
	Through	914	950	103.9%	35.7	7.8	D
	Right Turn	157	169	107.8%	5.0	1.1	A
	Subtotal	1,241	1,296	104.4%	35.1	7.1	D
SB	Left Turn	250	258	103.3%	51.7	6.8	D
	Through	941	979	104.0%	28.8	5.5	C
	Right Turn	112	115	102.2%	24.7	7.9	C
	Subtotal	1,303	1,352	103.7%	33.1	4.4	C
EB	Left Turn	32	33	104.4%	43.7	21.3	D
	Through	72	76	105.7%	46.4	9.9	D
	Right Turn	90	87	96.9%	18.5	10.4	B
	Subtotal	194	197	101.4%	34.5	10.7	C
WB	Left Turn	208	212	102.1%	253.2	61.5	F
	Through	263	285	108.4%	44.1	6.1	D
	Right Turn	370	381	102.9%	21.8	9.1	C
	Subtotal	841	878	104.4%	91.8	18.8	F
Total		3,579	3,722	104.0%	48.5	4.3	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	9.7	3.0	A
	Through						
	Right Turn	20	19	93.0%	9.1	1.6	A
	Subtotal	30	29	97.3%	9.3	1.5	A
SB	Left Turn	38	37	96.1%	11.4	2.0	B
	Through						
	Right Turn	85	88	103.8%	9.8	1.0	A
	Subtotal	123	125	101.4%	10.3	1.0	B
EB	Left Turn	42	40	94.8%	4.9	1.9	A
	Through	427	455	106.5%	0.5	0.1	A
	Right Turn	10	10	103.0%	0.8	1.1	A
	Subtotal	479	505	105.4%	0.9	0.3	A
WB	Left Turn	30	28	94.3%	3.1	1.4	A
	Through	746	776	104.0%	1.2	0.2	A
	Right Turn	18	18	98.3%	1.5	0.7	A
	Subtotal	794	822	103.5%	1.2	0.2	A
Total		1,426	1,481	103.8%	2.0	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (TWSC)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	162	161	99.6%	21.1	3.4	C
	Through						
	Right Turn	116	117	101.1%	5.9	1.7	A
	Subtotal	278	279	100.3%	15.0	3.1	B
EB	Left Turn	57	57	100.2%	13.9	4.6	B
	Through	428	455	106.4%	6.5	0.8	A
	Right Turn						
	Subtotal	485	513	105.7%	7.4	1.2	A
WB	Left Turn						
	Through	678	706	104.1%	9.1	0.9	A
	Right Turn	247	255	103.4%	5.5	1.3	A
	Subtotal	925	961	103.9%	8.1	0.9	A
Total		1,688	1,752	103.8%	9.0	0.9	A

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	60	16	42	91	497	227	214	803	MAX
	Through	1,200	128	38	89	217	828	258	559	1,476	NO
	Right Turn	1,200	3	0	2	3	80	18	47	109	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	74	8	65	92	391	56	314	480	MAX
	Through	2,500	105	15	88	140	693	192	554	1,213	NO
	Right Turn	2,500	106	15	90	141	694	192	555	1,215	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	11	79	16	64	106	NO
	Through	5,000	18	2	17	22	136	26	100	179	NO
	Right Turn	5,000	18	2	17	22	136	26	100	179	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	199	64	99	313	659	170	432	914	AVG
	Through	4,500	36	2	33	39	195	21	159	230	NO
	Right Turn	175	40	13	31	72	398	110	279	646	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	2	68	10	58	81	NO
	Through										
	Right Turn	100	1	0	1	2	68	10	57	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	2	47	13	28	76	NO
	Through										
	Right Turn	100	3	0	2	3	74	23	45	121	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	2	48	16	29	76	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	27	7	19	41	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	14	1	12	17	153	41	110	224	MAX
	Through										
	Right Turn	150	1	0	1	2	66	17	44	90	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	1	0	1	2	59	10	45	73	NO
	Through	500	5	1	4	7	137	32	94	183	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	9	1	7	11	140	17	113	173	NO
	Right Turn	2,500	5	1	3	6	136	44	67	212	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	120	124	103.6%	56.5	7.9	E
	Through	883	906	102.6%	37.6	3.2	D
	Right Turn	277	294	106.2%	7.0	2.1	A
	Subtotal	1,280	1,325	103.5%	32.9	2.8	C
SB	Left Turn	280	292	104.3%	85.5	15.6	F
	Through	838	878	104.7%	33.5	3.3	C
	Right Turn	52	49	94.8%	31.9	8.5	C
	Subtotal	1,170	1,219	104.2%	45.3	4.8	D
EB	Left Turn	72	77	106.4%	52.8	6.9	D
	Through	156	159	101.7%	44.4	5.1	D
	Right Turn	180	183	101.7%	27.7	6.8	C
	Subtotal	408	418	102.5%	38.5	3.8	D
WB	Left Turn	193	197	101.9%	267.9	53.3	F
	Through	123	127	103.6%	45.1	7.4	D
	Right Turn	170	173	102.0%	8.3	1.7	A
	Subtotal	486	497	102.3%	120.9	26.0	F
Total		3,344	3,459	103.4%	50.0	2.3	D

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	105.0%	11.5	4.1	B
	Through						
	Right Turn	30	28	94.7%	9.2	0.9	A
	Subtotal	50	49	98.8%	10.2	2.0	B
SB	Left Turn	26	26	100.8%	9.4	1.7	A
	Through						
	Right Turn	60	63	104.5%	8.0	0.6	A
	Subtotal	86	89	103.4%	8.4	0.7	A
EB	Left Turn	94	99	105.1%	2.7	0.9	A
	Through	609	637	104.6%	0.6	0.1	A
	Right Turn	10	10	104.0%	0.4	0.6	A
	Subtotal	713	746	104.7%	0.9	0.1	A
WB	Left Turn	30	31	103.0%	3.5	1.1	A
	Through	406	413	101.7%	0.8	0.1	A
	Right Turn	41	42	103.2%	1.5	0.4	A
	Subtotal	477	486	101.9%	1.1	0.2	A
Total		1,326	1,371	103.4%	1.9	0.2	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (TWSC)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	9	91.0%	27.9	13.7	C
	Through						
	Right Turn						
	Subtotal	10	9	91.0%	27.9	13.7	C
SB	Left Turn	252	247	97.9%	19.3	3.1	B
	Through						
	Right Turn	96	98	101.7%	4.8	0.6	A
	Subtotal	348	344	98.9%	15.2	2.0	B
EB	Left Turn	109	110	100.7%	12.0	2.8	B
	Through	556	580	104.3%	9.3	1.7	A
	Right Turn						
	Subtotal	665	690	103.7%	9.8	1.7	A
WB	Left Turn	10	11	113.0%	11.5	10.5	B
	Through	371	379	102.1%	10.5	2.3	B
	Right Turn	175	177	101.1%	4.1	1.5	A
	Subtotal	556	567	102.0%	8.6	2.0	A
Total		1,579	1,610	102.0%	10.8	1.6	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	36	5	29	44	250	95	195	469	MAX
	Through	1,200	116	12	107	144	674	116	560	909	NO
	Right Turn	1,200	9	2	6	13	160	37	109	219	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	130	42	101	245	587	224	398	1,190	MAX
	Through	2,500	89	7	77	97	620	143	445	912	NO
	Right Turn	2,500	90	7	78	99	622	143	447	913	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	21	3	18	26	160	41	111	240	MAX
	Through	5,000	43	4	40	53	256	53	197	364	NO
	Right Turn	5,000	44	4	40	54	256	53	198	364	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	242	85	121	411	596	140	368	857	AVG
	Through	4,500	18	2	15	20	108	22	86	153	NO
	Right Turn	175	9	2	6	14	150	48	109	264	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	2	0	2	3	73	8	59	81	NO
	Through										
	Right Turn	100	2	0	2	3	72	8	58	80	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	45	8	31	51	NO
	Through										
	Right Turn	100	1	0	1	2	55	14	45	88	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	1	49	13	32	75	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	46	17	24	71	NO
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	1	1	48	35	22	99	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	22	2	19	26	198	34	149	268	MAX
	Through										
	Right Turn	150	1	0	0	1	56	9	42	66	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	4	1	4	5	95	18	69	117	NO
	Through	500	10	1	8	12	158	28	110	215	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	2,500	0	0	0	1	28	9	21	48	NO
	Through	2,500	7	1	5	8	98	19	68	126	NO
	Right Turn	2,500	4	0	3	4	90	10	81	107	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	170	174	102.2%	64.9	16.8	E
	Through	914	947	103.6%	36.4	10.5	D
	Right Turn	157	169	107.5%	5.3	0.9	A
	Subtotal	1,241	1,289	103.9%	36.4	9.6	D
SB	Left Turn	250	254	101.5%	48.0	4.0	D
	Through	941	974	103.5%	29.1	5.0	C
	Right Turn	112	116	103.3%	25.8	4.8	C
	Subtotal	1,303	1,343	103.1%	32.8	3.7	C
EB	Left Turn	32	35	109.1%	47.9	7.7	D
	Through	72	79	109.4%	42.5	4.5	D
	Right Turn	90	88	97.2%	21.0	10.3	C
	Subtotal	194	201	103.7%	34.4	7.8	C
WB	Left Turn	208	214	102.7%	282.3	93.7	F
	Through	263	284	108.1%	46.2	6.1	D
	Right Turn	370	374	101.1%	23.2	4.9	C
	Subtotal	841	872	103.7%	97.7	26.6	F
Total		3,579	3,706	103.5%	50.4	6.4	D

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	41.6	18.4	D
	Through						
	Right Turn	20	20	97.5%	9.8	3.8	A
	Subtotal	30	30	100.3%	21.8	9.8	C
SB	Left Turn	38	38	98.7%	46.2	12.2	D
	Through						
	Right Turn	85	86	101.3%	8.0	1.0	A
	Subtotal	123	124	100.5%	19.7	3.7	B
EB	Left Turn	42	42	100.7%	37.4	8.8	D
	Through	427	452	105.7%	6.3	2.7	A
	Right Turn	10	11	109.0%	6.3	7.1	A
	Subtotal	479	505	105.4%	9.1	2.8	A
WB	Left Turn	30	28	94.3%	45.7	10.2	D
	Through	746	772	103.5%	3.4	1.2	A
	Right Turn	18	17	95.0%	4.5	6.6	A
	Subtotal	794	818	103.0%	4.9	1.4	A
Total		1,426	1,476	103.5%	8.0	1.5	A

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (Signal)**
Volume and Delay by Movement **AM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	Total Delay (sec/veh) LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	162	164	100.9%	38.7	2.6	D
	Through						
	Right Turn	116	116	100.3%	6.4	1.7	A
	Subtotal	278	280	100.6%	25.6	2.6	C
EB	Left Turn	57	58	101.6%	19.8	4.2	B
	Through	428	451	105.4%	7.7	1.9	A
	Right Turn						
	Subtotal	485	509	104.9%	9.1	1.9	A
WB	Left Turn						
	Through	678	701	103.4%	13.9	2.5	B
	Right Turn	247	257	104.0%	5.7	1.1	A
	Subtotal	925	958	103.6%	11.6	2.1	B
Total		1,688	1,747	103.5%	13.1	1.8	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	62	14	45	85	522	245	251	909	MAX
	Through	1,200	129	42	86	213	799	262	464	1,371	NO
	Right Turn	1,200	3	0	2	3	83	13	67	109	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	71	6	61	82	362	47	297	424	MAX
	Through	2,500	107	14	90	137	720	193	540	1,170	NO
	Right Turn	2,500	108	14	91	138	722	193	541	1,172	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	11	82	15	64	104	NO
	Through	5,000	18	2	14	22	142	13	126	158	NO
	Right Turn	5,000	18	2	14	22	143	13	126	158	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	216	72	106	337	722	166	542	991	AVG
	Through	4,500	36	2	34	39	203	33	136	259	NO
	Right Turn	175	40	3	34	44	383	62	300	501	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	4	1	1	5	65	9	56	80	NO
	Through										
	Right Turn	100	3	1	1	5	62	9	54	77	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	8	1	6	11	82	36	59	180	NO
	Through										
	Right Turn	100	1	0	0	2	60	25	38	115	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	9	2	6	11	85	17	68	112	NO
	Through	4,500	7	2	5	11	181	29	119	222	NO
	Right Turn	4,500	6	1	4	9	180	29	119	221	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	5	1	4	6	68	9	48	83	NO
	Through	500	4	1	3	7	203	58	109	293	NO
	Right Turn	500	4	1	3	7	202	58	108	292	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	35	2	32	39	200	27	155	239	MAX
	Through										
	Right Turn	150	1	0	1	2	66	16	43	88	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	2	1	1	3	71	22	44	113	NO
	Through	500	7	1	5	9	136	20	109	172	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	19	2	17	23	233	51	164	319	NO
	Right Turn	2,500	6	1	5	7	118	23	90	156	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	120	125	103.9%	57.4	4.2	E
	Through	883	904	102.3%	37.0	2.2	D
	Right Turn	277	294	106.1%	7.0	1.6	A
	Subtotal	1,280	1,322	103.3%	32.5	1.6	C
SB	Left Turn	280	295	105.5%	96.6	19.0	F
	Through	838	873	104.2%	33.9	3.3	C
	Right Turn	52	50	96.5%	31.6	6.9	C
	Subtotal	1,170	1,219	104.2%	48.3	5.5	D
EB	Left Turn	72	75	103.5%	51.9	7.9	D
	Through	156	156	100.1%	44.3	5.9	D
	Right Turn	180	181	100.8%	27.0	5.8	C
	Subtotal	408	412	101.0%	38.0	5.0	D
WB	Left Turn	193	201	104.0%	300.2	80.1	F
	Through	123	127	102.8%	47.3	10.5	D
	Right Turn	170	170	99.7%	12.4	5.1	B
	Subtotal	486	497	102.2%	138.5	44.5	F
Total		3,344	3,450	103.2%	53.2	6.1	D

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	109.5%	44.1	8.8	D
	Through						
	Right Turn	30	28	92.0%	13.2	3.9	B
	Subtotal	50	50	99.0%	26.6	4.9	C
SB	Left Turn	26	28	108.1%	38.0	11.7	D
	Through						
	Right Turn	60	63	104.8%	7.5	0.8	A
	Subtotal	86	91	105.8%	15.8	4.7	B
EB	Left Turn	94	98	104.3%	34.9	7.2	C
	Through	609	634	104.1%	7.5	2.6	A
	Right Turn	10	12	116.0%	6.4	5.7	A
	Subtotal	713	744	104.3%	11.3	3.1	B
WB	Left Turn	30	31	103.3%	38.0	7.2	D
	Through	406	412	101.6%	7.1	2.1	A
	Right Turn	41	41	100.5%	5.9	3.3	A
	Subtotal	477	485	101.6%	9.1	2.1	A
Total		1,326	1,369	103.2%	11.6	2.3	B

Vissim Post-Processor **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs **Cumulative Year Plus Project (Signal)**
Volume and Delay by Movement **PM Peak Hour**

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	10	99.0%	25.3	14.4	C
	Through						
	Right Turn						
	Subtotal	10	10	99.0%	25.3	14.4	C
SB	Left Turn	252	251	99.5%	31.8	3.0	C
	Through						
	Right Turn	96	97	101.3%	5.1	0.8	A
	Subtotal	348	348	100.0%	24.6	2.3	C
EB	Left Turn	109	112	102.5%	18.4	2.6	B
	Through	556	578	104.0%	12.3	1.8	B
	Right Turn						
	Subtotal	665	690	103.7%	13.3	1.9	B
WB	Left Turn	10	11	113.0%	21.0	14.8	C
	Through	371	378	101.8%	14.0	2.5	B
	Right Turn	175	181	103.3%	4.8	1.2	A
	Subtotal	556	570	102.5%	11.3	1.9	B
Total		1,579	1,617	102.4%	15.5	1.5	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	36	3	30	40	234	90	165	469	MAX
	Through	1,200	118	12	103	140	662	137	491	909	NO
	Right Turn	1,200	9	2	6	12	159	42	89	213	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	140	30	102	196	609	111	465	763	MAX
	Through	2,500	88	7	76	98	567	111	420	775	NO
	Right Turn	2,500	89	7	77	100	569	111	422	777	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	21	4	15	28	169	60	114	316	MAX
	Through	5,000	42	4	34	47	241	41	182	315	NO
	Right Turn	5,000	42	4	34	47	241	41	183	315	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	285	102	158	442	683	170	431	923	AVG
	Through	4,500	18	2	15	24	110	18	86	136	NO
	Right Turn	175	10	3	6	17	166	54	90	290	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	7	1	5	8	71	9	58	80	NO
	Through										
	Right Turn	100	6	1	5	7	69	9	55	77	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	6	2	3	9	72	23	42	94	NO
	Through										
	Right Turn	100	1	0	0	1	51	14	40	83	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	100	18	3	13	24	145	56	92	282	MAX
	Through	4,500	12	3	9	20	240	33	164	281	NO
	Right Turn	4,500	11	3	8	18	239	33	163	280	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	6	2	4	9	64	13	46	88	NO
	Through	500	6	1	4	10	196	45	113	276	NO
	Right Turn	500	6	1	4	9	195	45	112	275	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	1	1	2	51	33	22	98	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	46	3	40	49	277	44	224	358	MAX
	Through										
	Right Turn	150	1	0	1	1	60	16	43	88	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	7	1	6	9	112	24	77	146	NO
	Through	500	16	1	14	18	170	20	137	198	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	2,500	1	0	0	1	33	15	20	62	NO
	Through	2,500	13	1	11	15	137	24	96	177	NO
	Right Turn	2,500	5	1	4	6	105	24	83	156	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	100	175	175.1%	60.9	10.8	E
	Through	744	954	128.2%	35.5	6.6	D
	Right Turn	137	169	123.6%	5.2	1.3	A
	Subtotal	981	1,298	132.4%	35.1	6.3	D
SB	Left Turn	220	257	116.9%	49.9	7.9	D
	Through	811	980	120.9%	28.0	6.1	C
	Right Turn	92	115	124.9%	24.5	7.4	C
	Subtotal	1,123	1,352	120.4%	32.1	4.6	C
EB	Left Turn	32	33	103.4%	46.8	12.3	D
	Through	52	77	148.1%	39.7	5.1	D
	Right Turn	60	88	146.0%	14.3	8.7	B
	Subtotal	144	198	137.3%	29.9	7.8	C
WB	Left Turn	188	211	112.2%	261.7	53.5	F
	Through	173	286	165.1%	46.4	6.0	D
	Right Turn	320	381	119.1%	19.5	7.4	B
	Subtotal	681	878	128.9%	89.5	11.4	F
Total		2,929	3,726	127.2%	47.2	2.9	D

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	11	106.0%	5.3	5.8	A
	Through						
	Right Turn	20	19	94.5%	4.2	3.5	A
	Subtotal	30	30	98.3%	4.6	3.3	A
SB	Left Turn	38	37	96.1%	19.7	10.2	C
	Through						
	Right Turn	85	88	103.8%	0.5	0.1	A
	Subtotal	123	125	101.4%	6.5	2.6	A
EB	Left Turn	42	40	95.5%	11.6	3.3	B
	Through	357	456	127.8%	13.8	5.2	B
	Right Turn	10	10	103.0%	7.2	4.7	A
	Subtotal	409	507	123.8%	13.5	4.9	B
WB	Left Turn	30	28	94.0%	8.6	2.6	A
	Through	586	776	132.4%	9.0	1.2	A
	Right Turn	18	18	98.3%	3.6	1.9	A
	Subtotal	634	822	129.6%	8.8	1.3	A
Total		1,196	1,482	123.9%	10.1	1.8	B

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	142	162	114.2%	23.7	2.8	C
	Through						
	Right Turn	106	117	110.7%	5.9	1.8	A
	Subtotal	248	279	112.7%	16.4	2.0	B
EB	Left Turn	47	57	121.5%	25.9	11.9	C
	Through	368	454	123.5%	19.7	5.3	B
	Right Turn						
	Subtotal	415	511	123.2%	20.4	5.1	C
WB	Left Turn						
	Through	528	705	133.5%	10.1	1.8	B
	Right Turn	217	255	117.6%	5.2	1.2	A
	Subtotal	745	960	128.9%	8.7	1.6	A
Total		1,408	1,751	124.4%	13.1	1.4	B

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	63	18	43	97	540	245	239	1,013	MAX
	Through	1,200	128	35	86	210	815	259	528	1,424	NO
	Right Turn	1,200	3	1	2	4	82	18	45	111	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	75	11	63	95	377	80	276	530	MAX
	Through	2,500	104	15	81	134	684	191	474	1,133	NO
	Right Turn	2,500	105	15	82	135	686	191	476	1,135	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	9	2	6	12	81	13	64	101	NO
	Through	5,000	18	1	15	19	135	29	105	202	NO
	Right Turn	5,000	17	1	15	19	135	29	106	202	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	200	49	137	283	611	88	507	737	AVG
	Through	4,500	35	2	32	40	183	21	153	217	NO
	Right Turn	175	40	12	32	72	384	117	252	631	MAX
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	14	28	0	81	NO
	Through										
	Right Turn	100	0	0	0	0	14	28	0	81	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	2	1	1	4	56	37	21	151	NO
	Through										
	Right Turn	100	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	4,500	21	10	13	40	396	104	259	594	NO
	Through	4,500	21	10	13	40	396	104	259	594	NO
	Right Turn	4,500	19	10	10	37	397	104	260	595	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	4	7	0	18	NO
	Through	500	7	2	4	9	314	95	119	412	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	15	1	13	16	155	41	97	224	MAX
	Through										
	Right Turn	150	1	0	1	2	63	16	44	88	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	3	1	1	5	105	30	67	164	NO
	Through	500	5	1	4	6	97	11	87	117	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	2,500	10	2	9	13	156	41	112	258	NO
	Right Turn	2,500	4	1	3	5	140	41	83	204	NO
	Second Right										

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	120	125	103.8%	59.5	9.1	E
	Through	883	912	103.3%	38.4	3.9	D
	Right Turn	277	297	107.0%	7.5	1.9	A
	Subtotal	1,280	1,333	104.1%	33.9	3.5	C
SB	Left Turn	280	291	104.1%	81.0	16.9	F
	Through	838	880	105.0%	34.8	5.4	C
	Right Turn	52	52	99.8%	34.1	8.9	C
	Subtotal	1,170	1,223	104.5%	45.3	6.1	D
EB	Left Turn	72	77	107.1%	53.9	8.9	D
	Through	156	162	103.8%	44.5	4.4	D
	Right Turn	180	185	102.7%	25.4	5.4	C
	Subtotal	408	424	103.9%	37.4	3.8	D
WB	Left Turn	193	198	102.5%	265.2	56.7	F
	Through	123	126	102.3%	45.8	6.2	D
	Right Turn	170	171	100.8%	9.8	3.1	A
	Subtotal	486	495	101.9%	117.9	26.4	F
Total		3,344	3,474	103.9%	50.0	3.3	D

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	22	108.5%	1.8	1.6	A
	Through						
	Right Turn	30	30	100.0%	3.3	3.7	A
	Subtotal	50	52	103.4%	2.8	3.2	A
SB	Left Turn	26	26	99.6%	5.2	4.0	A
	Through						
	Right Turn	60	63	104.3%	0.2	0.1	A
	Subtotal	86	89	102.9%	1.8	1.7	A
EB	Left Turn	94	98	104.5%	9.8	5.1	A
	Through	609	644	105.7%	11.2	4.2	B
	Right Turn	10	11	105.0%	4.9	4.4	A
	Subtotal	713	753	105.5%	10.9	4.2	B
WB	Left Turn	30	31	104.0%	3.6	1.4	A
	Through	406	410	101.1%	3.8	0.7	A
	Right Turn	41	43	103.9%	2.0	0.4	A
	Subtotal	477	484	101.5%	3.6	0.6	A
Total		1,326	1,377	103.8%	7.3	2.1	A

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	10	9	91.0%	19.9	10.2	B
	Through						
	Right Turn						
	Subtotal	10	9	91.0%	19.9	10.2	B
SB	Left Turn	252	248	98.5%	21.4	2.3	C
	Through						
	Right Turn	96	97	101.5%	4.6	0.8	A
	Subtotal	348	346	99.3%	16.8	1.3	B
EB	Left Turn	109	112	102.8%	15.4	6.9	B
	Through	556	586	105.3%	19.5	2.6	B
	Right Turn						
	Subtotal	665	698	104.9%	18.8	2.5	B
WB	Left Turn	10	12	115.0%	15.5	10.5	B
	Through	371	377	101.6%	10.4	3.3	B
	Right Turn	175	180	102.7%	4.3	1.3	A
	Subtotal	556	568	102.2%	8.7	2.7	A
Total		1,579	1,621	102.6%	15.3	1.8	B

Vissim Post-Processor | **Pulte Debonne Traffic Study & Roundabout**
Average Results from 10 Runs | **Cumulative Year Plus Project (Roundabout)**
Queue Length | **PM Peak Hour**

Intersection 4 **Jefferson St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	200	37	5	30	43	255	83	179	469	MAX
	Through	1,200	118	14	106	149	662	100	552	804	NO
	Right Turn	1,200	10	3	6	15	173	54	104	289	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	300	127	41	99	239	575	231	378	1,190	MAX
	Through	2,500	91	14	73	125	620	144	431	851	NO
	Right Turn	2,500	92	14	74	126	622	144	432	853	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	22	3	17	26	142	32	89	195	NO
	Through	5,000	43	5	34	49	238	34	182	295	NO
	Right Turn	5,000	43	5	34	49	238	34	183	295	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	150	218	49	153	331	578	105	440	753	AVG
	Through	4,500	18	2	16	21	108	28	75	158	NO
	Right Turn	175	8	1	8	10	134	25	87	168	NO
	Second Right										

Intersection 5 **Camino San Gregorio/Ave 40** **Roundabout**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	29	27	0	57	NO
	Through										
	Right Turn	100	0	0	0	0	29	27	0	57	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	28	11	20	47	NO
	Through										
	Right Turn	100	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	4,500	28	8	19	46	434	63	350	514	NO
	Through	4,500	28	8	19	46	434	63	350	514	NO
	Right Turn	4,500	24	8	16	42	435	63	351	515	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	2	7	0	23	NO
	Through	500	0	0	0	1	98	24	72	140	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										

Intersection 6 **Madison St/Ave 40** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	1	0	0	1	56	37	23	99	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	150	25	2	22	28	207	54	150	320	MAX
	Through										
	Right Turn	150	1	0	1	1	62	15	42	84	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	175	5	1	4	9	116	29	66	161	NO
	Through	500	11	1	9	12	134	18	111	166	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	2,500	0	0	0	1	27	10	19	50	NO
	Through	2,500	8	1	6	9	104	15	83	128	NO
	Right Turn	2,500	4	1	3	5	101	23	65	143	NO
	Second Right										

APPENDIX L

AB 52 and SB 18 Tribal Consultation

APPENDIX L.1

SB 18 and AB 52 Notification

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

■ **CEQA Tribal Consultation List (AB 52)** – *Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2*

■ **General Plan (SB 18)** - *Per Government Code § 65352.3.*

Local Action Type:

☐ **General Plan** ☐ **General Plan Element** ☐ **General Plan Amendment**

☑ **Specific Plan** ☐ **Specific Plan Amendment** ☐ **Pre-planning Outreach Activity**

Required Information

Project Title: Desert Retreat Specific Plan Project

Local Government/Lead Agency: City of Indio

Contact Person: Kevin Snyder, Community Development Director

Street Address: 100 Civic Center Drive

City: Indio **Zip:** 92201

Phone: (760) 541-4255 **Fax:**

Email: ksnyder@indio.org

Specific Area Subject to Proposed Action

County: Riverside **City/Community:** Indio

Project Description:

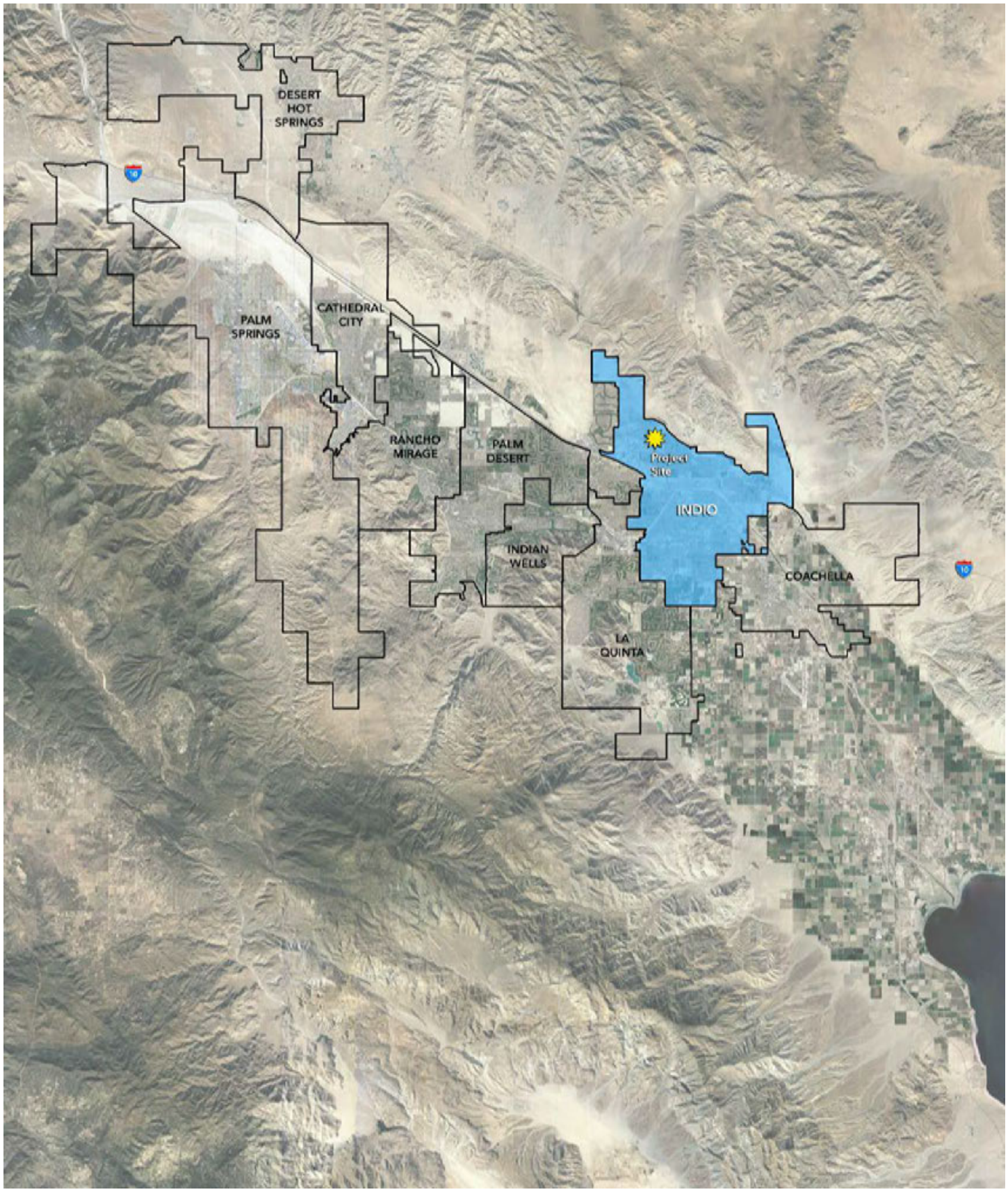
The City of Indio (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Desert Retreat Specific Plan Project (Project). The Project description and location, as well as the potential environmental effects proposed for study in the Draft EIR, are contained in the attached Initial Study. The Specific Plan is proposed to implement the City's General Plan for the approximate 377-acre site by allowing development of a master-planned residential community with recreation amenities and a multi-use trail system fostering connectivity with the surrounding communities. The proposed Specific Plan would allow development of up to 1,500 age-restricted active adult residential units.

Additional Request

☐ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s):

Township: **Range:** **Section(s):**



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20

SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

APPENDIX L.2

Tribal Notification Letters

September 6, 2022

Patricia Garcia-Plotkin, Director
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

Project Description: The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site. The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing. The applicant is also proposing a Tentative Tract Map (TTM-22-06-470) to develop up to 1,500 age restricted active adult residential units. Further, the applicant is requesting Design Review (DR-22-06-503) approval for model homes, on-site amenities and typical front yard landscaping.

Project Location: The Project site is located in the northwest portion of the City of Indio, as shown in Figure 1: Regional Location Map. The Specific Plan Area is bound by the following streets: 38th Avenue on the north, Jefferson Street on the west, 40th Avenue on the south, and Madison Street on the east, as shown in Figure 2: Project Location Map. The project site is comprised of Assessor's Parcel Numbers 691-110-002, 691-110-003, 691-110-004, 691-110-007, 691-110-008, 691-110-011, 691-110-014, 691-100-021, 691-100-023 and 691-100-025.

General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Indio by contacting the Lead Agency Contact directly.

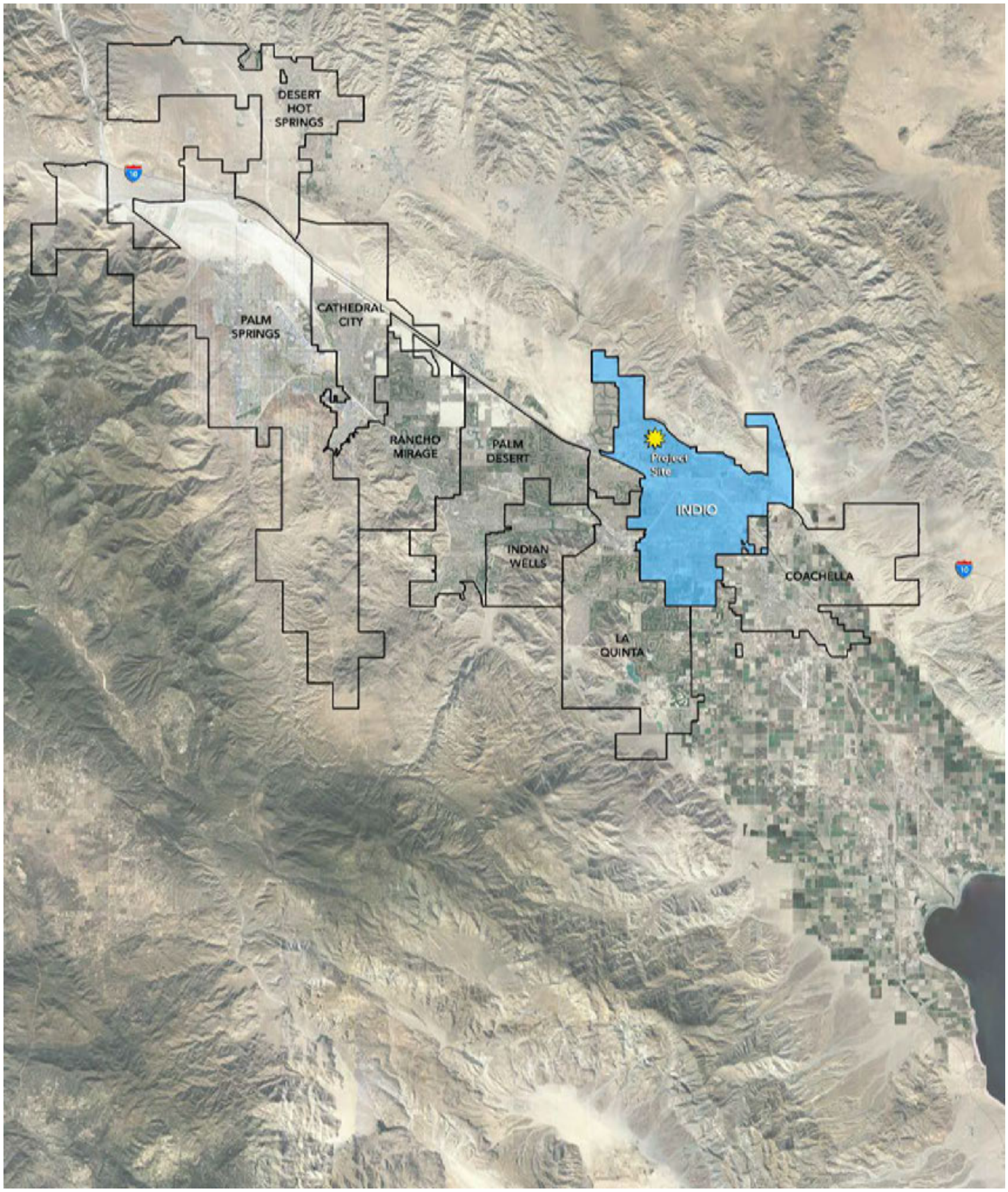
Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
Figure 1: Regional Location Map
Figure 2: Project Location Map

cc:Project File



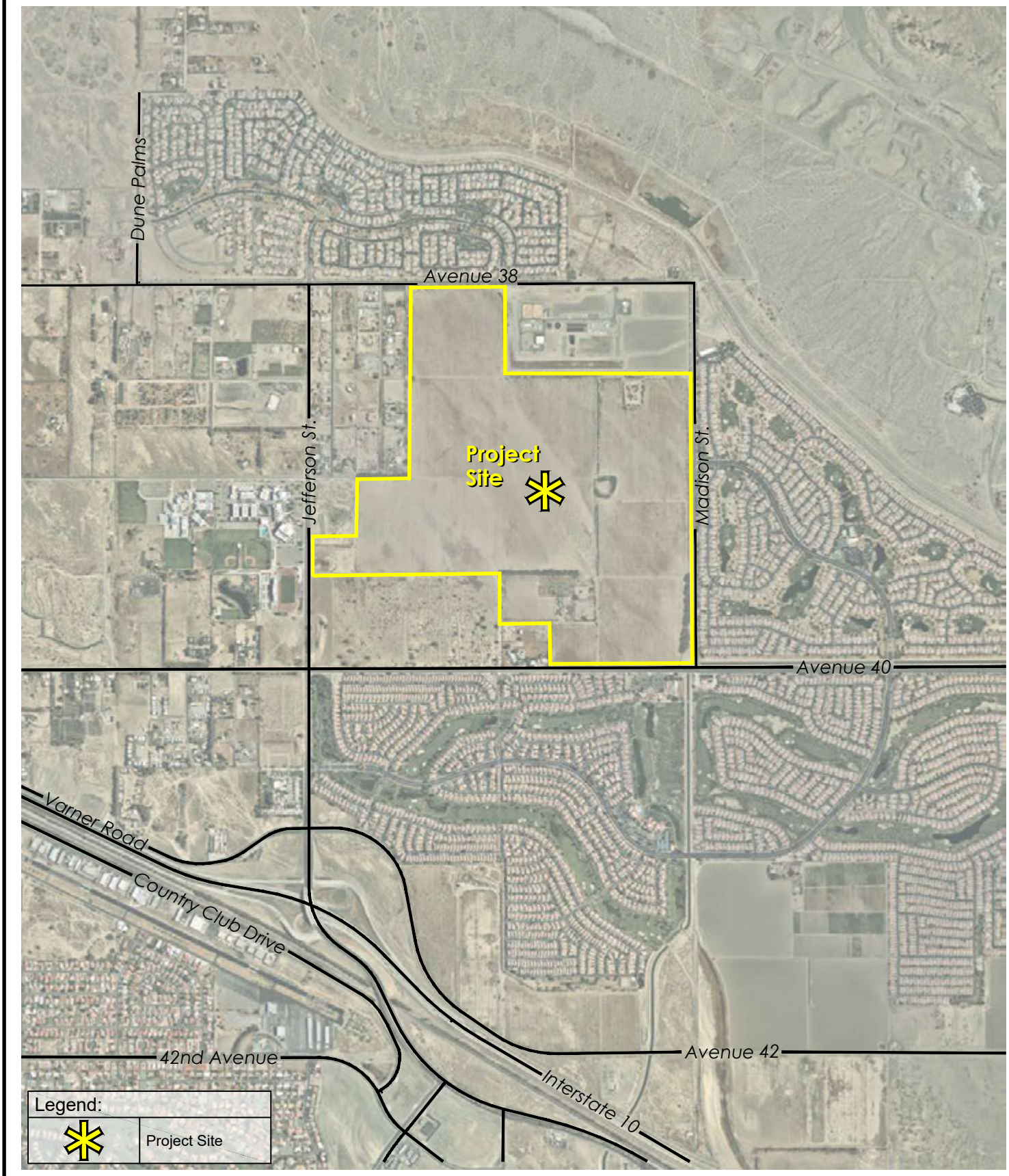
SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Reid Milanovich, Chairperson
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

Project Description: The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site. The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing. The applicant is also proposing a Tentative Tract Map (TTM-22-06-470) to develop up to 1,500 age restricted active adult residential units. Further, the applicant is requesting Design Review (DR-22-06-503) approval for model homes, on-site amenities and typical front yard landscaping.

Project Location: The Project site is located in the northwest portion of the City of Indio, as shown in Figure 1: Regional Location Map. The Specific Plan Area is bound by the following streets: 38th Avenue on the north, Jefferson Street on the west, 40th Avenue on the south, and Madison Street on the east, as shown in Figure 2: Project Location Map. The project site is comprised of Assessor's Parcel Numbers 691-110-002, 691-110-003, 691-110-004, 691-110-007, 691-110-008, 691-110-011, 691-110-014, 691-100-021, 691-100-023 and 691-100-025.

General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Indio by contacting the Lead Agency Contact directly.

Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
Figure 1: Regional Location Map
Figure 2: Project Location Map

cc:Project File

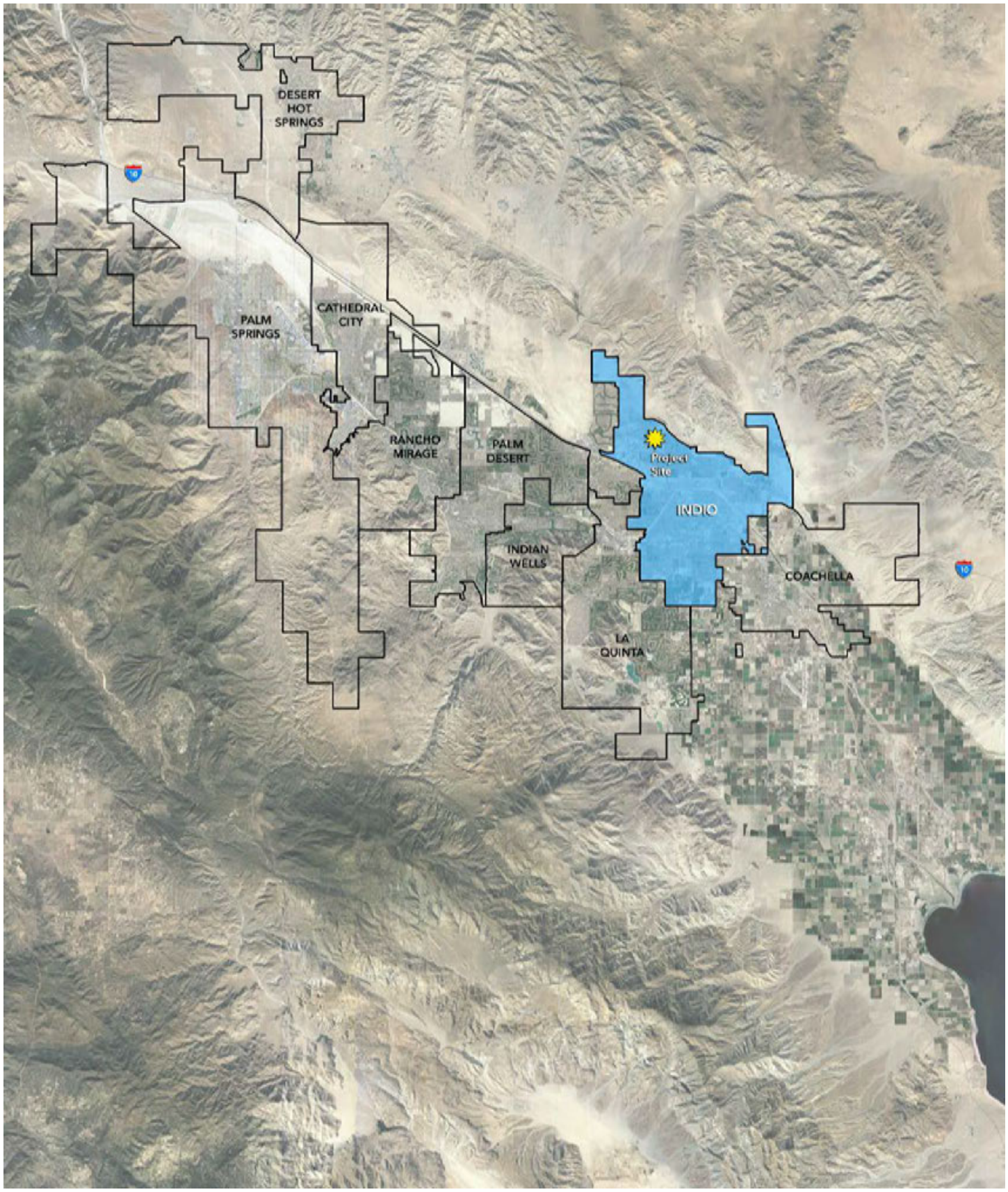


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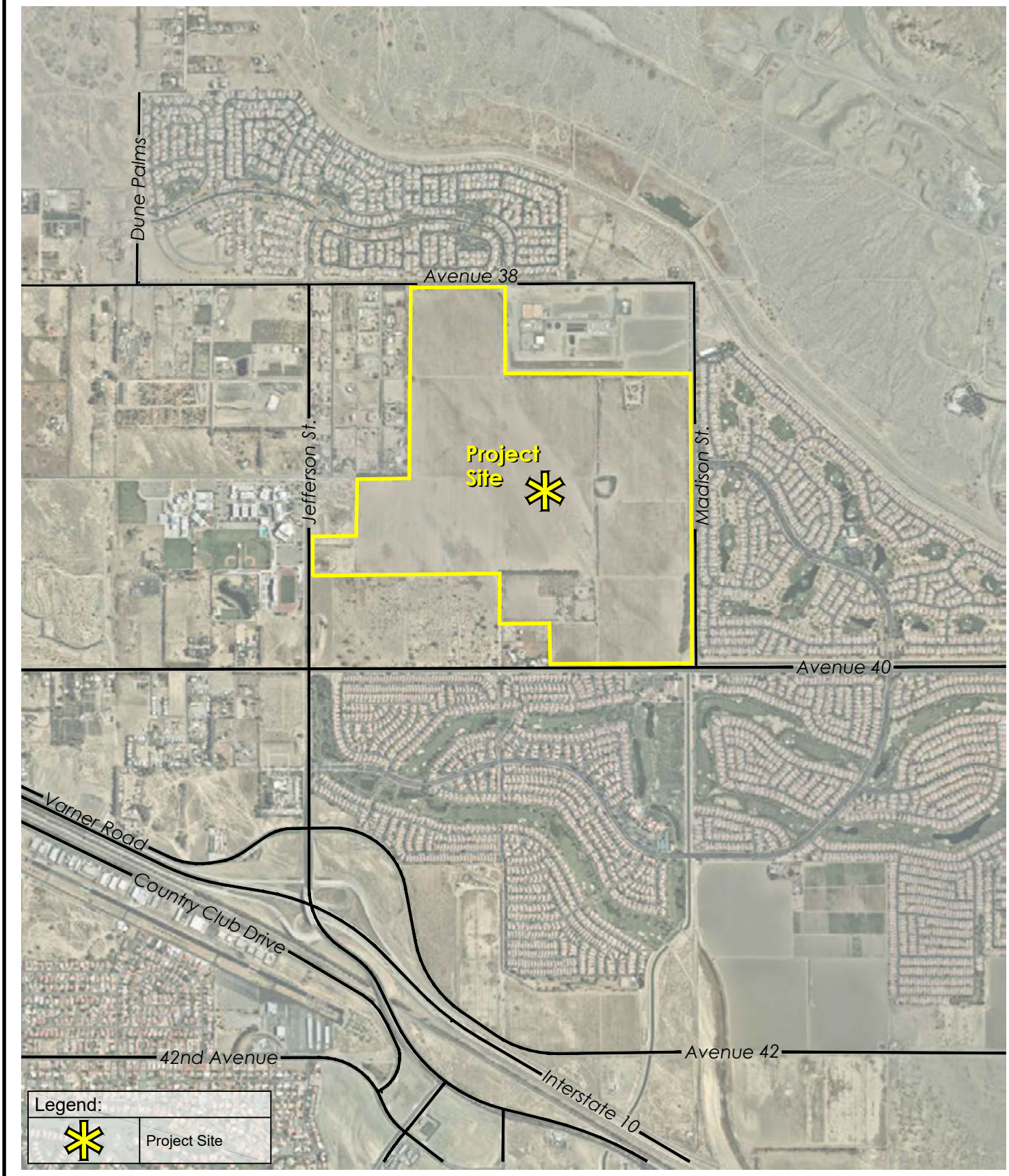
FIGURE **1**

INDIO

Regional Location Map

044-002-20



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Amanda Vance, Chairperson
Augustine Band of Cahuilla Mission Indians
P.O. Box 846
Coachella, CA 92236

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

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Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Indio by contacting the Lead Agency Contact directly.

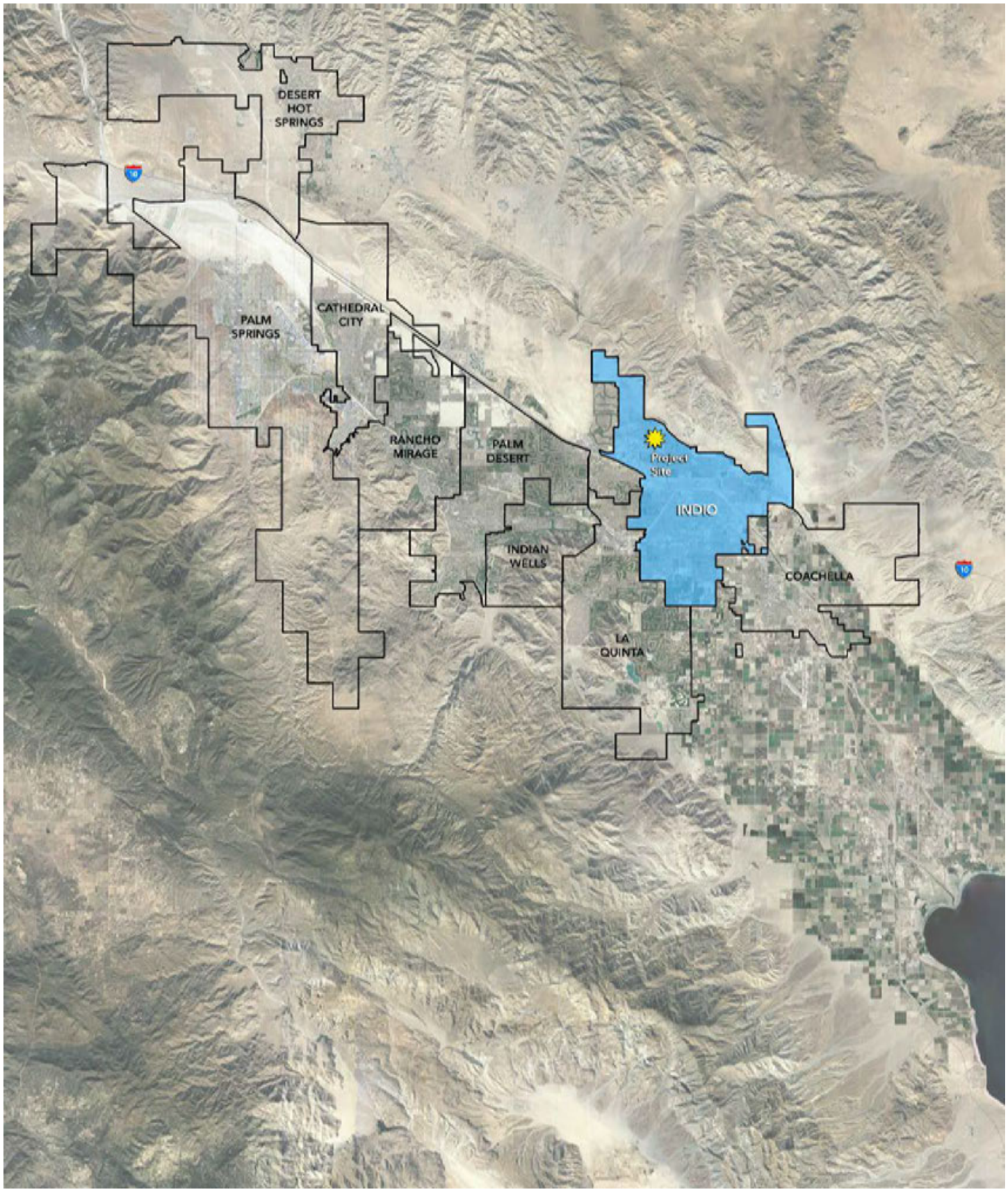
Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
Figure 1: Regional Location Map
Figure 2: Project Location Map

cc:Project File



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20

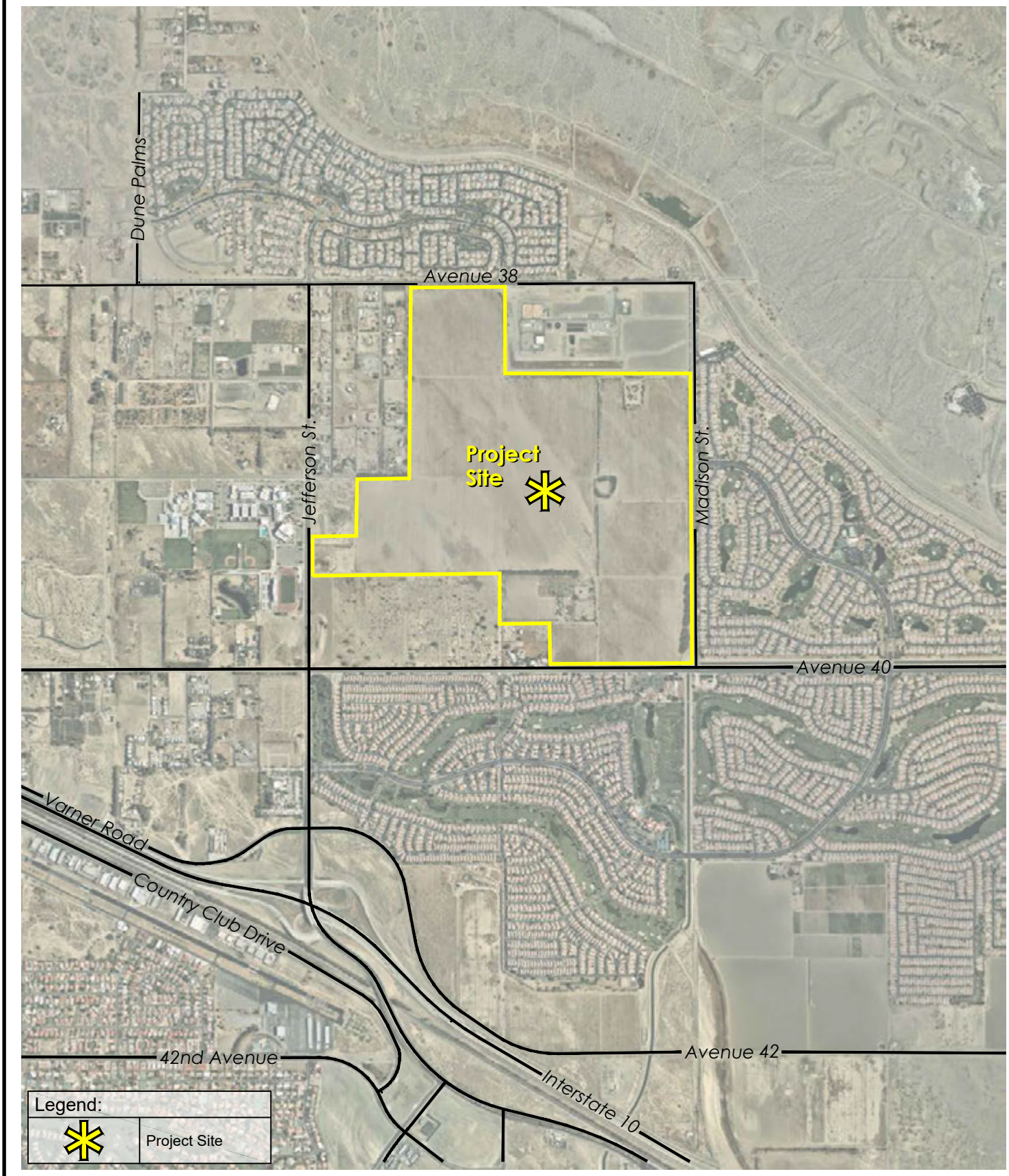


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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Doug Welmas, Chairperson
Cabazon Band of Mission Indians
84-245 Indio Springs Parkway
Indio, CA 92203

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

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Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
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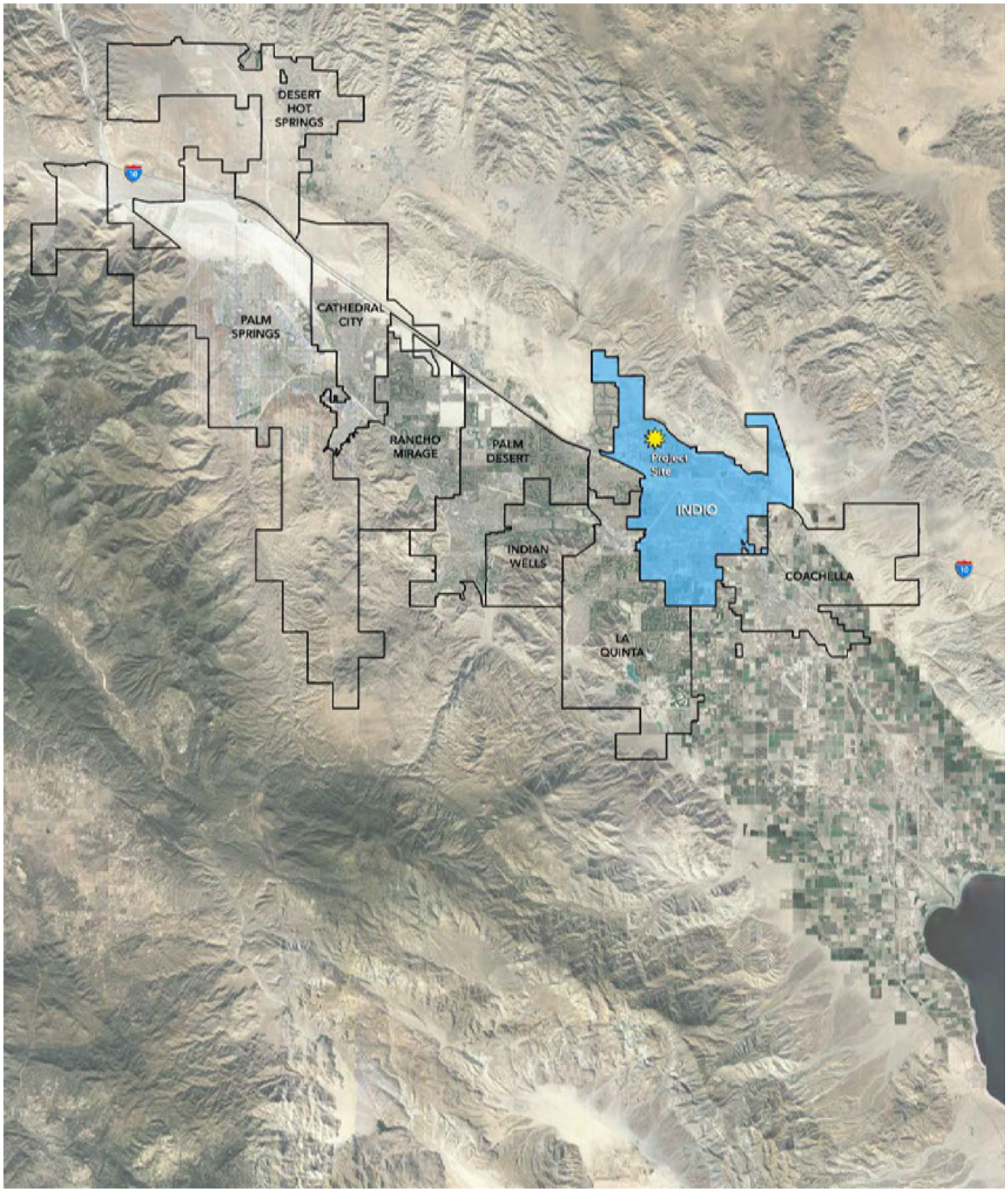

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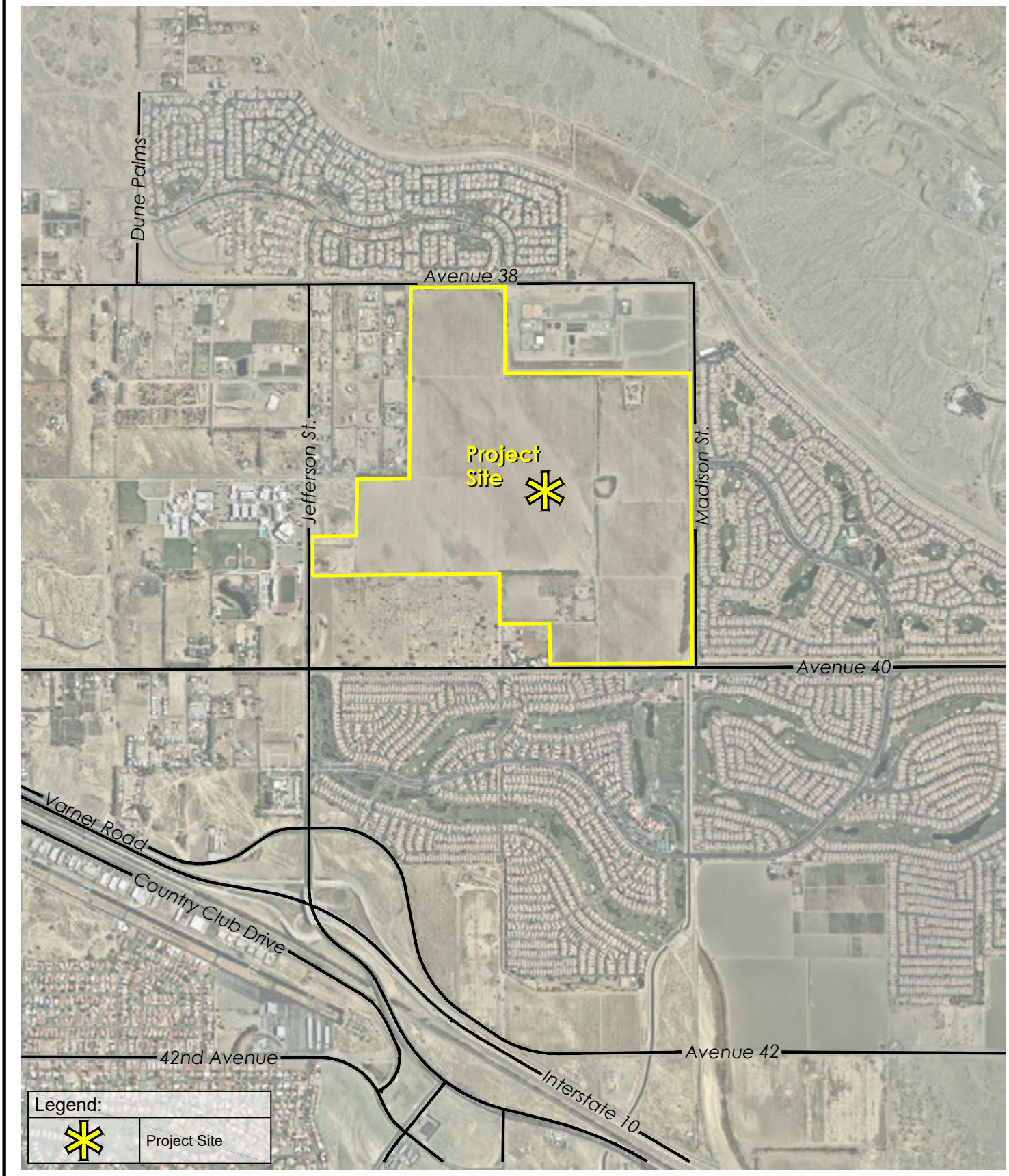

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Michael Mirelez, Director of Cultural Affairs
Cabazon Band of Mission Indians
84-245 Indio Springs Parkway
Indio, CA 92203

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

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Director of Community Development

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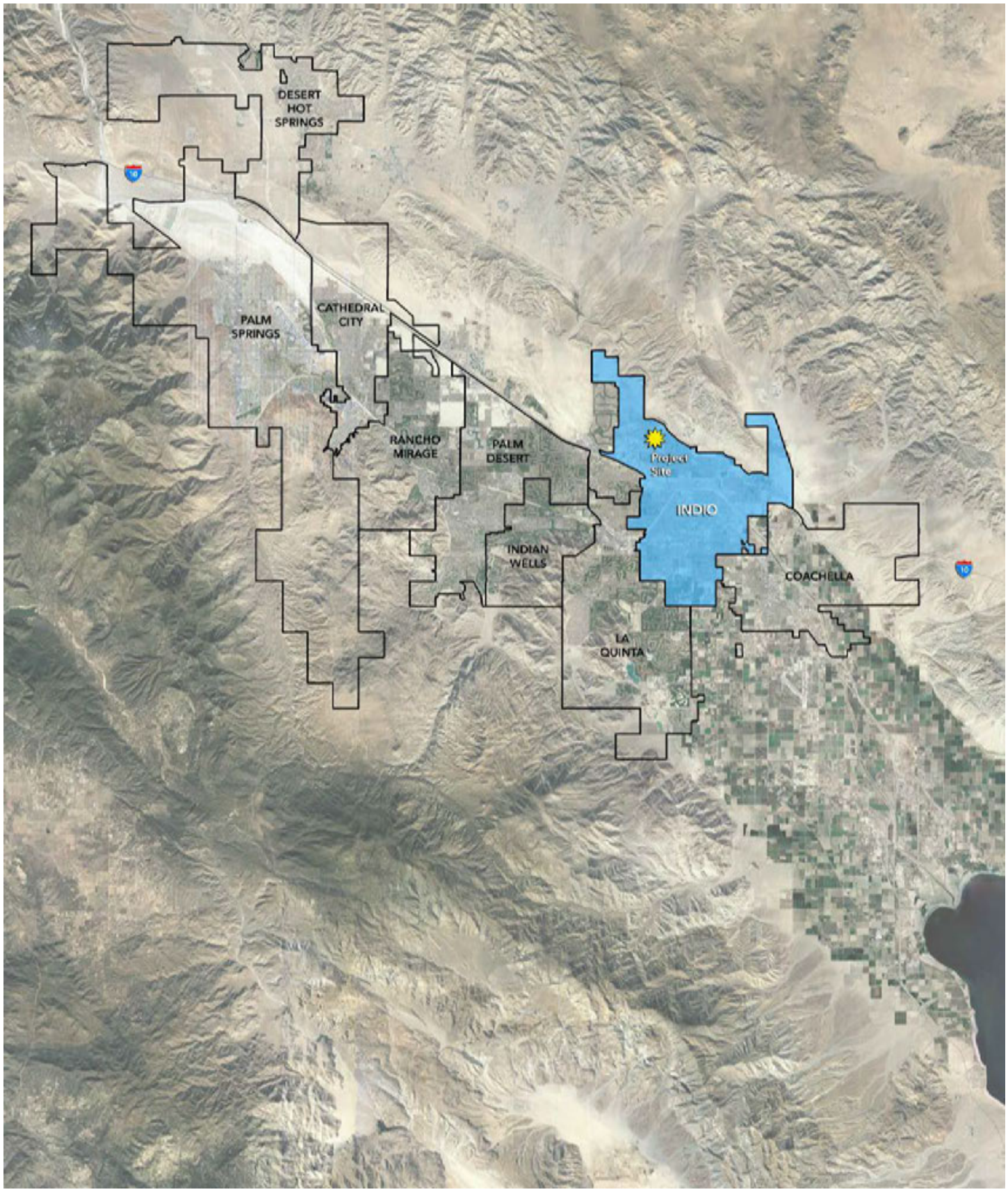

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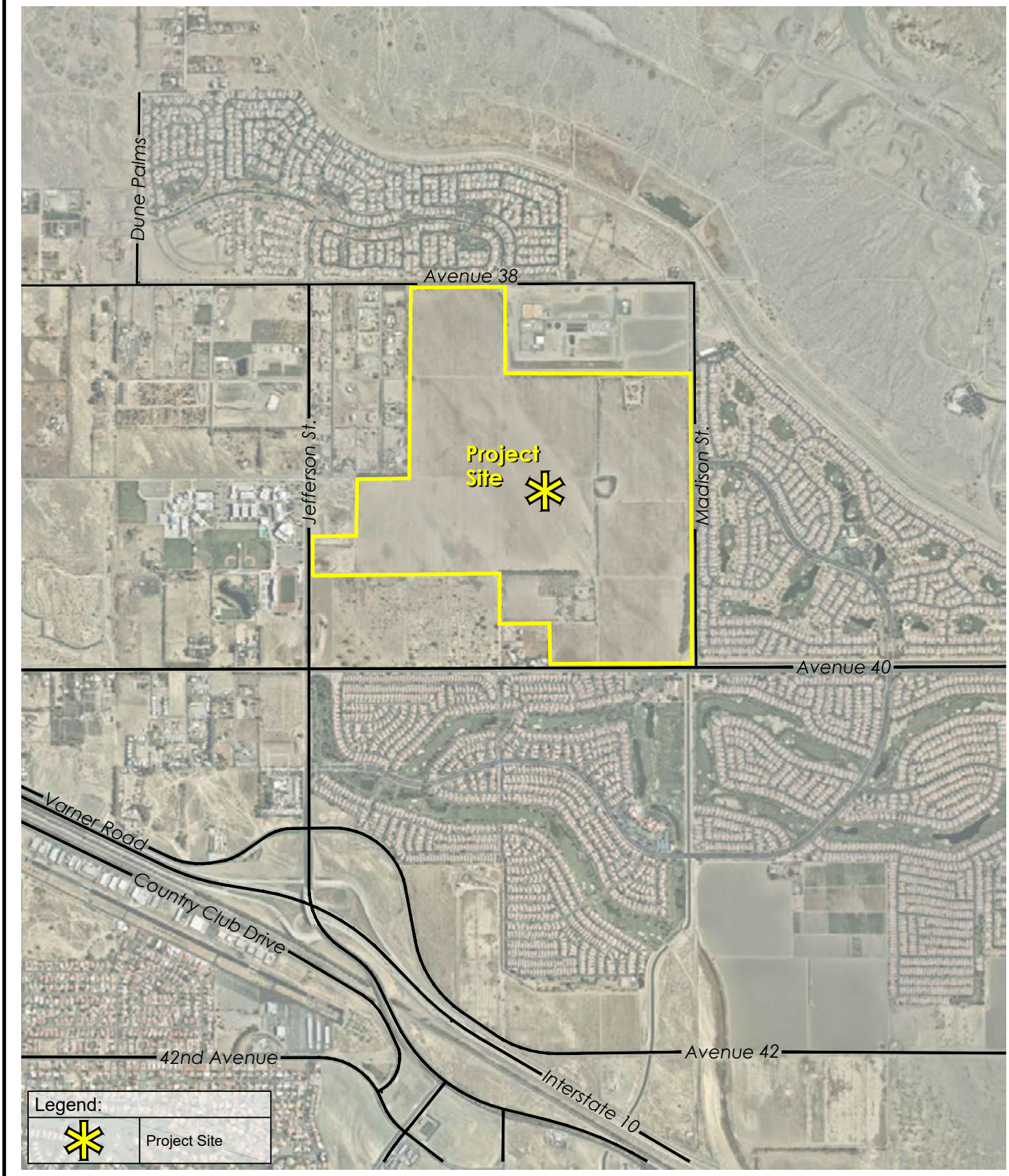

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Daniel Salgado, Chairperson
Cahuilla Band of Indians
52701 U.S. Highway 371
Anza, CA 92539

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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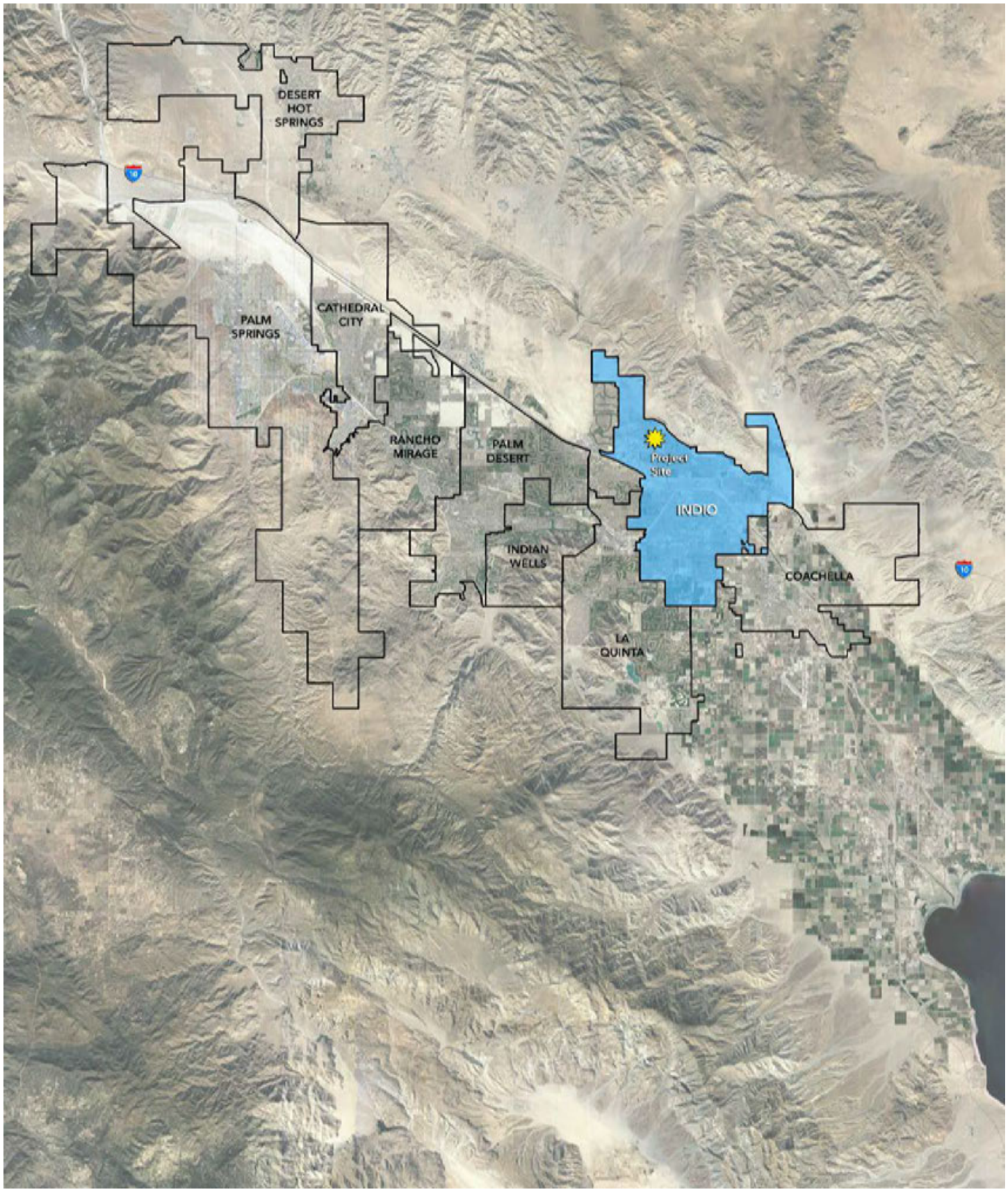

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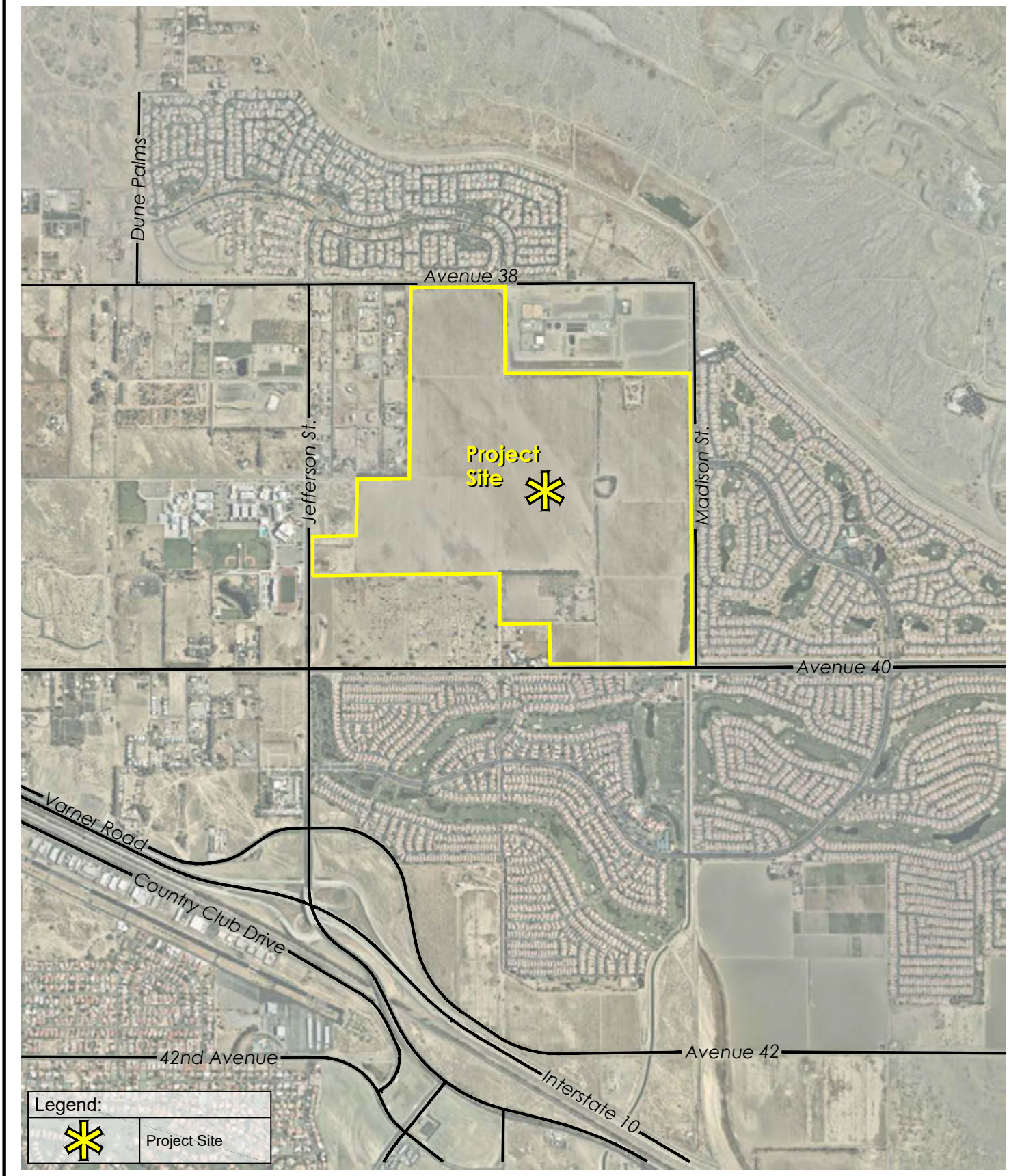

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Ralph Goff, Chairperson
Campo Band of Diegueno Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

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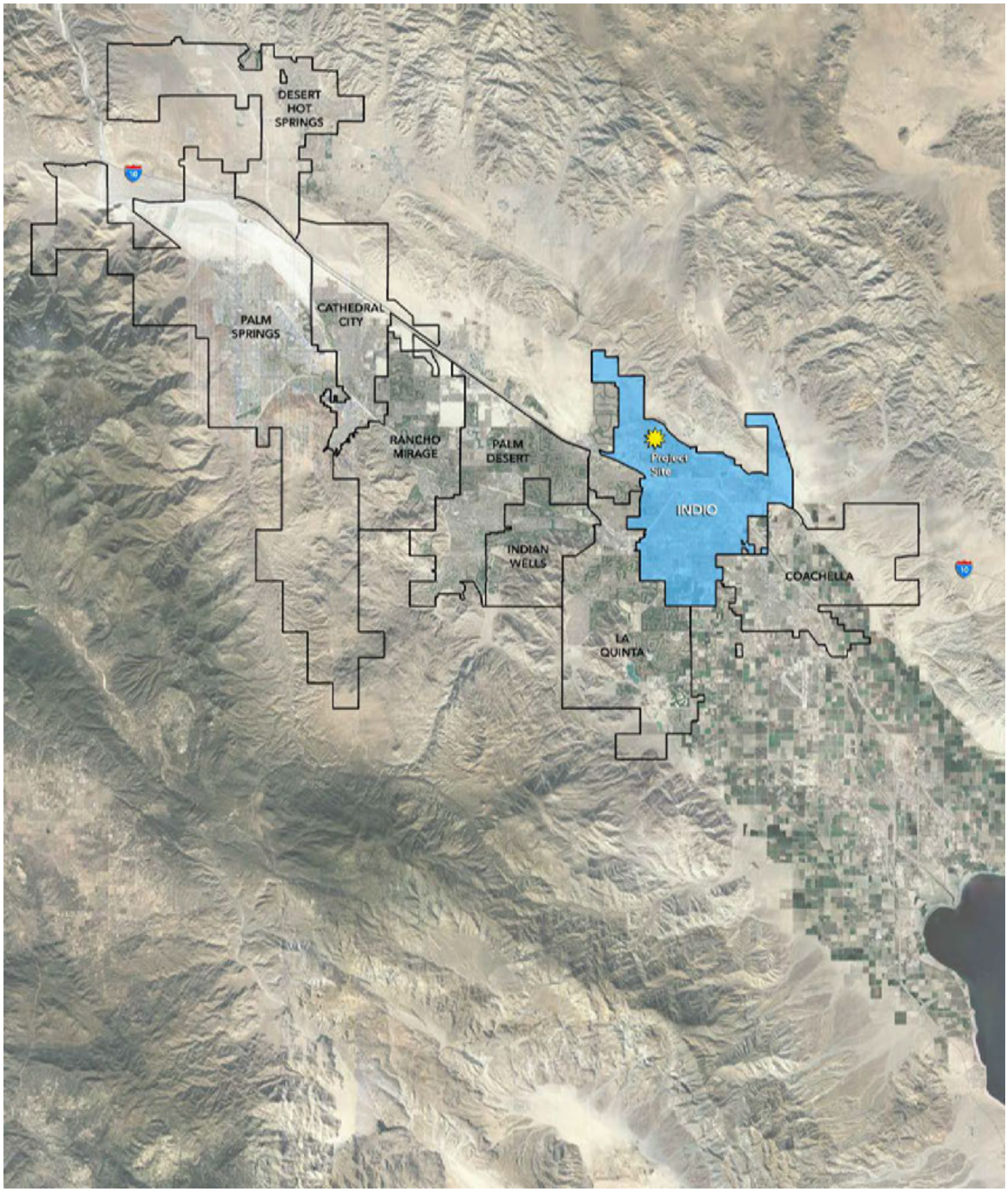

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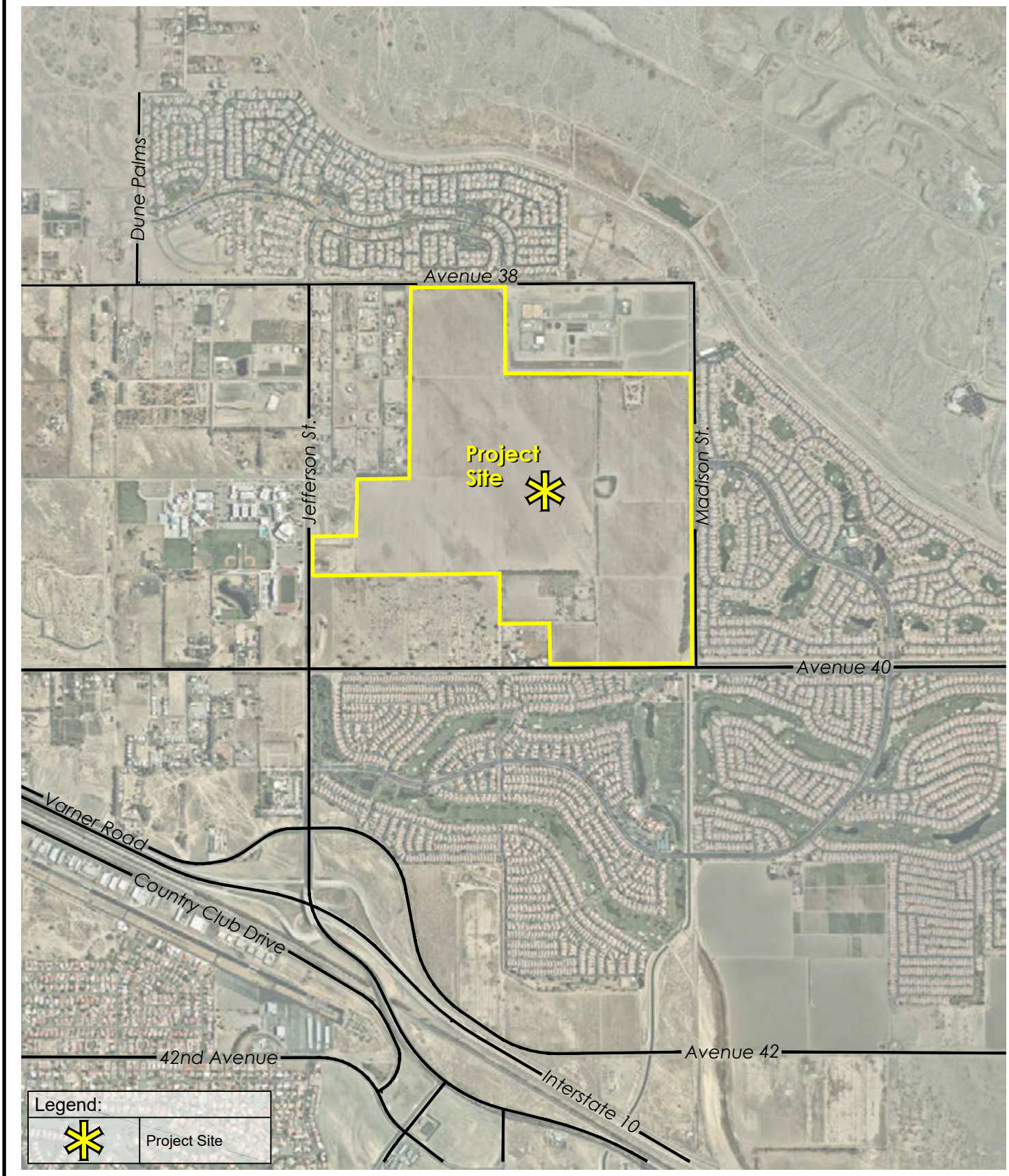

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Michael Garcia, Vice Chairperson
Ewiiaapaayp Band of Kumeyaay Indians
4054 Willows Road
Alpine, CA 91901

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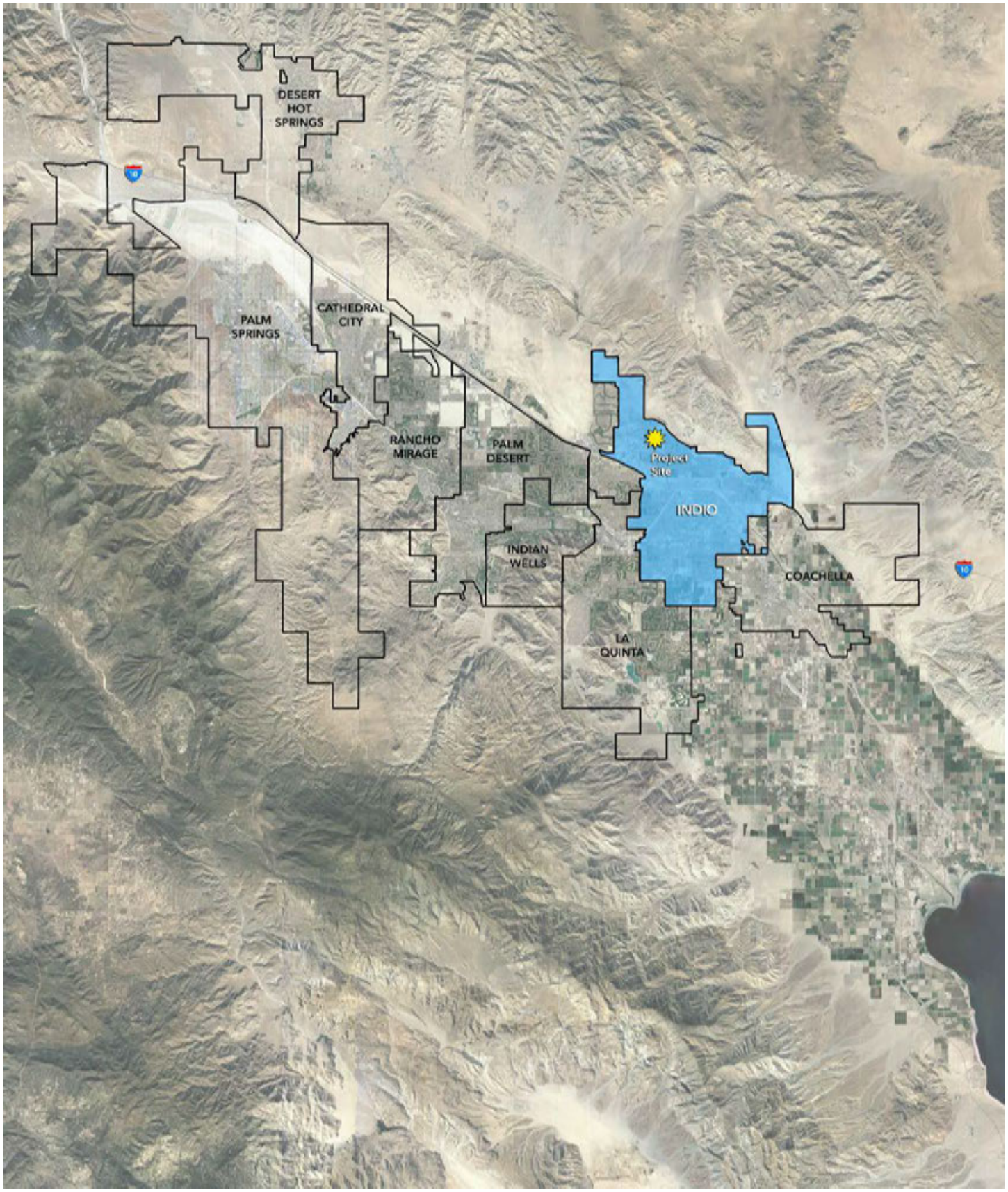

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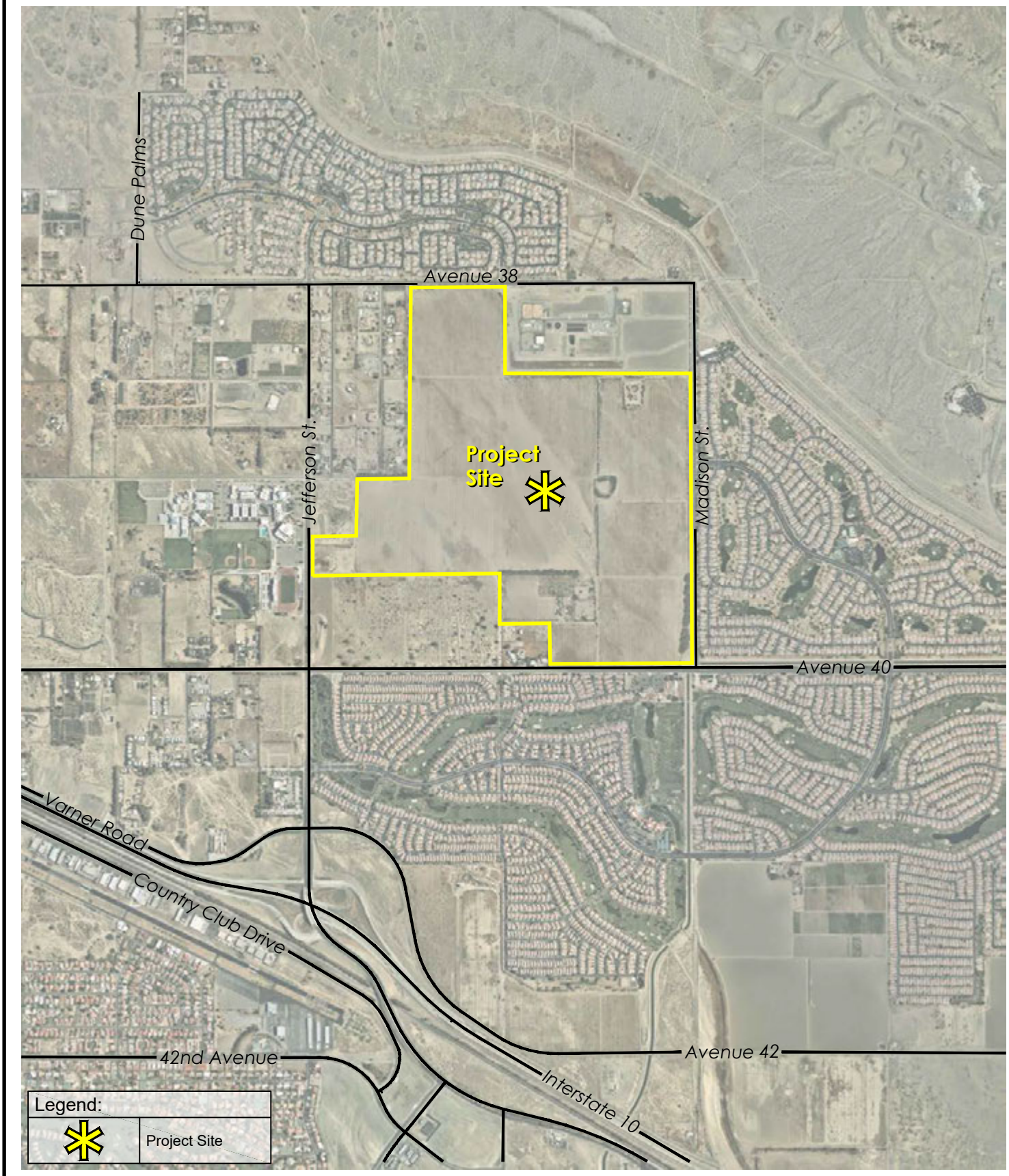

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Project Location Map

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September 6, 2022

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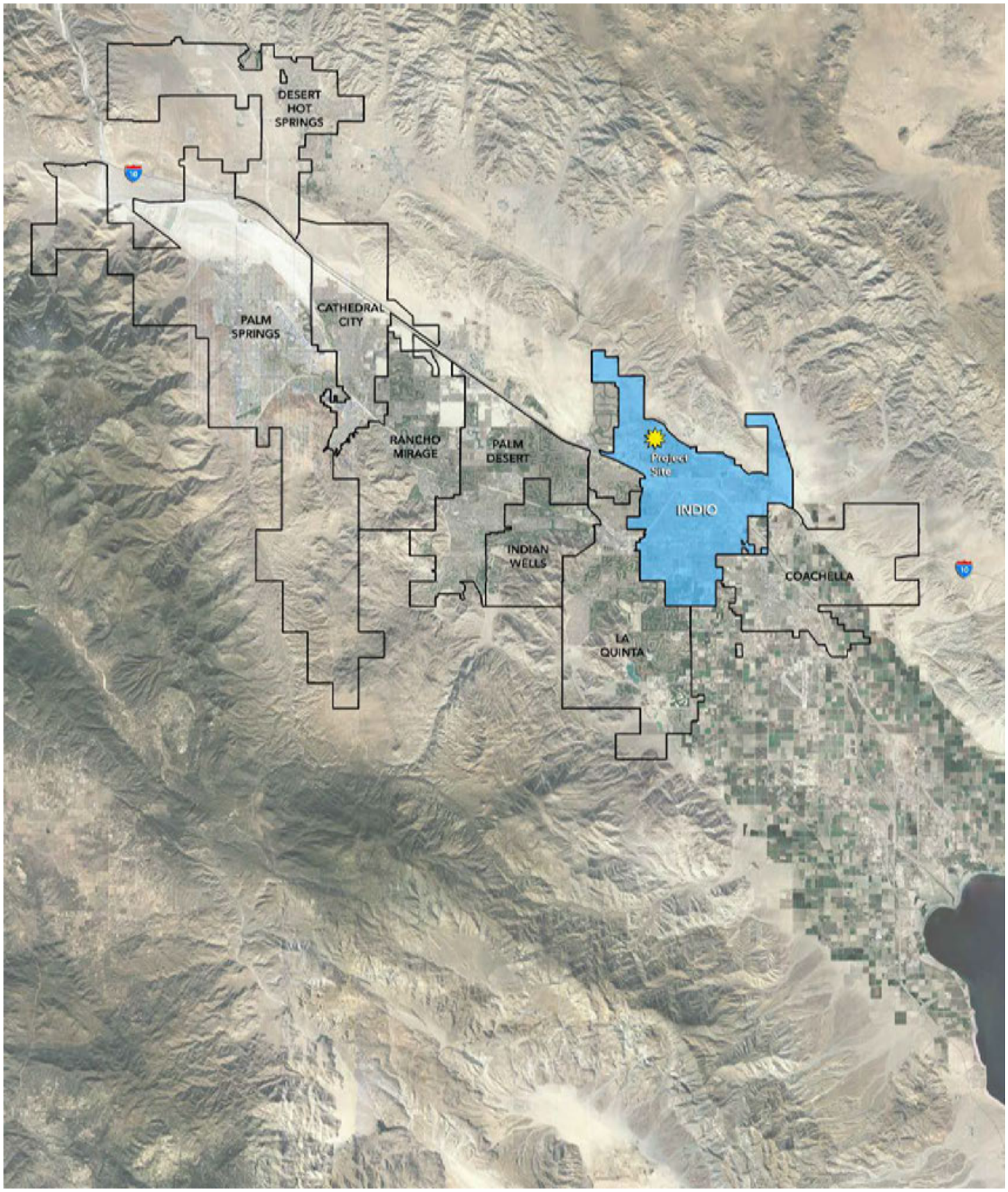

SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20

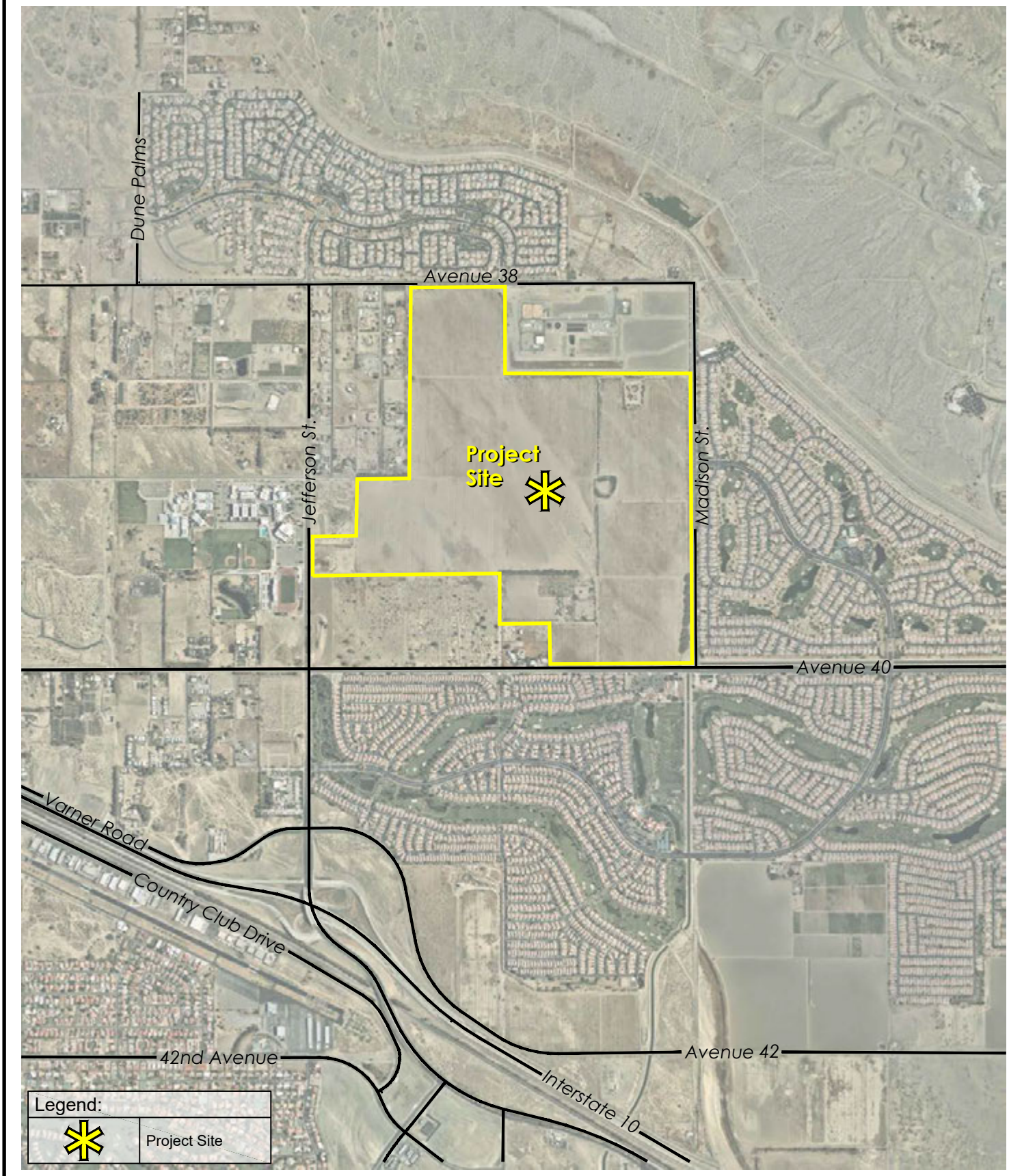

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Gwendolyn Parada, Chairperson
La Posta Band of Diegueno Mission Indians
8 Crestwood Road
Boulevard, CA 91905

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

Project Description: The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site. The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing. The applicant is also proposing a Tentative Tract Map (TTM-22-06-470) to develop up to 1,500 age restricted active adult residential units. Further, the applicant is requesting Design Review (DR-22-06-503) approval for model homes, on-site amenities and typical front yard landscaping.

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

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Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

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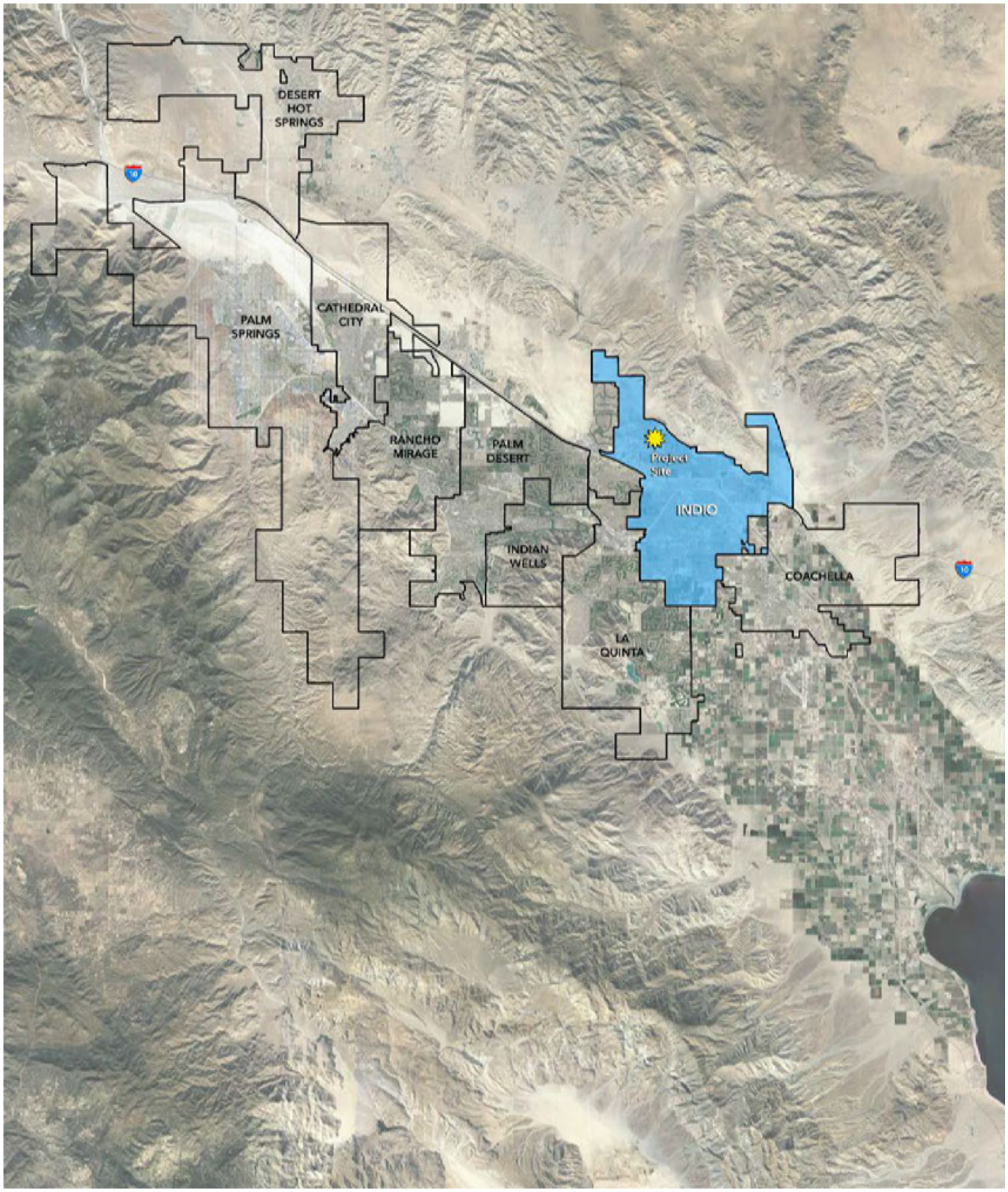

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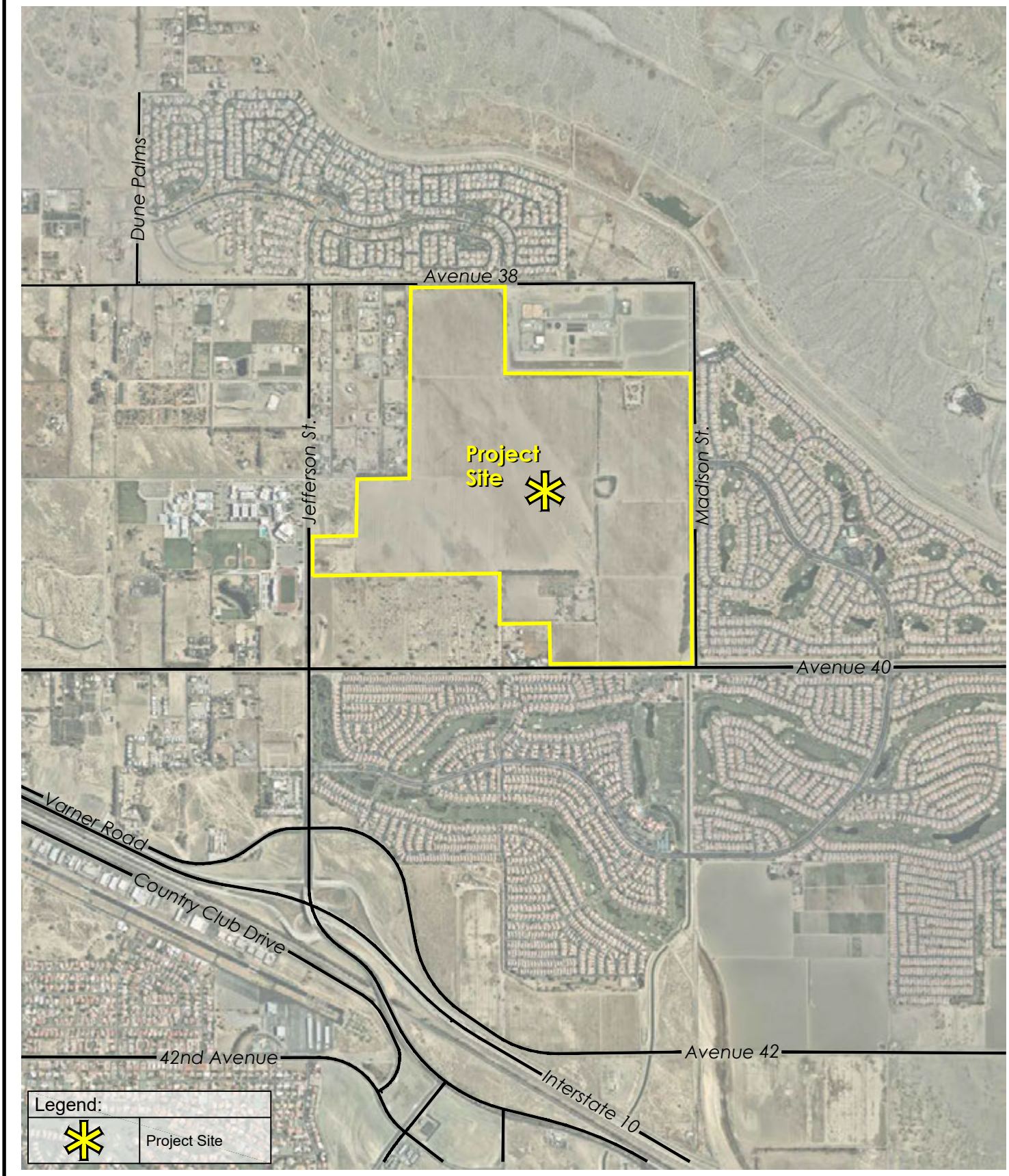

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Javaughn Miller, Tribal Administrator
La Posta Band of Diegueno Mission Indians
8 Crestwood Road
Boulevard, CA 91905

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

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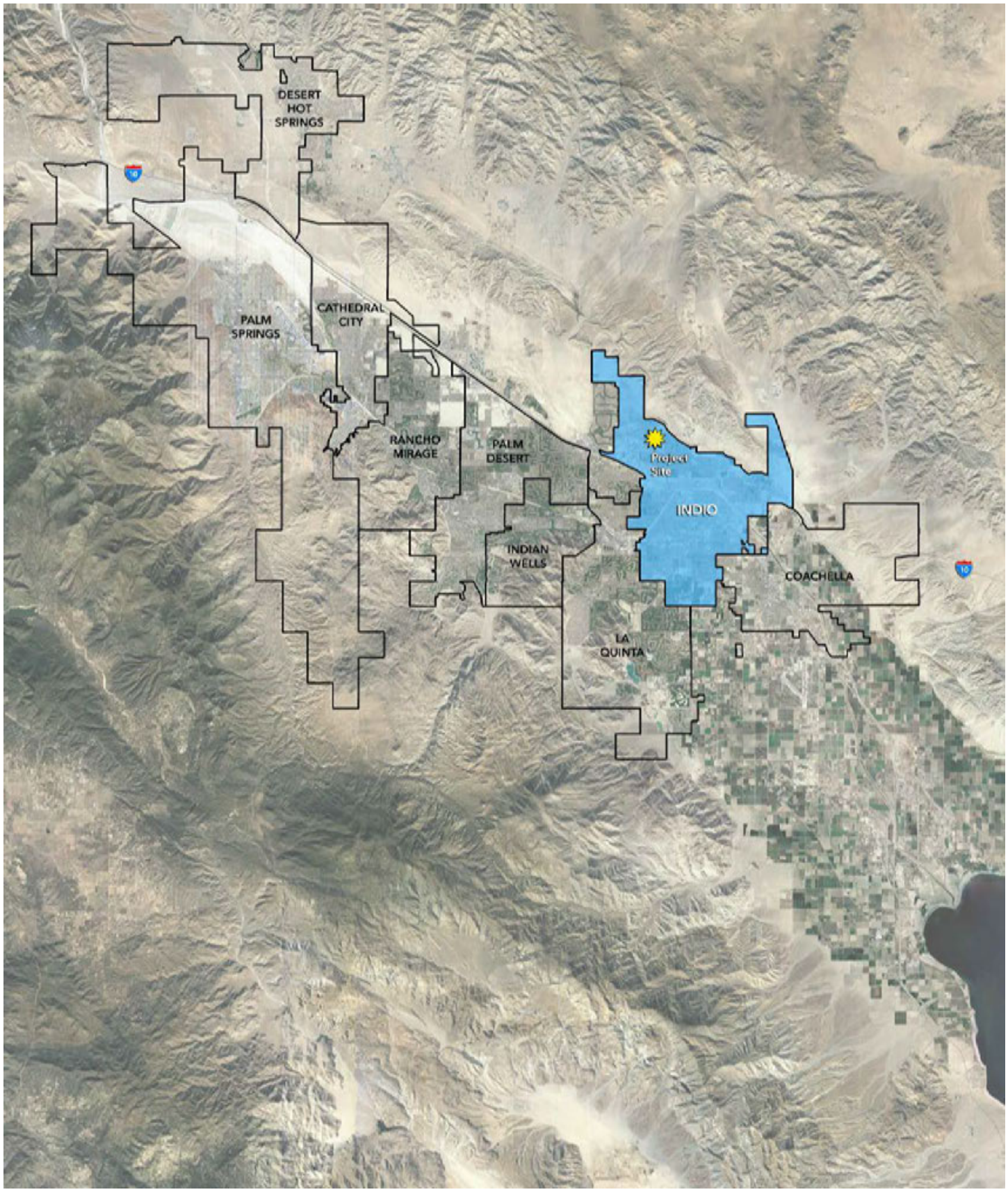

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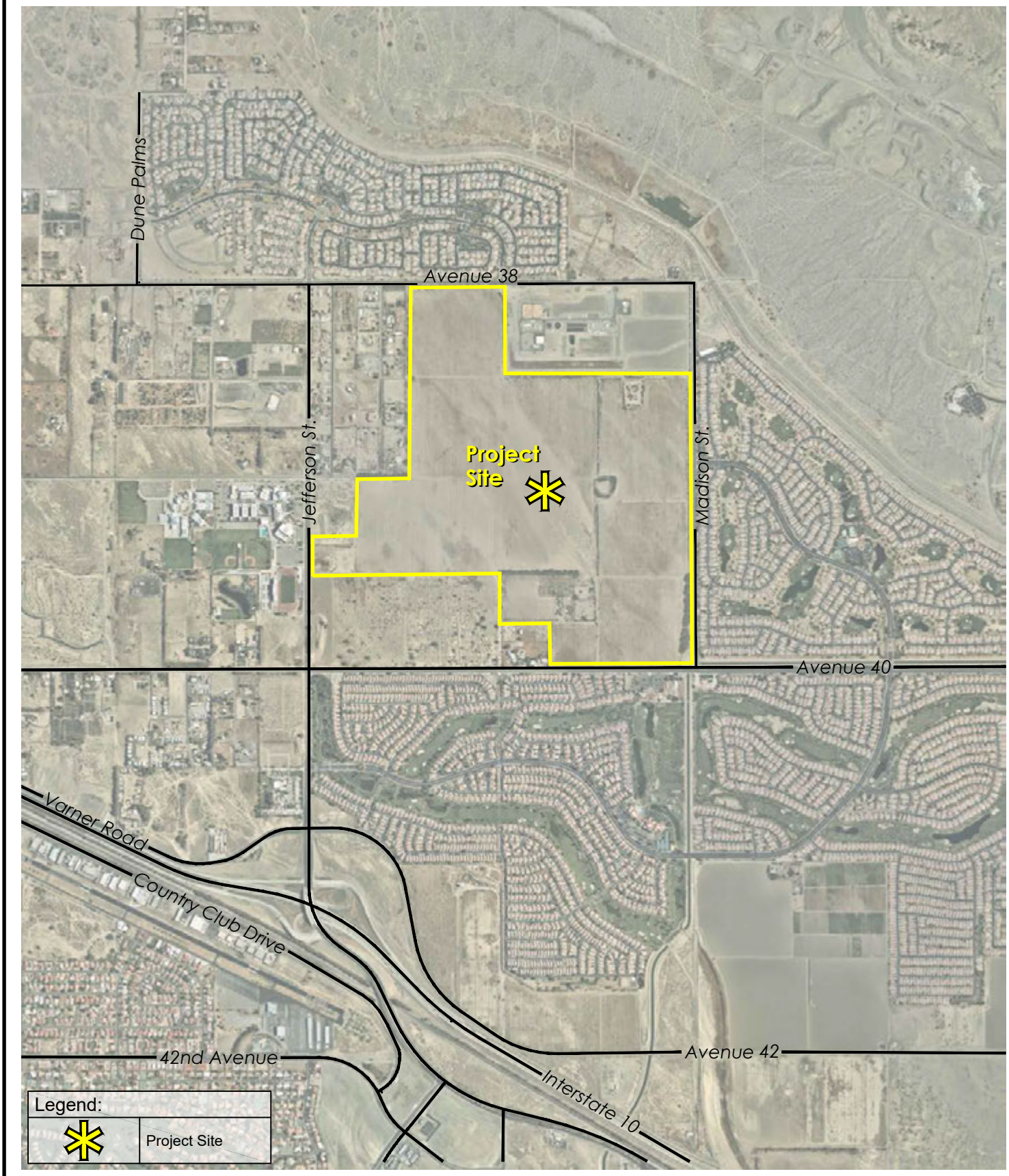

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Ray Chapparosa, Chairperson
Los Coyotes Band of Cahuilla and Cupeno Indians
P.O. Box 189
Warner Springs, CA 92086

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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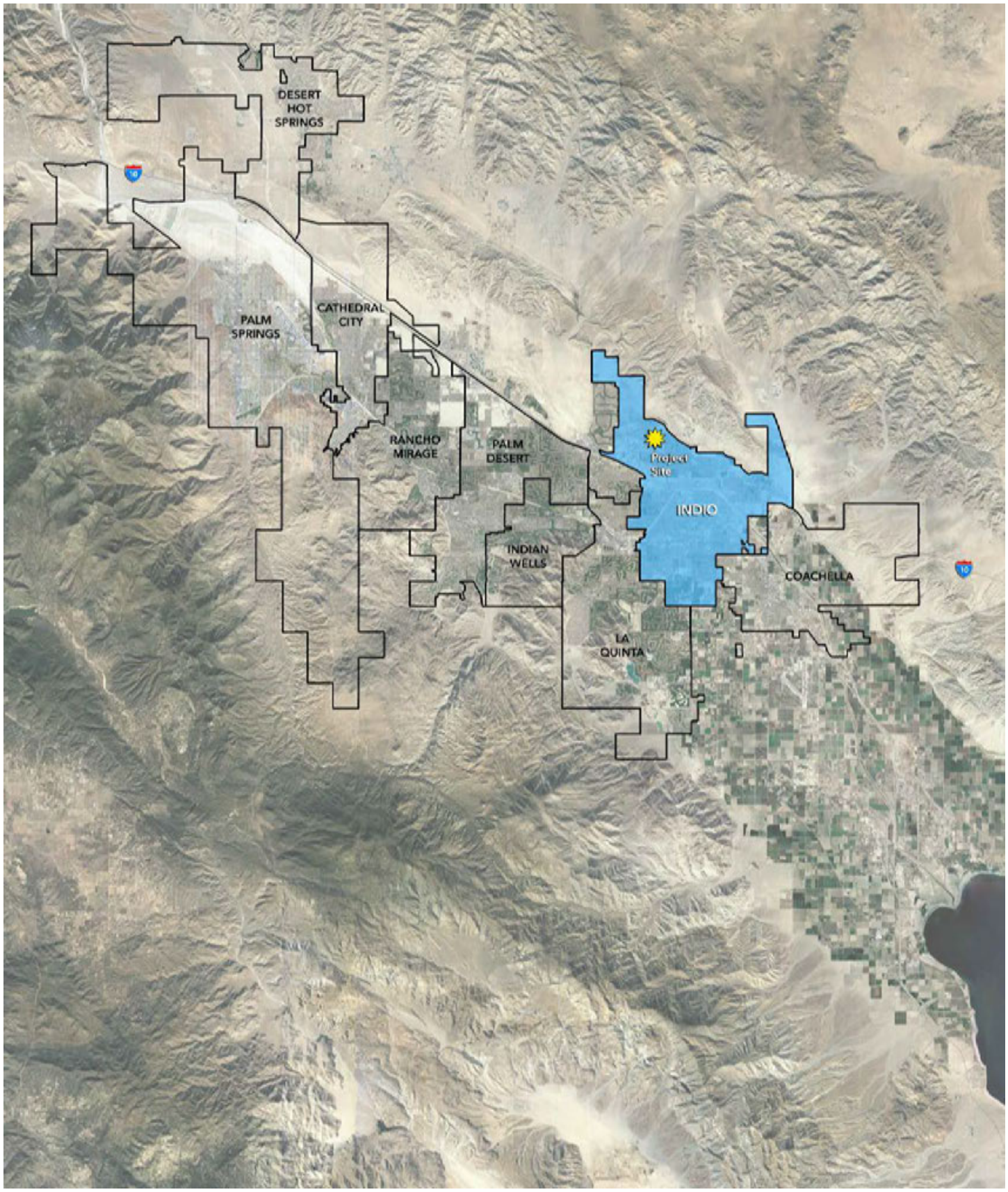

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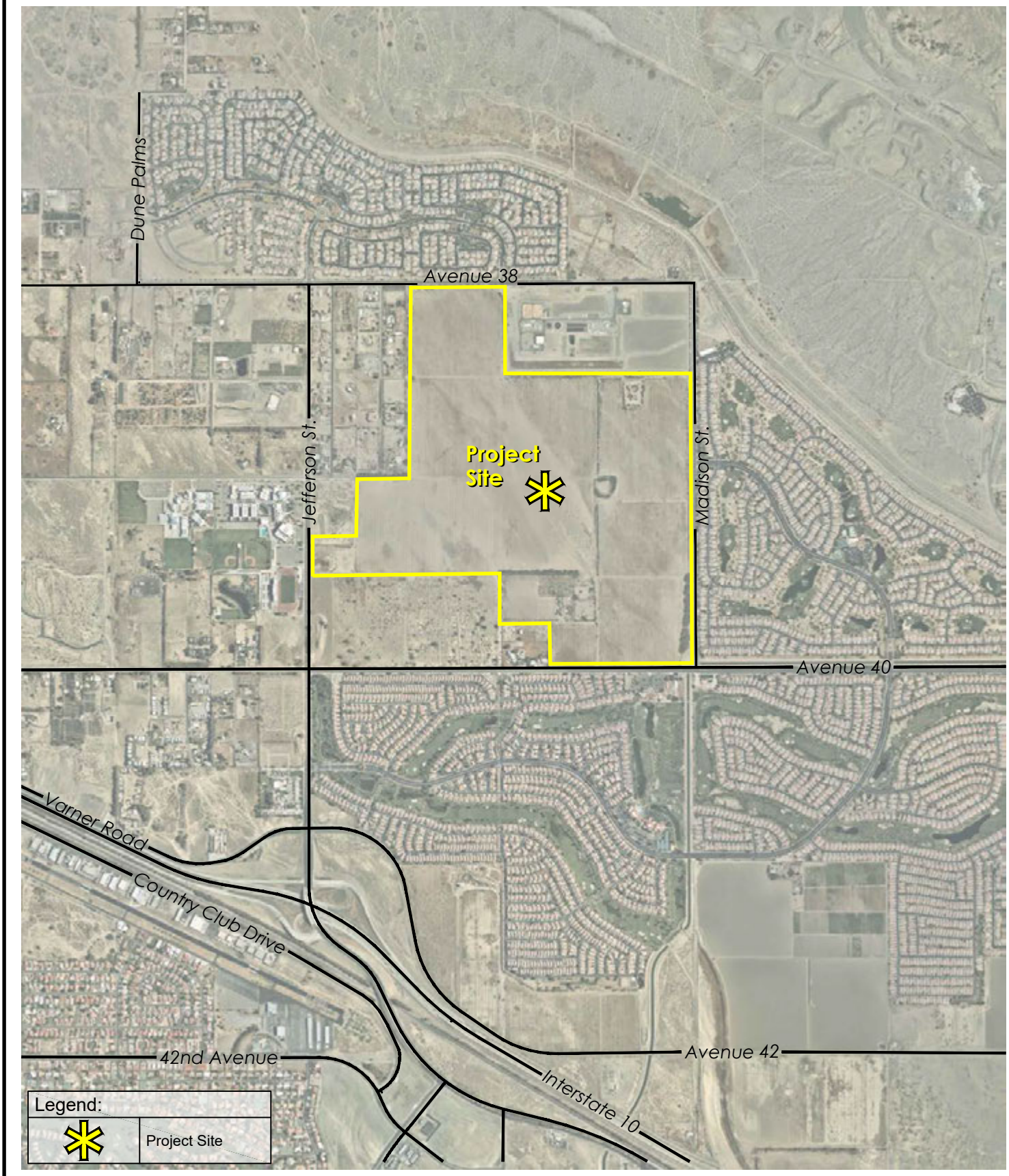

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Angela Elliott Santos, Chairperson
Manzanita Band of Kumeyaay Nation
P.O. Box 1302
Boulevard, CA 91905

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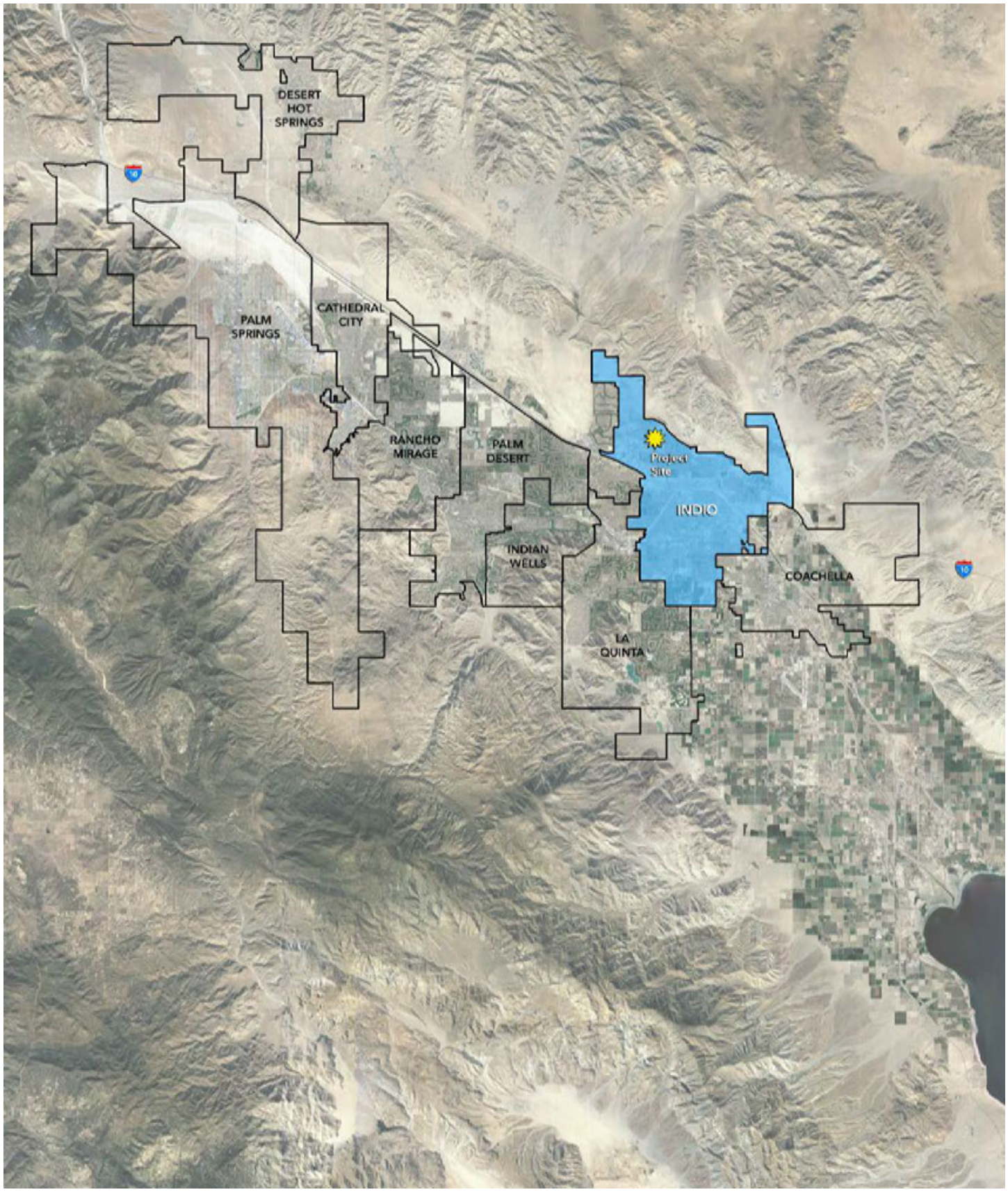

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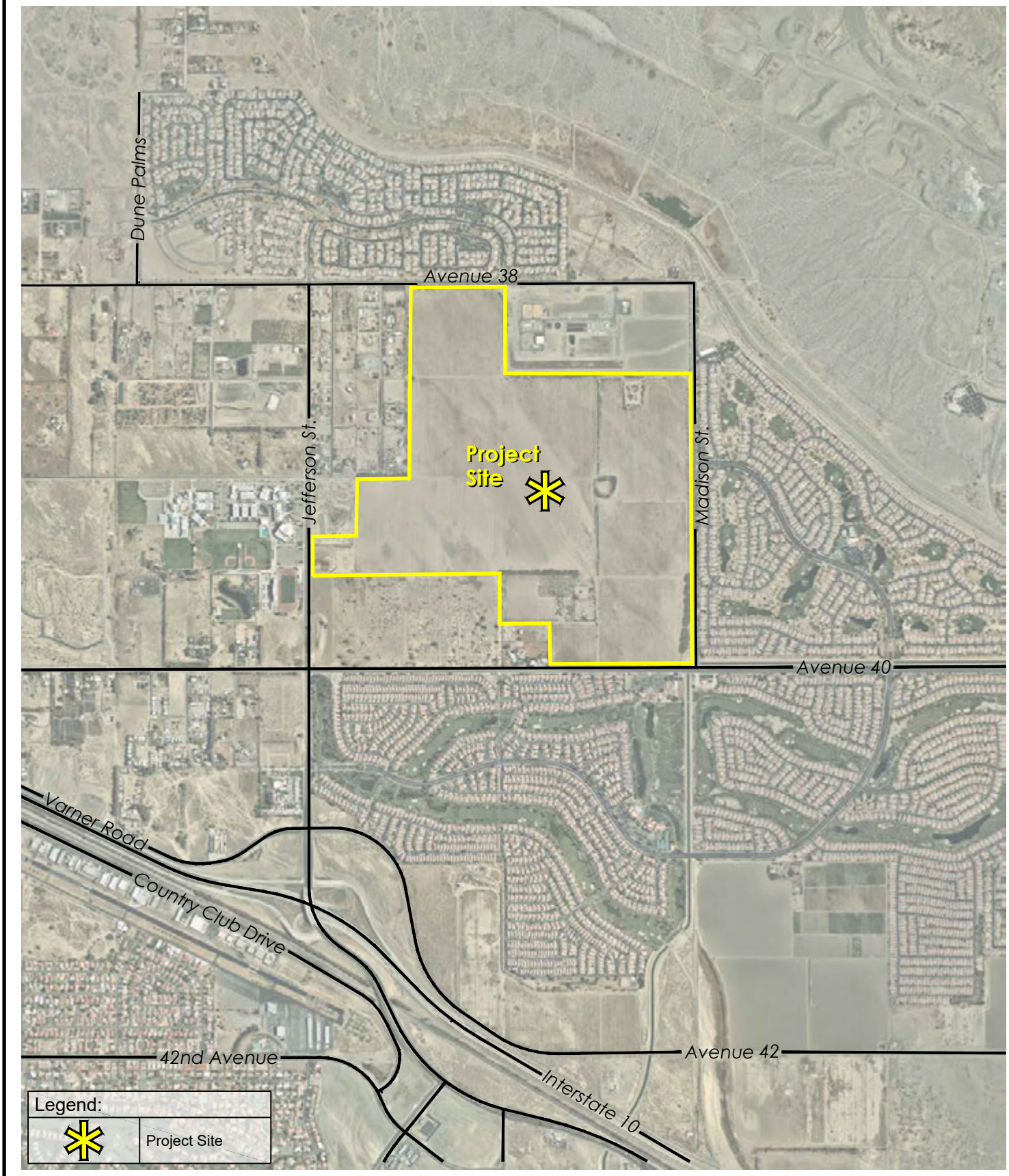

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Michael Linton, Chairperson
Mesa Grande Band of Diegueno Mission Indians
P.O. Box 270
Santa Ysabel, CA 92070

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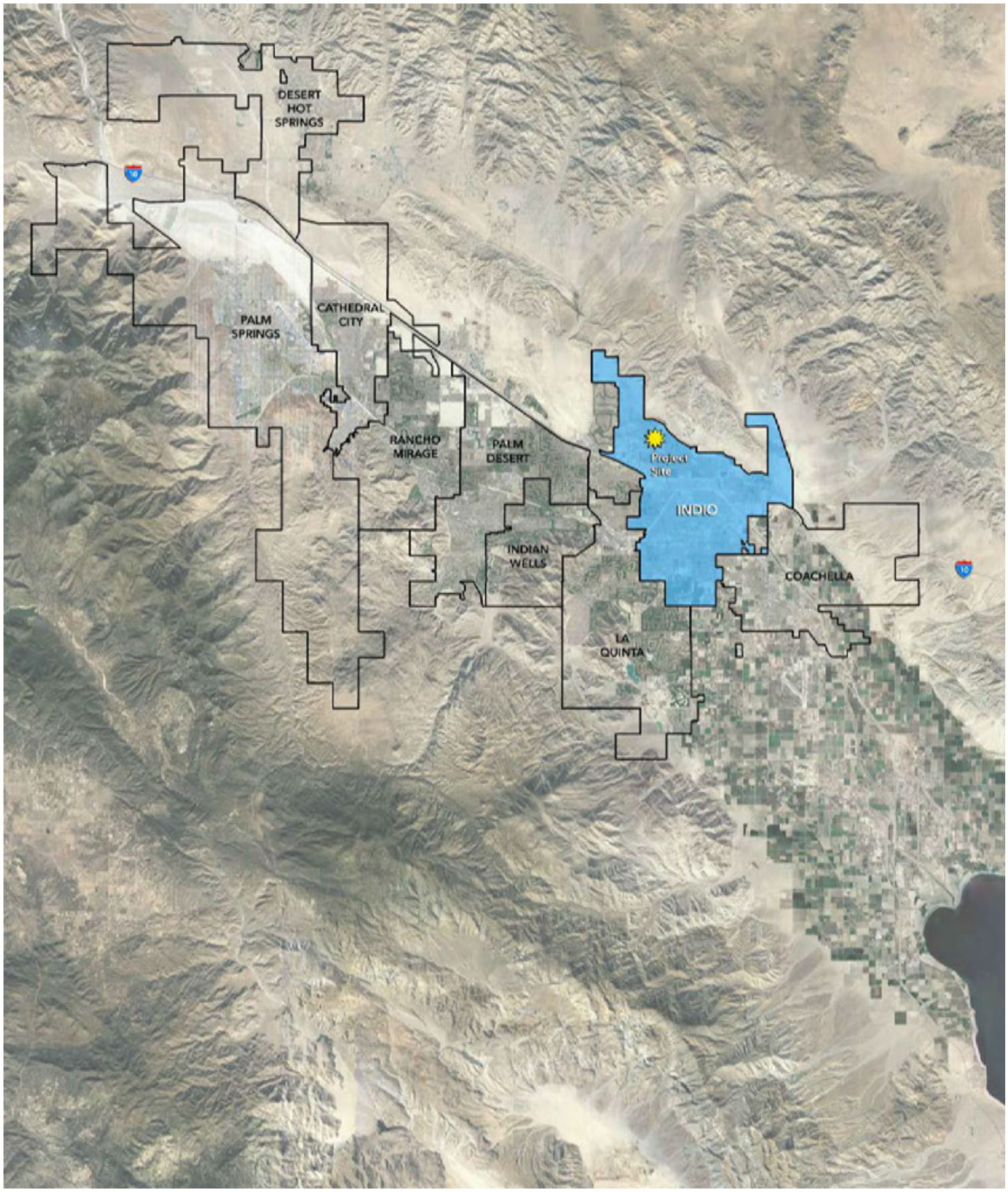

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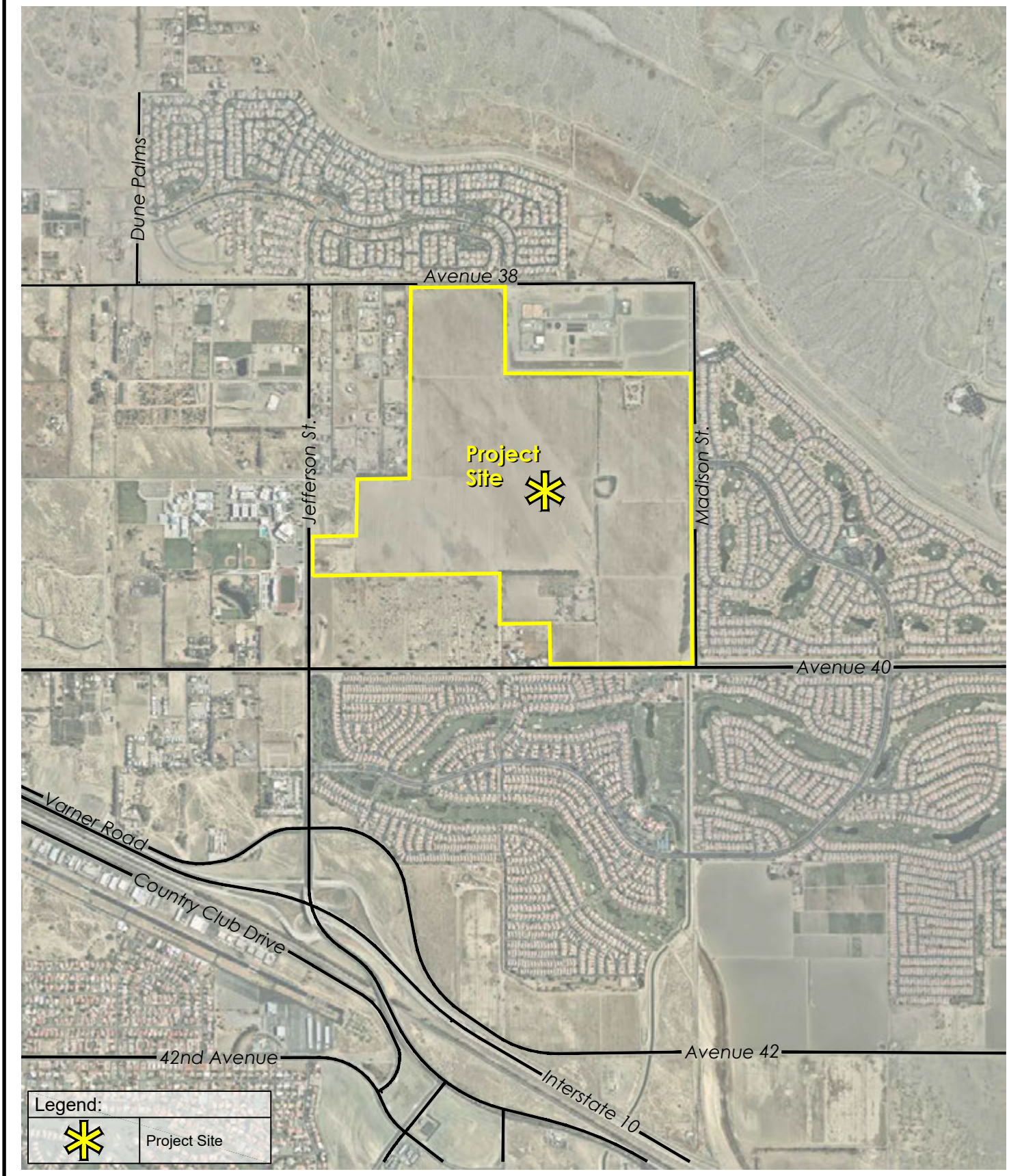

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Ann Brierty, THPO
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

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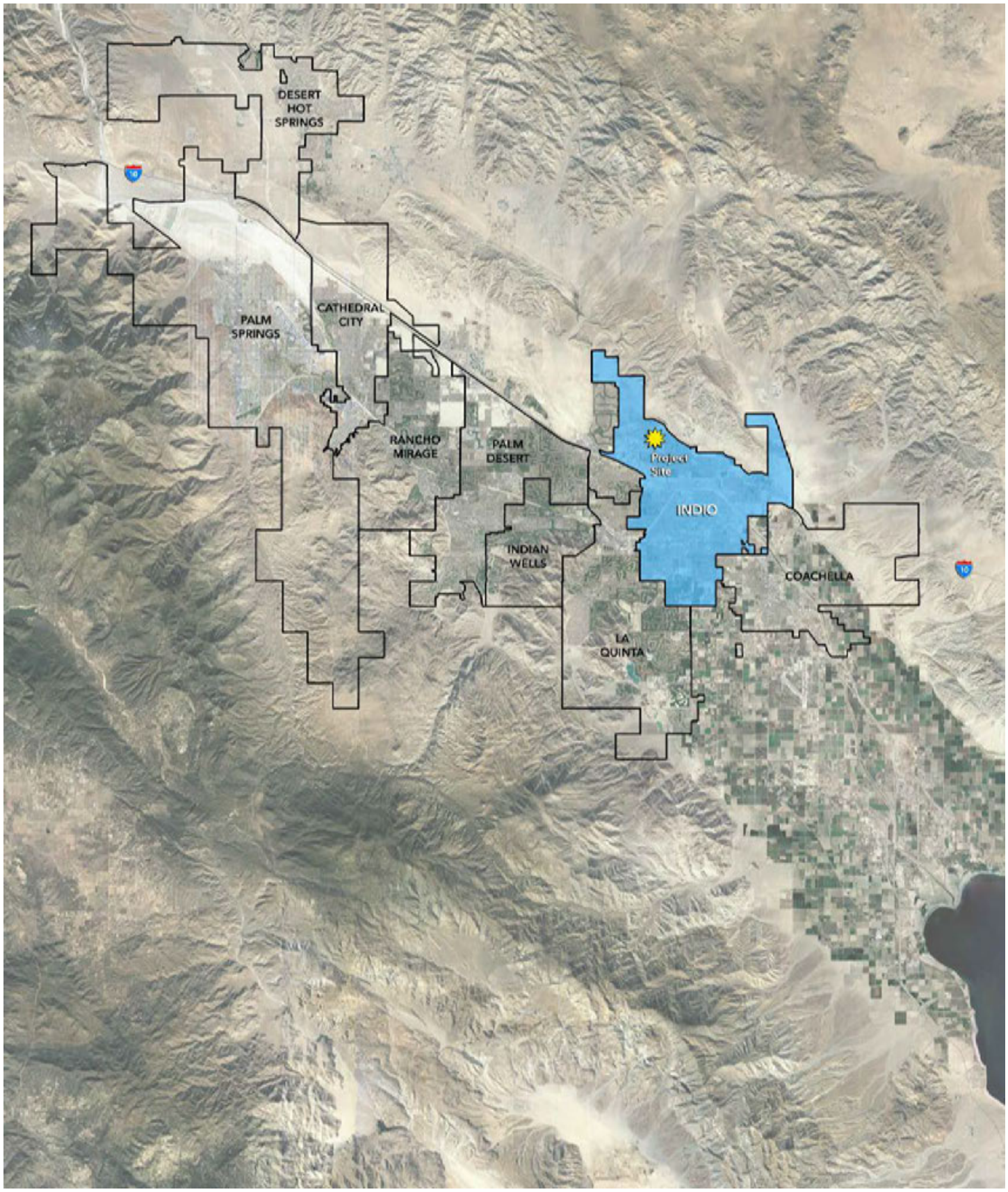

SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20

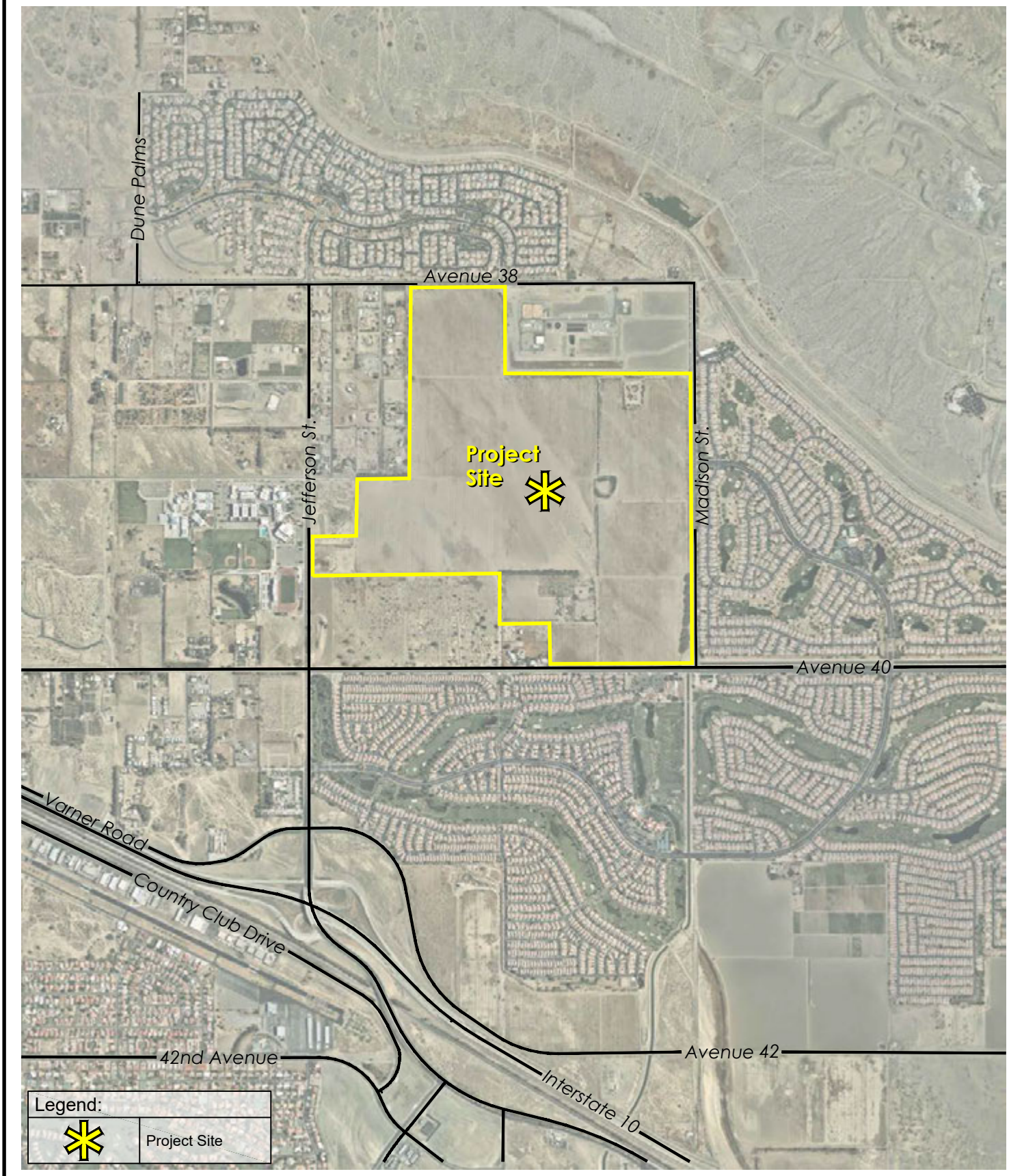

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Robert Martin, Chairperson
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

Project Description: The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site. The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing. The applicant is also proposing a Tentative Tract Map (TTM-22-06-470) to develop up to 1,500 age restricted active adult residential units. Further, the applicant is requesting Design Review (DR-22-06-503) approval for model homes, on-site amenities and typical front yard landscaping.

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

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Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

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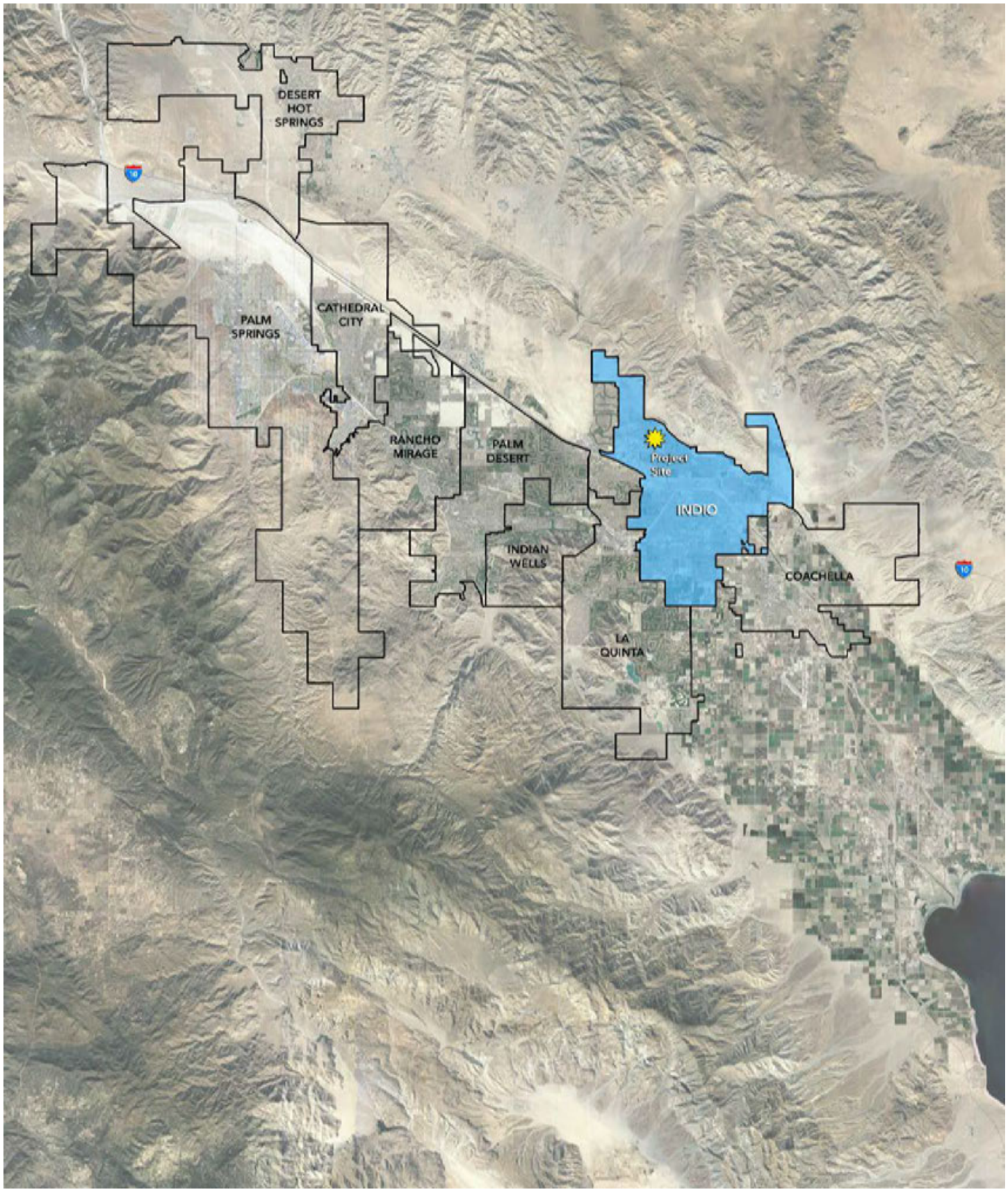

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FIGURE **1**

INDIO

Regional Location Map

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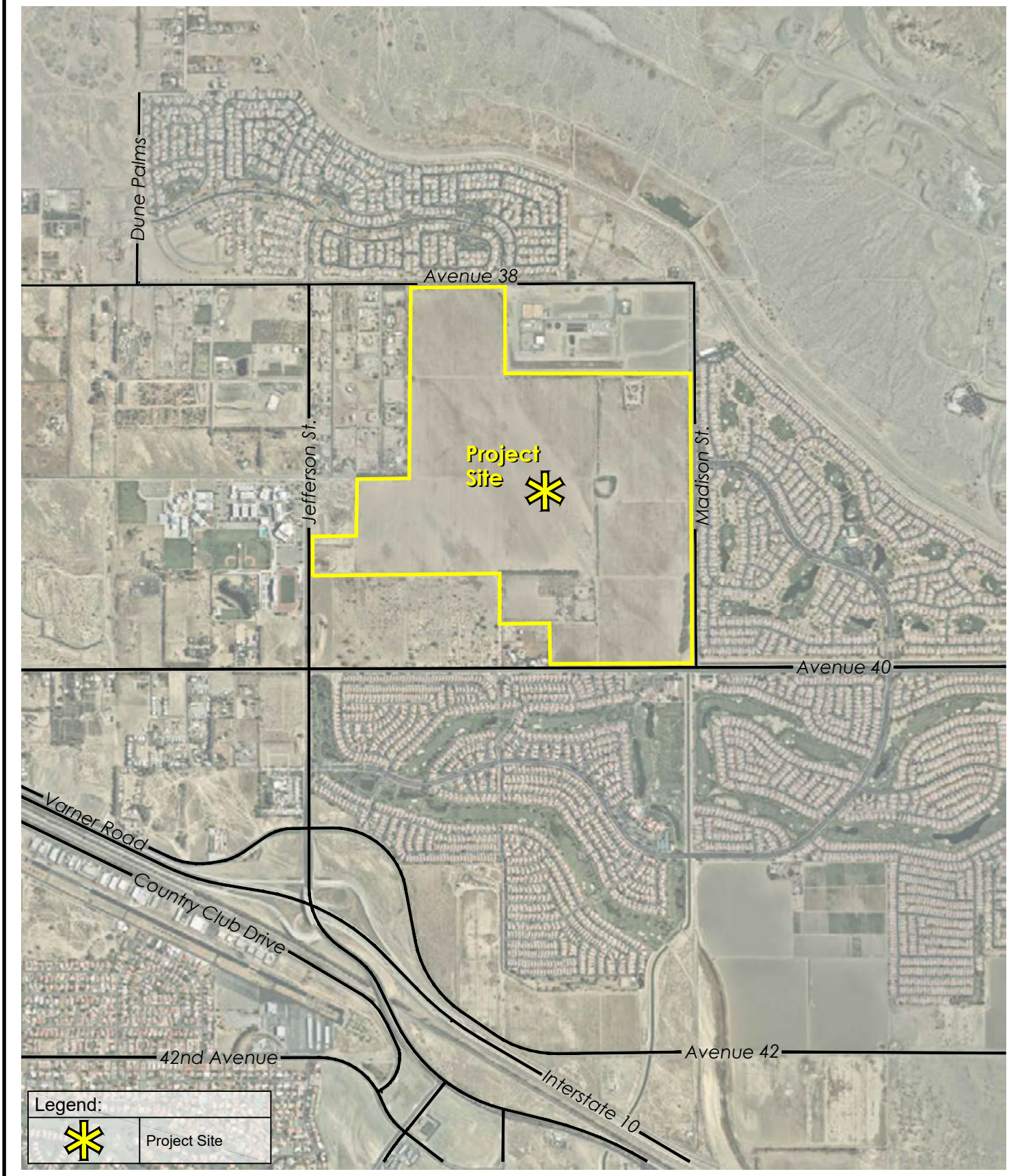

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Jill McCormick, Historic Preservation Officer
Quechan Tribe of the Fort Yuma Reservation
P.O. Box 1899
Yuma, AZ 85366

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

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Director of Community Development

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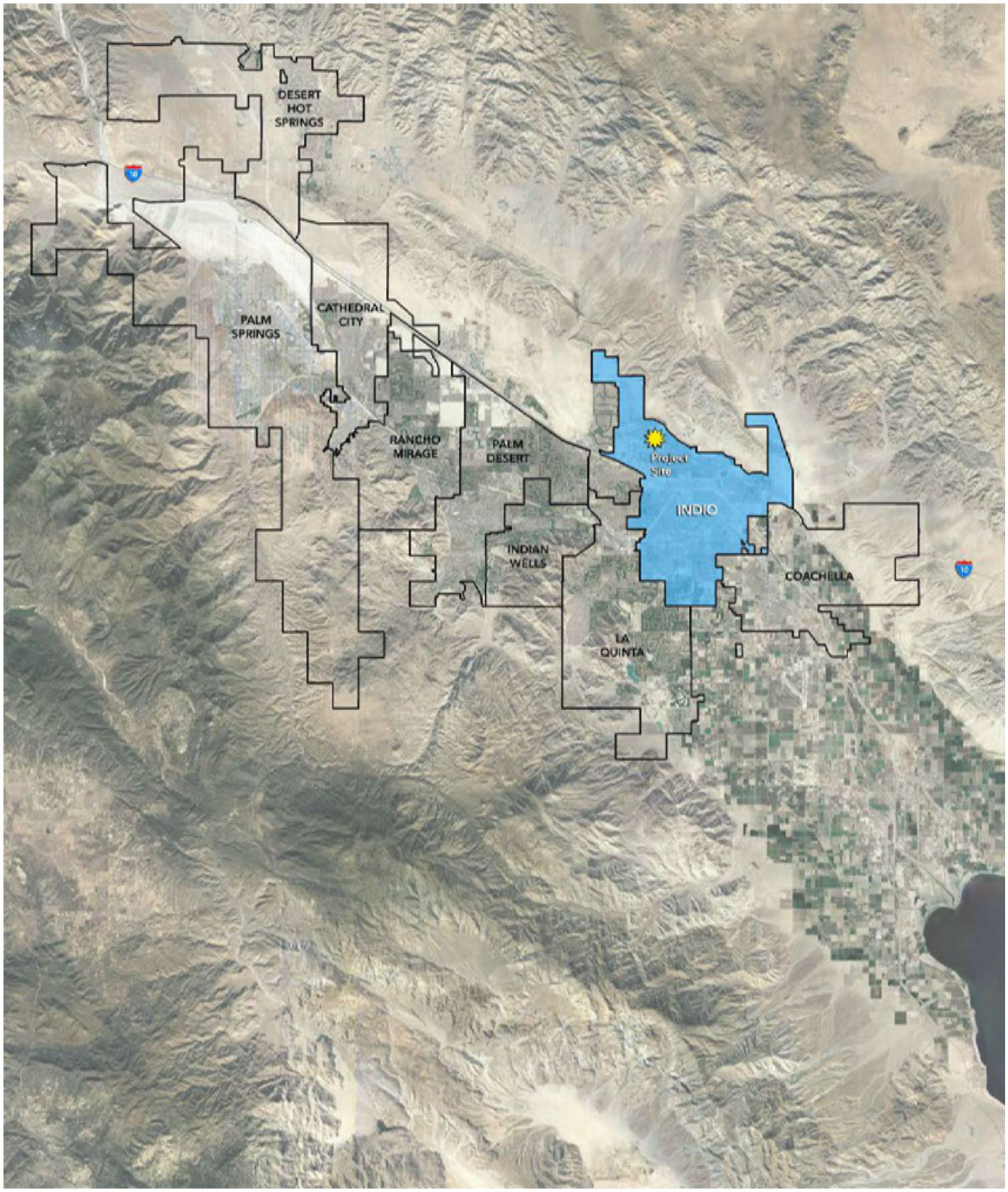

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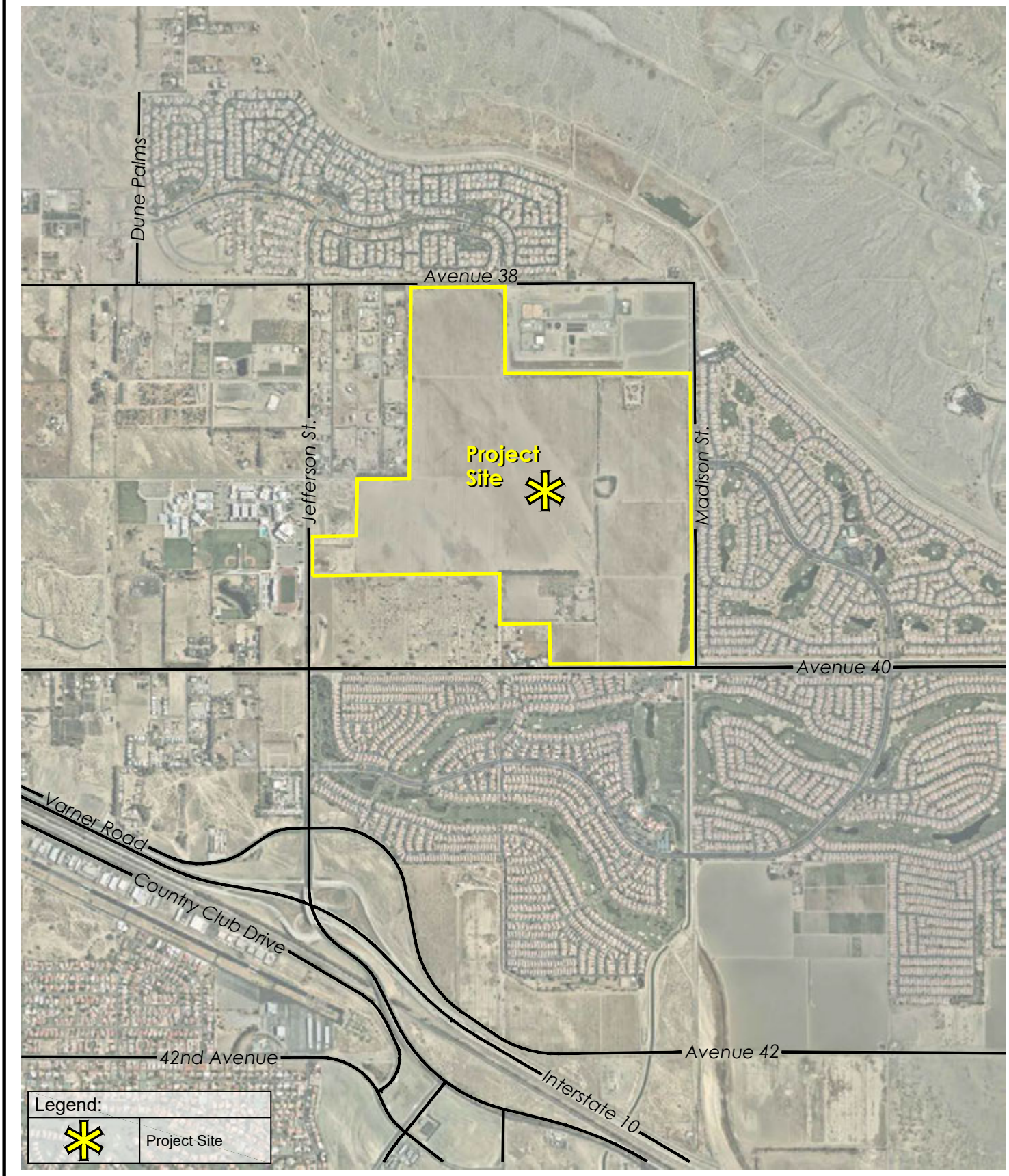

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Joseph Hamilton, Chairperson
Ramona Band of Cahuilla
P.O. Box 391670
Anza, CA 92539

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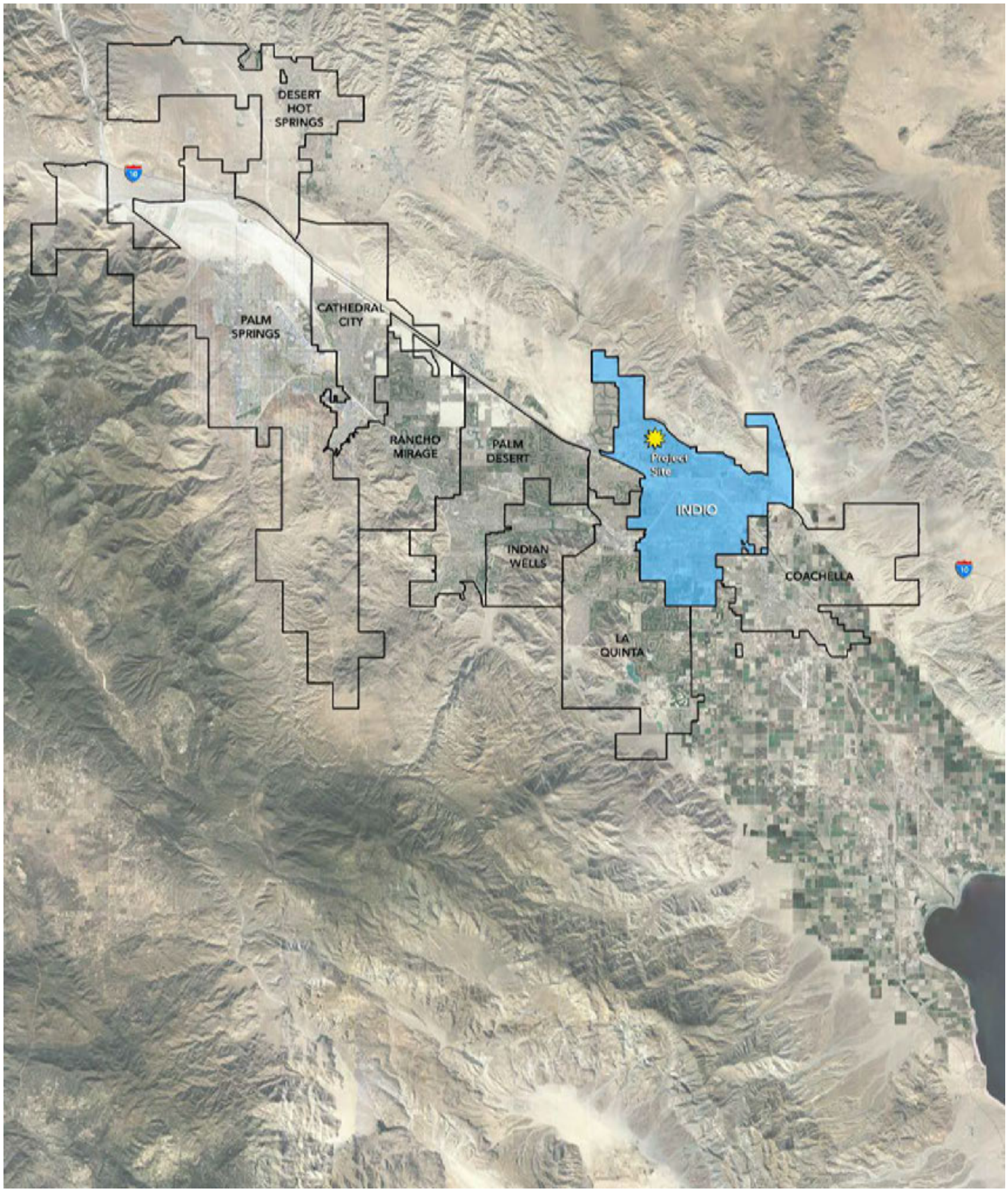

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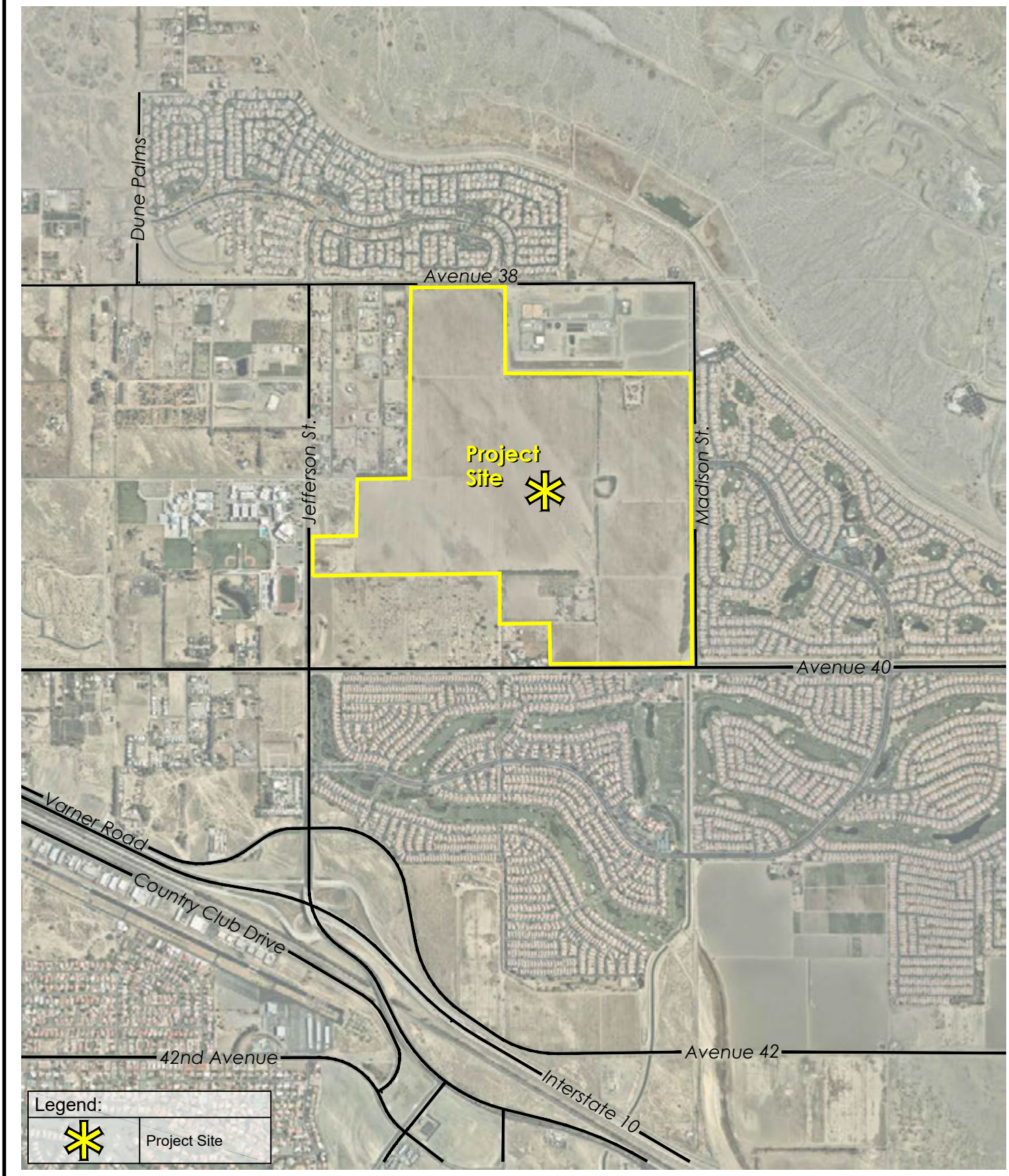

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Lovina Redner, Tribal Chair
Santa Rosa Band of Cahuilla Indians
P.O. Box 391820
Anza, CA 92539

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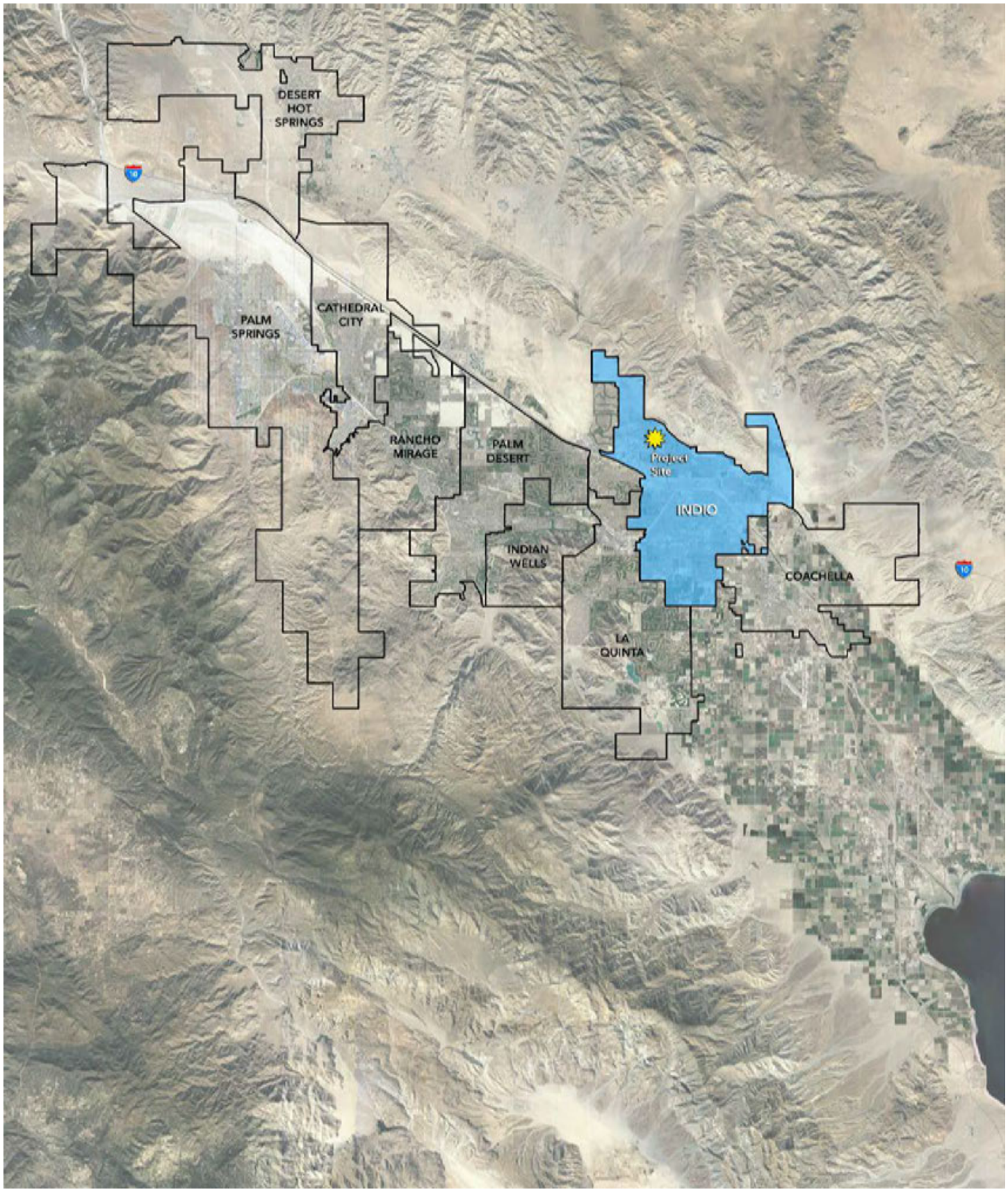

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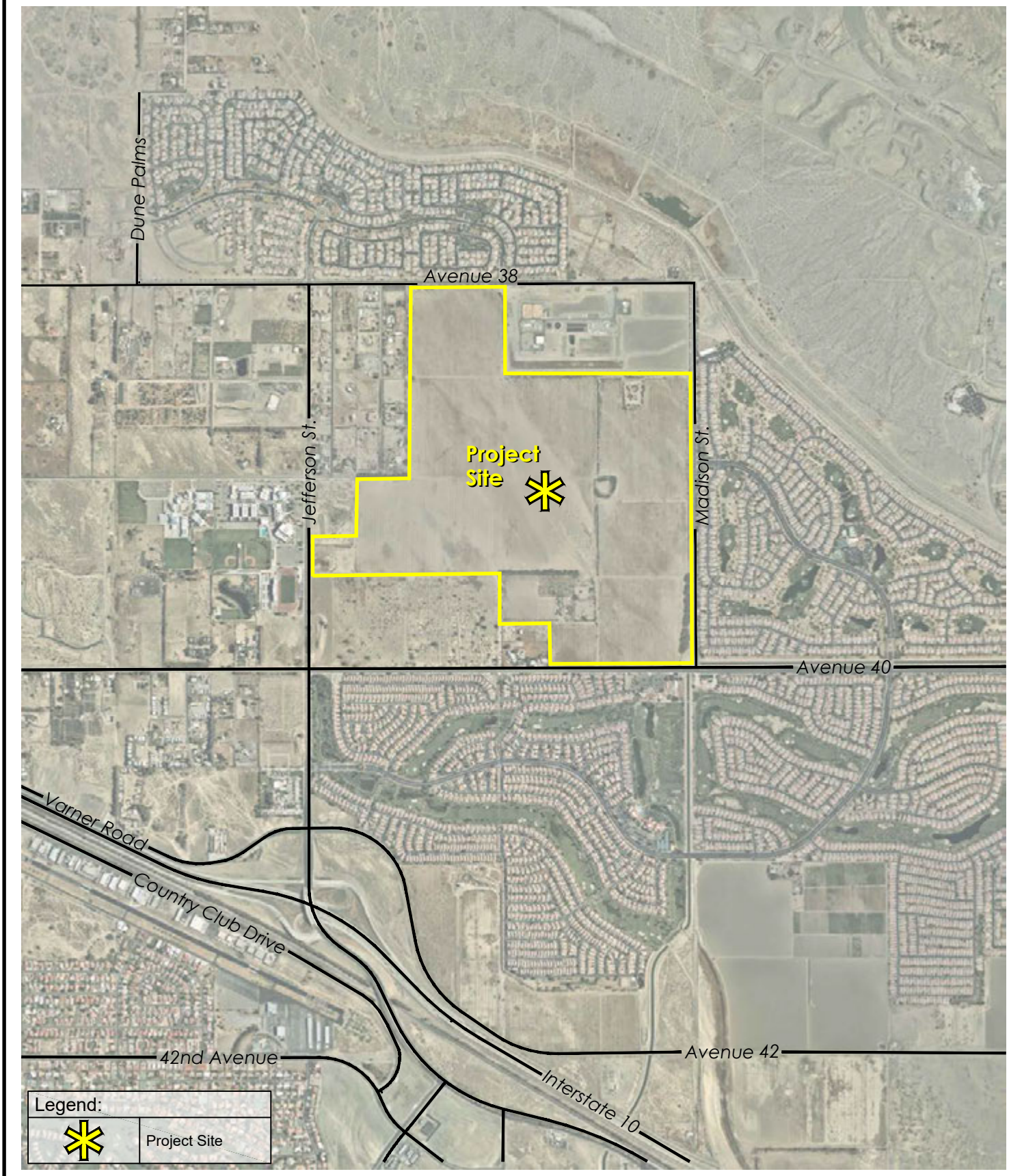

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FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Isaiah Vivanco, Chairperson
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA 92581

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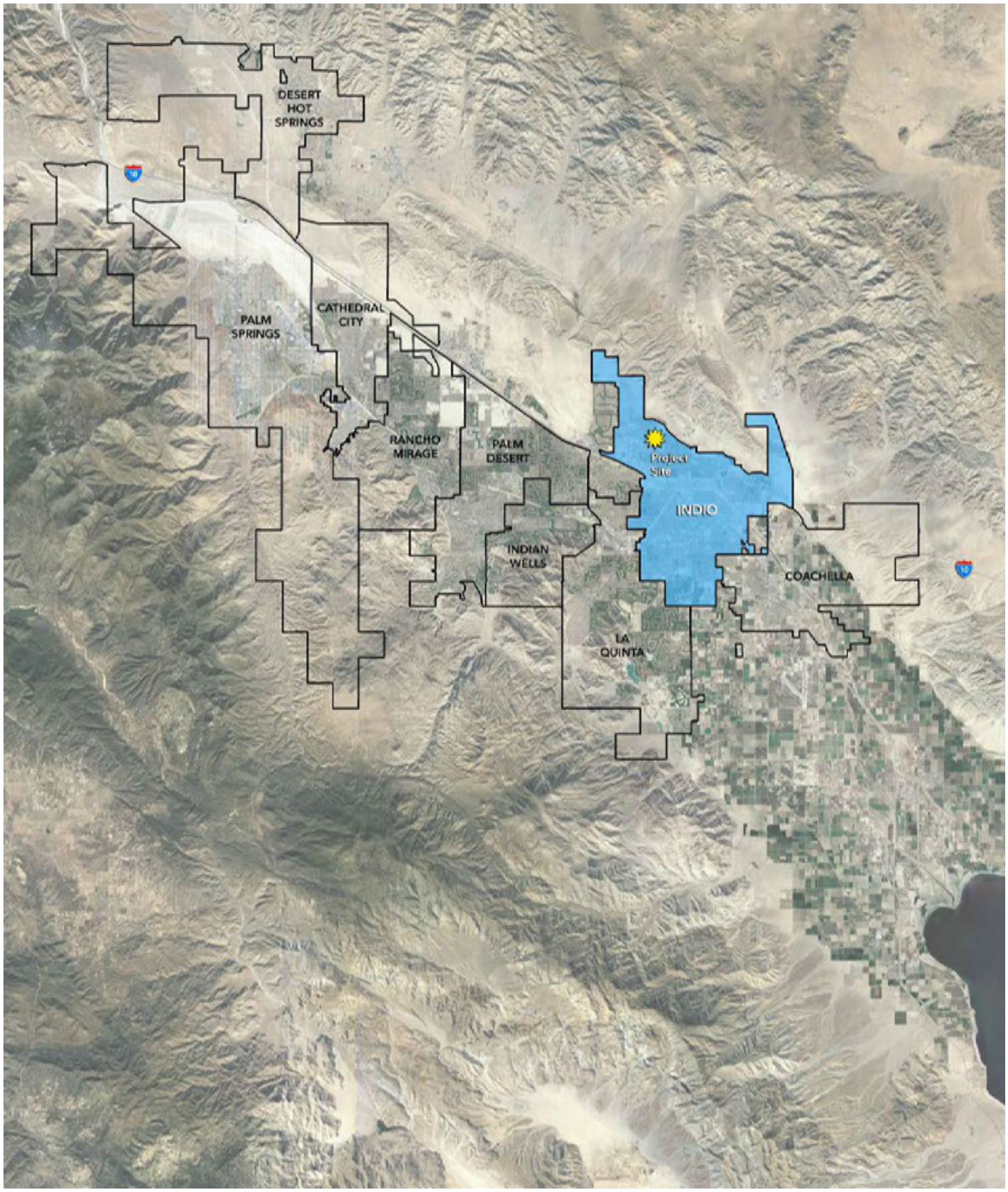

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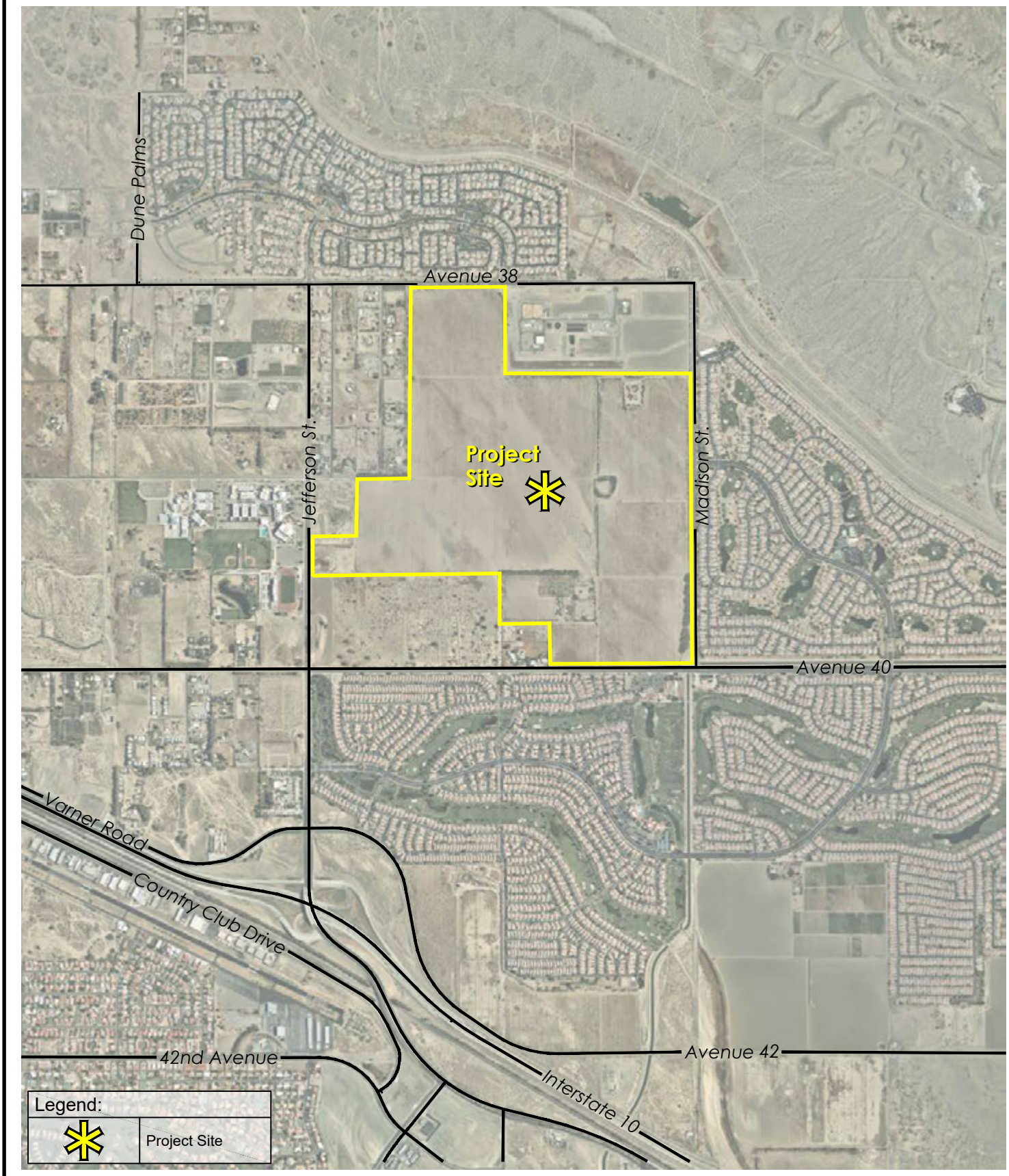

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Project Location Map

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September 6, 2022

Joseph Ontiveros, Cultural Resource Department
Soboba Band of Luiseno Indians
P.O. Box 487
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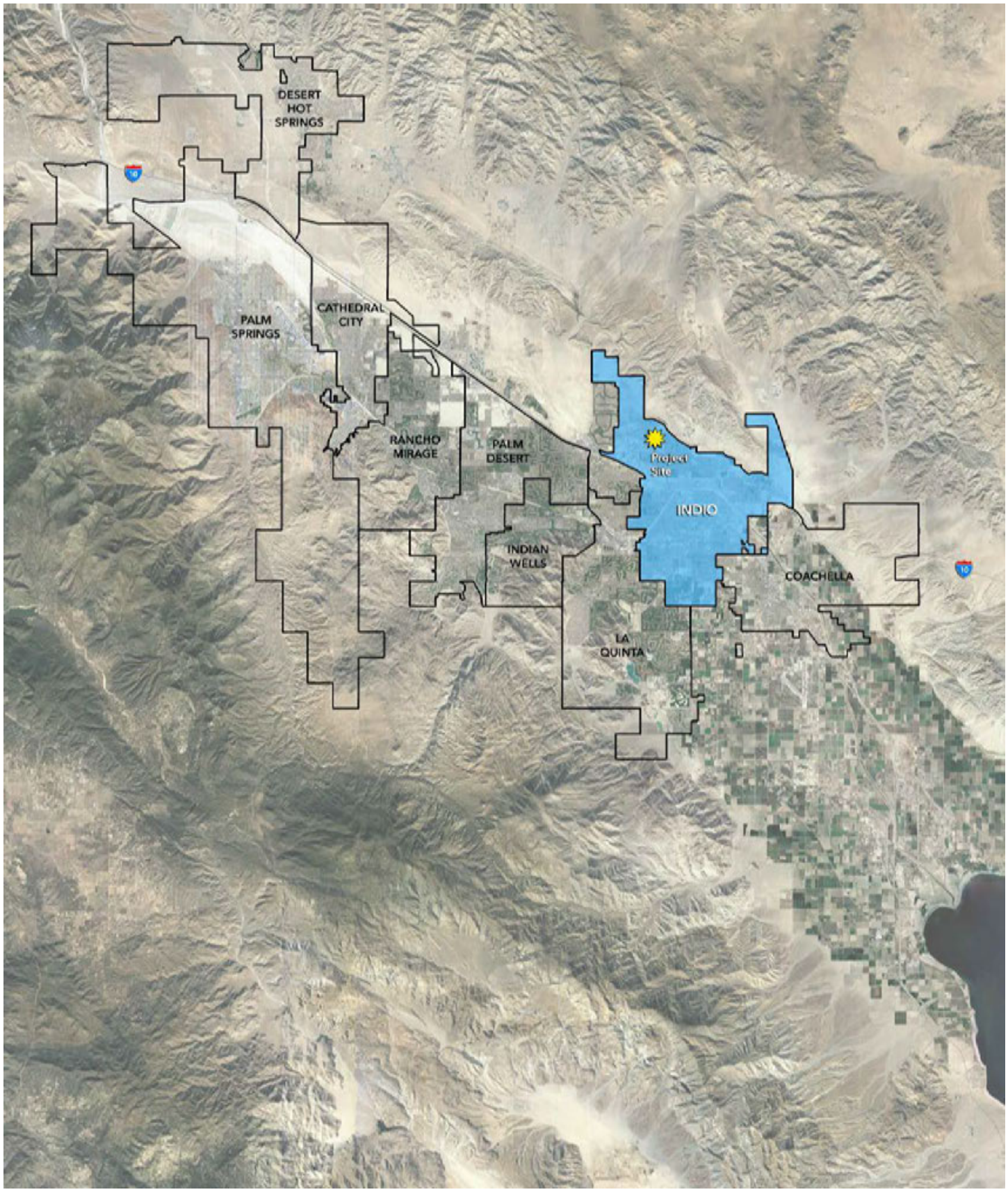
Figure 2: Project Location Map

cc:Project File



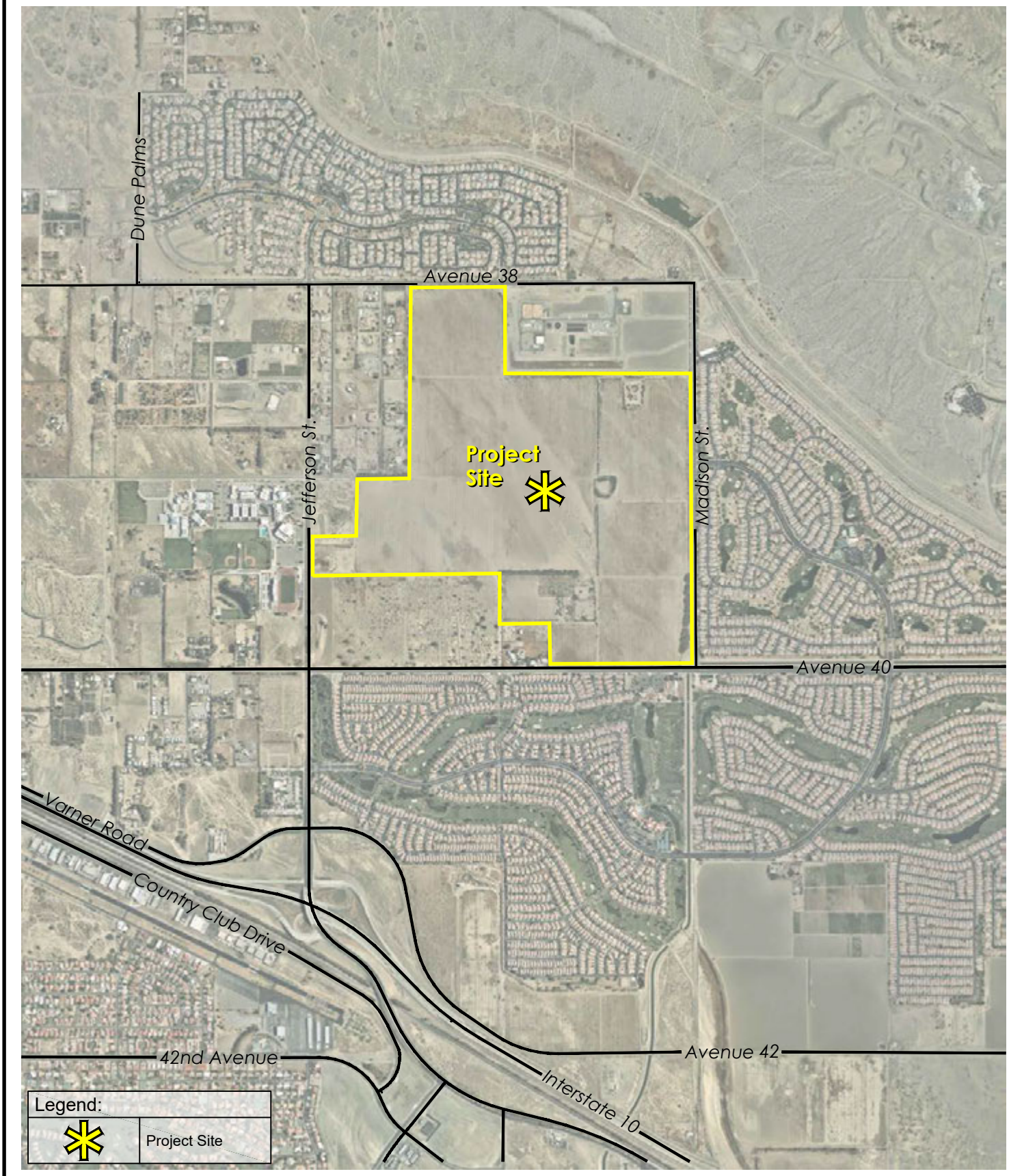
SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **1**

INDIO

Regional Location Map

044-002-20



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Thomas Tortez, Chairperson
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

The City of Indio has determined that a project application is complete for the Desert Retreat Specific Plan Project proposed by Pulte Group, Inc. Please find a description of the proposed project below with maps showing the project location provided in attachments to this letter. The name of the project point of contact and the lead agency point of contact are also provided below pursuant to PRC § 21080.3.1 (d).

Project Description: The applicant is proposing the Desert Retreat Specific Plan Project ("Specific Plan" or "Project") to implement the City of Indio ("City") General Plan by regulating development of an age-restricted (aged 55 and older) residential community containing up to 1,500 homes on an approximate 377-acre site. The objectives of the Specific Plan document will include ensuring quality development consistent with the goals, objectives, and policies of the City of Indio General Plan; designing a high-quality, master-planned active adult residential community; planning a community that is compatible and connected with the surrounding residential communities and recreational amenities; and helping meet the City's need for additional housing. The applicant is also proposing a Tentative Tract Map (TTM-22-06-470) to develop up to 1,500 age restricted active adult residential units. Further, the applicant is requesting Design Review (DR-22-06-503) approval for model homes, on-site amenities and typical front yard landscaping.

Project Location: The Project site is located in the northwest portion of the City of Indio, as shown in Figure 1: Regional Location Map. The Specific Plan Area is bound by the following streets: 38th Avenue on the north, Jefferson Street on the west, 40th Avenue on the south, and Madison Street on the east, as shown in Figure 2: Project Location Map. The project site is comprised of Assessor's Parcel Numbers 691-110-002, 691-110-003, 691-110-004, 691-110-007, 691-110-008, 691-110-011, 691-110-014, 691-100-021, 691-100-023 and 691-100-025.

General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

Lead Agency Point of Contact: Kevin Snyder, AICP, Director of Community Development, 100 Civic Center Mall, Indio, CA 92201, 760-541-4255, ksnyder@indio.org

The Native American Resource Protection Act (Assembly Bill 52, Public Resources Code § 21080.3.1) requires the City to notify California Native American Tribes of the decision to undertake the Project and allows Tribes 30 days to request consultation regarding possible significant effects that implementation of the Project may have on tribal cultural resources. In addition, Senate Bill 18 (Chapter 905, Statutes of 2004, Government Code § 65352.3) requires the City to contact California Native American Tribes prior to adoption of a specific plan and allows Tribes 90 days to request consultation.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the City of Indio by contacting the Lead Agency Contact directly.

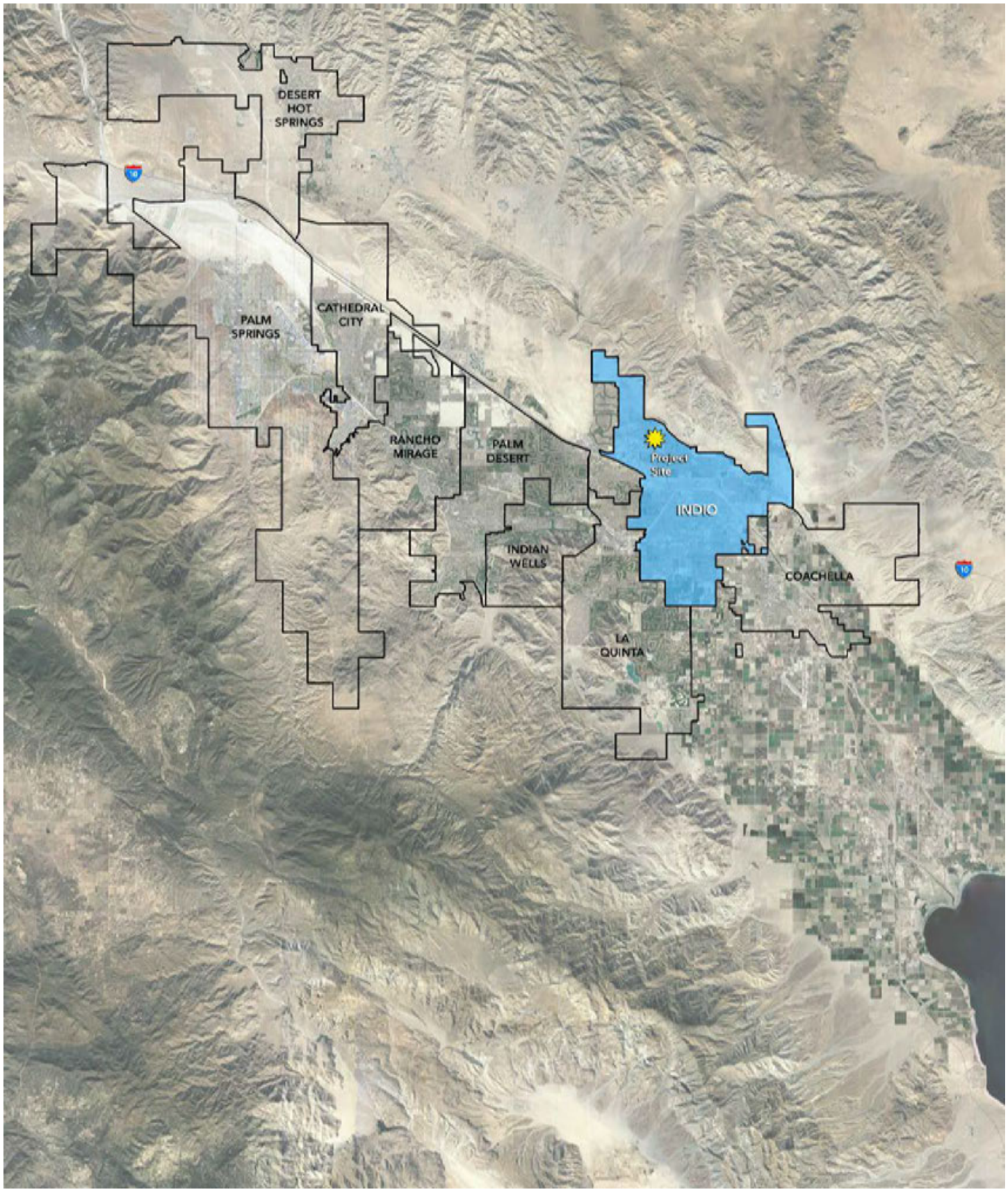
Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
Figure 1: Regional Location Map
Figure 2: Project Location Map

cc:Project File



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Regional Location Map

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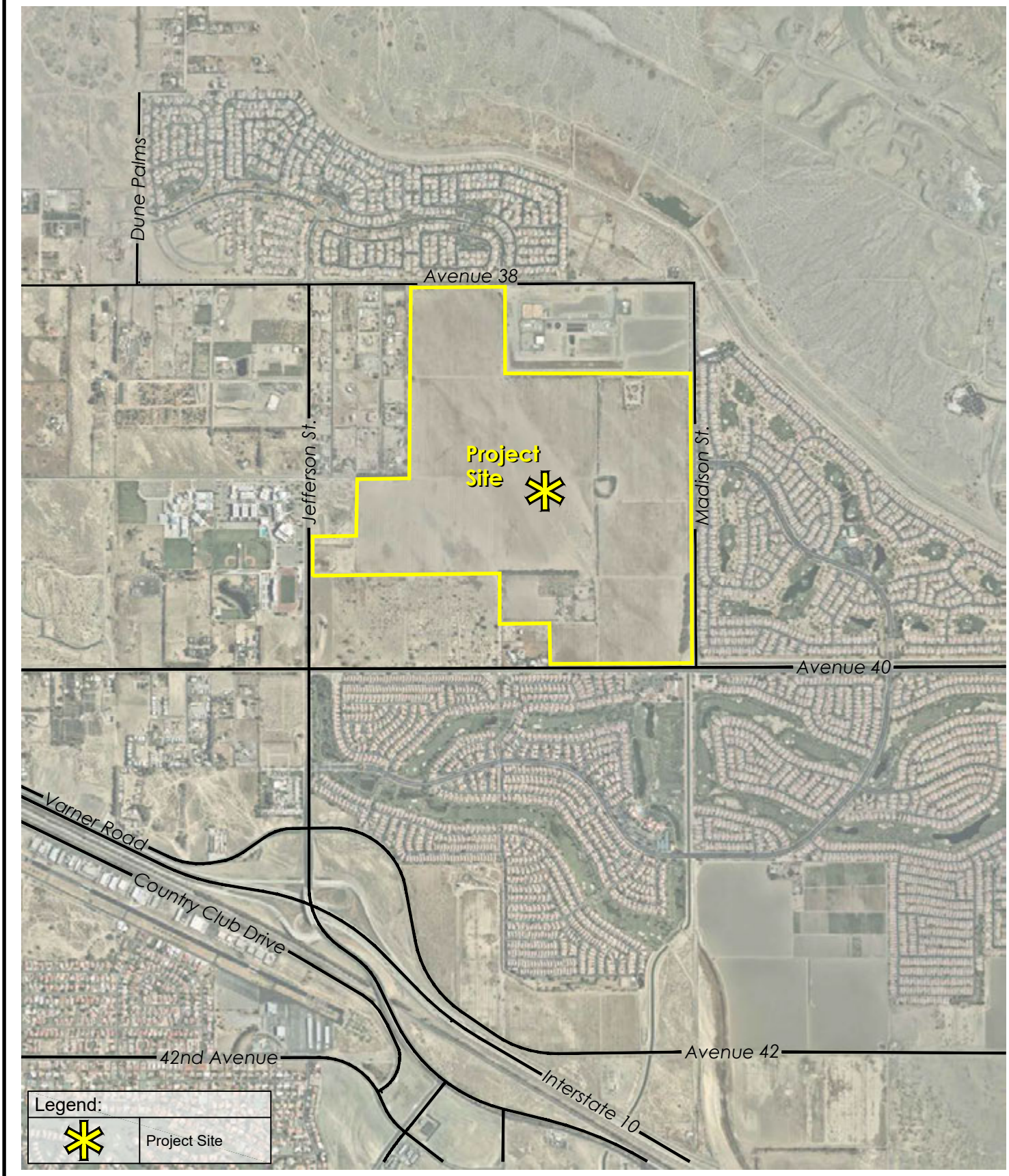

SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

September 6, 2022

Darrell Mike, Chairperson
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA 92236

RE: AB 52/SB 18 Notification of Consultation Opportunity under the California Environmental Quality Act, pursuant to Public Resources Code § 21080.3.1 and Government Code § 65352.3 for the Desert Retreat Specific Plan Project

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General Plan and Zoning Designation: Suburban Neighborhood (SN); Existing Zoning: RL (Residential Low) and Village Core

Environmental Compliance: The City of Indio has determined that an Environmental Impact Report (EIR) is required for the Project. Information regarding the Notice of Preparation and Initial Study can be found at: https://www.indio.org/your_government/development_services/hearing_notices.htm.

Project Sponsor Point of Contact: David Dewegeli, Manager of Land Planning & Entitlements, Pulte Group, Inc., 27401 Los Altos, Suite 400, Mission Viejo, CA 92691, (760) 578-9334, David.Dewegeli@pultegroup.com

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Very Respectfully,

Kevin H. Snyder

Kevin H. Snyder, AICP
Director of Community Development

Attachments:
Figure 1: Regional Location Map
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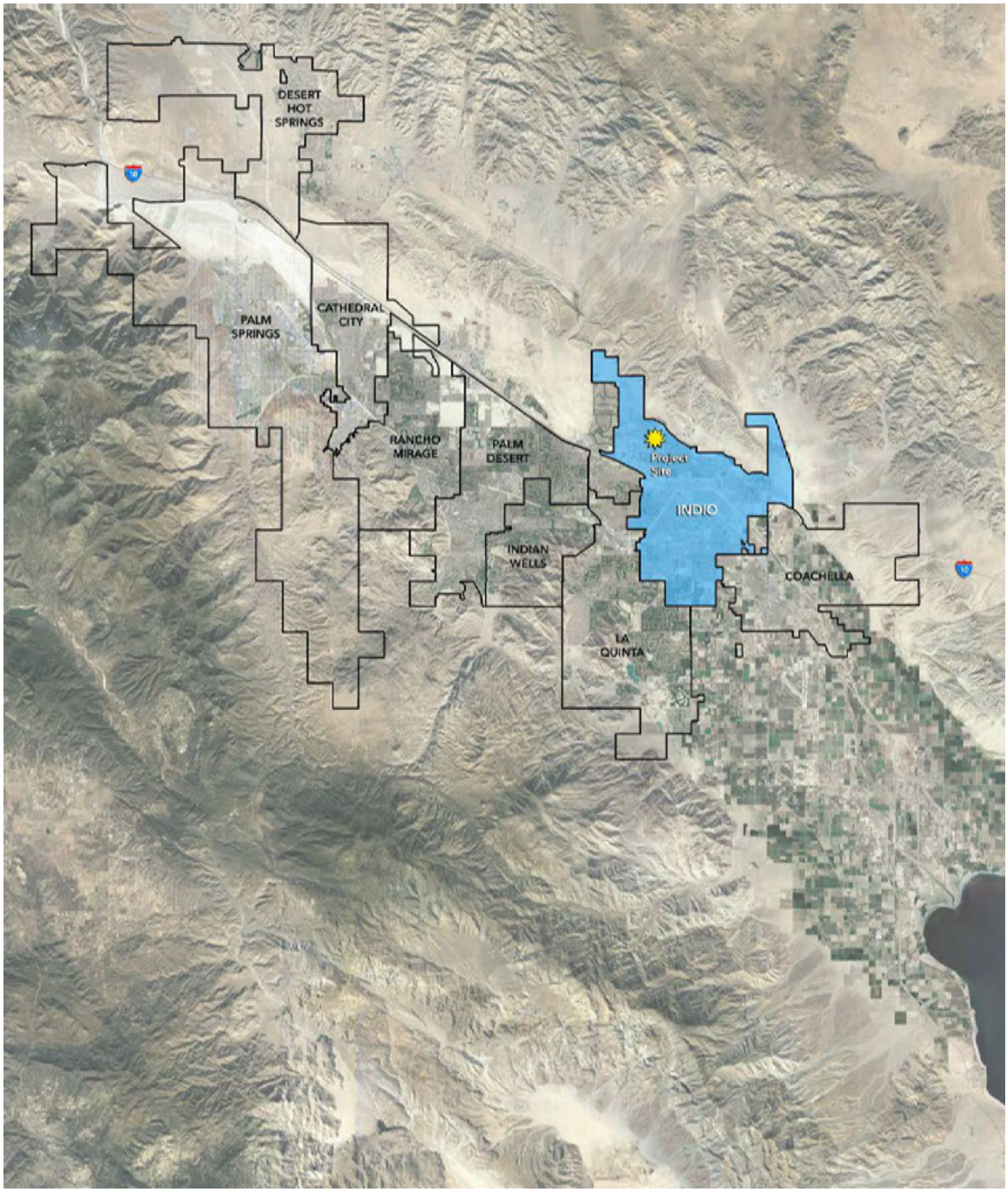

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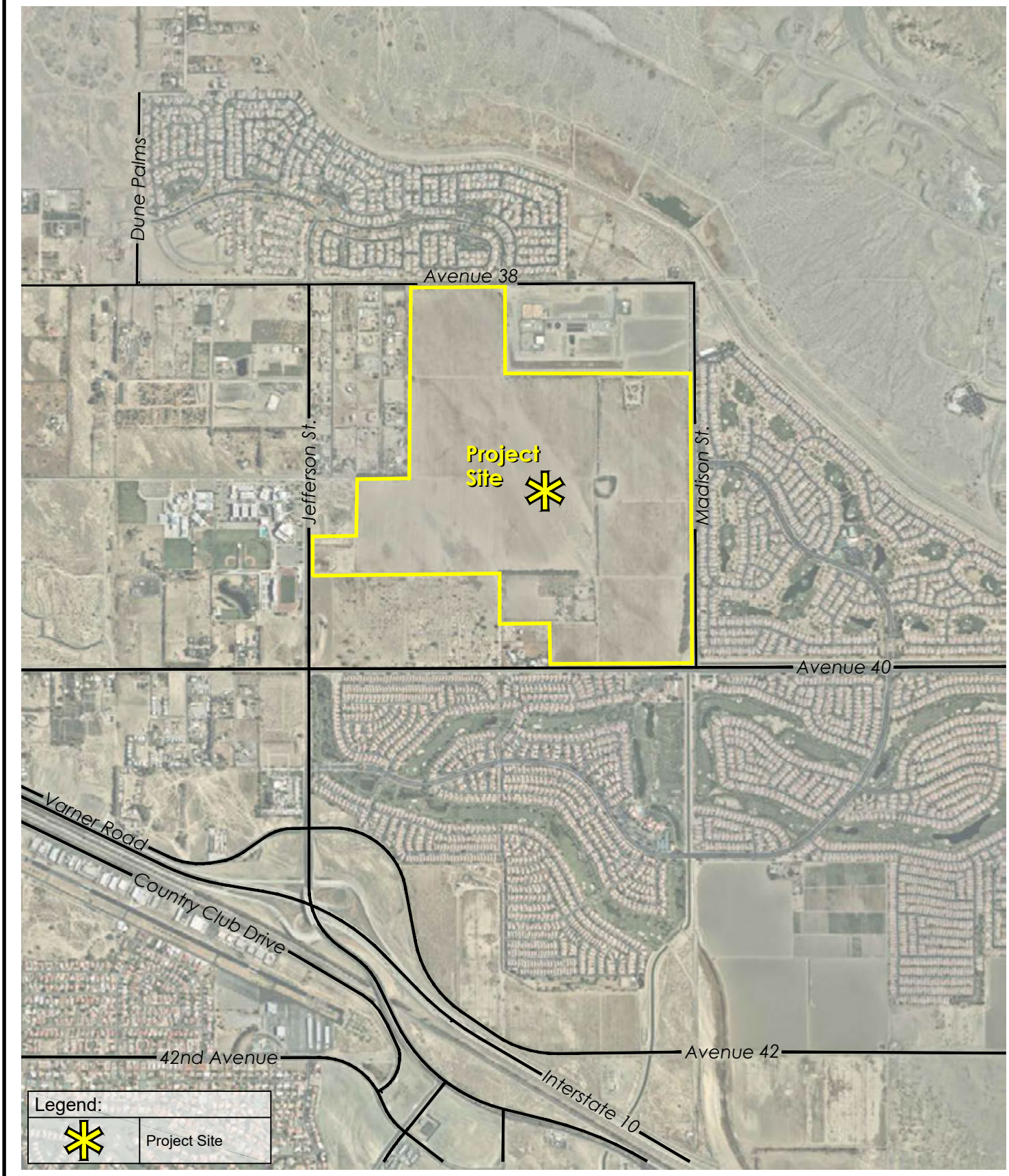
FIGURE **1**

INDIO

Regional Location Map

044-002-20



SOURCE: MSA Consulting, Inc. - 2022; Meridian Consultants - 2022

FIGURE **2**

INDIO

Project Location Map

044-002-20

APPENDIX L.3

ACBCI Tribal Consultation Response

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-002-2022-003

August 23, 2022

[VIA EMAIL TO:ksnyder@indio.org]
City of Indio
Mr. Kevin Snyder
100 Civic Center Mall
Indio, CA 92201

Re: Desert Retreat by Pulte Group

Dear Mr. Kevin Snyder,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the North Indio Specific Plan project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*Formal government to government consultion under California Assembly Bill No. 52 (AB-52).

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

*The presence of an archaeologist that meets the Secretary of Interior's standards during any ground disturbing activities.

*Please contact our office to schedule a meeting.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6956. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

Lacy Padilla
Operations Manager
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

APPENDIX M

Utilities

APPENDIX M.1

Sewer System Analysis

COACHELLA VALLEY WATER DISTRICT
Established in 1918 as a public agency

GENERAL MANAGER
Jim Barrett

CLERK OF THE BOARD
Sylvia Bermudez

ASSISTANT GENERAL MANAGER
Robert Cheng

ASSISTANT GENERAL MANAGER
Dan Charlton

January 24, 2023

Marco Celedon
MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

Dear Mr. Celedon:

Subject: Revised Pulte North Indio Development - Sanitation System Hydraulic Modeling Results

The purpose of this letter is to provide updated sanitation hydraulic modeling results for the proposed Pulte North Indio Development based on a new proposal from MSA Consulting, Inc. This letter supersedes the previous sanitation hydraulic modeling letter dated August 30, 2022. The project is located along Madison Street, between Avenues 38 and Avenue 40, in the City of Indio, California (see Figure 1). Since the previous hydraulic modeling request in August 2022, the project was revised to consist of 1,450 single-family dwelling units and a community building (34,000 sq. ft.) on approximately 378 acres. The August 2022 modeling analysis had a sewer flow loading based on 1,405 single-family dwellings. For this hydraulic modeling request, CVWD received a revised sewer improvement exhibit and the Hydraulic Model Checklist dated November 01, 2022.

Sanitation Hydraulic Modeling Results:

The sanitation sewer hydraulic loading is based on the calculated number of equivalent dwelling units (EDU) and flows per EDU as provided in CVWD's Development Design Manual (DDM). The DDM provides for average annual and peak hour dry weather flows (PDWF) of 200 gallons per day per EDU (gpd/EDU) and 400 gpd/EDU, respectively. The estimated peak hour dry weather flow was simulated in the hydraulic model to verify that conditions do not exceed CVWD's depth-to-diameter ratio (d/D) design criteria for sewer pipelines within the existing sanitation sewer system.

Based on the information provided by the engineering consultant the Project will add an additional loading of 1,490 EDUs to the existing sanitary sewer system. Table 1 shows the calculated average annual dry weather flows and peak hour dry weather flows used in the hydraulic model analysis.

Table 1 – Revised Pulte North Indio Development Proposed EDU and Calculated Sewer Flows

Area	Total EDU	Average Annual Dry Weather Flow (gpm)	Peak Hour Dry Weather Flow (gpm)
Pulte Single Family Residential Units	1450	201.4	402.8
Community Building (34,000 sq ft)	40	5.6	11.1
Total	1490	207.0	413.9

A hydraulic model was used to simulate the calculated flow conditions from the proposed connections and to verify that flow conditions in existing pipelines meet the criteria in CVWD's DDM.

Option 1 – (All Development Sewer Flows Routed South – MSA Consulting, Inc. proposal)

Onsite Piping

The Project proposes an onsite collection system consisting of 8-inch, 12-inch, and 15-inch diameter gravity sewer pipelines. The proposed onsite pipe will connect to the existing sewer system at two locations near the intersection of Avenue 40 and Madison Street, (See Figure 1). All sewer flows from the development will be conveyed south to the two existing 12-inch diameter gravity sewer pipelines near the street intersection. The proposed pipeline alignments originated from the consultant prepared drawings. The size and capacity of the proposed onsite sanitary sewer pipeline is adequate for the anticipated sewer loading from the Project.

Offsite Piping

The development contributes flows to the existing 12-inch diameter gravity sewer pipelines near the intersection of Madison Street and Avenue 40. The development flows then continue south along the existing 12-inch and 15-inch gravity mains before entering CVWD's existing Lift Station 81-07. Flows from the lift station are conveyed north along Madison Street before ultimately discharging to the Water Reclamation Plant No. 7 outfall (See Figure 1).

As part of the revised hydraulic modeling request, the consultant is proposing a 12-inch diameter gravity sewer pipeline along Jefferson Street and Varner Road between Camino Santa Elise and Lift Station 81-07 (see Figure 1) to redirect flows from the existing 15-inch diameter pipeline within the existing Shadow Hills Development. CVWD's modeling results show that this pipeline needs to be a 15-inch diameter rather than a 12-inch diameter pipeline to be consistent with the pipelines upstream and avoid having a constriction of flows and causing negative impacts to the pipelines upstream. The hydraulic model analysis used a 15-inch diameter gravity sewer pipeline in Jefferson Street and Varner Road.

The required 15-inch diameter sewer pipeline will direct flows away from the existing 15-inch diameter gravity pipeline segments along Camino Los Campos, Via Arleta, and Avenida Los Padres. The Jefferson Street and Varner Road sewer pipelines will also collect flows from other imminent developments including Espana (Phase 2), Garden Fellowship, Chandi Square, and Jefferson Plaza (see Figure 1).

With the addition of development flows, the existing pipelines downstream of the development experience peak d/D ratios ranging from 0.74 (in the least critical downstream pipeline) to 1.00 (in the most critical downstream pipeline). The hydraulic analysis indicates that the existing lift station and sewer pipelines downstream of the development are not adequately sized to convey development flows under the CVWD DDM criteria, and require the following improvements:

- The existing 12-inch diameter gravity pipeline from the connection point on Avenue 40 to Calle Santa Monica, experiences a d/D of 0.84 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 15-inches for the 645-foot segment.

- The existing 12-inch diameter gravity pipeline along Calle Santa Monica, experiences a d/D of 1.0 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 15-inches for the 1,300-foot segment.
- The existing 12-inch diameter gravity pipeline along Camino Santa Paula, experiences a d/D of 1.0 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 15-inches for the 785-foot segment.
- The existing 12-inch diameter gravity pipeline along Camino San Lucas, experiences a d/D of 1.0 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 15-inches for the 1060-foot segment.
- The existing 12-inch diameter gravity pipeline along Camino Santa Juliana, experiences a d/D of 1.0 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 15-inches for the 815-foot segment.
- The existing 15-inch diameter gravity pipeline along Camino Los Campos, experiences a d/D of 1.0 with the development flows and the DDM criteria is 0.75. The project will require the existing sewer pipeline to be upsized to 18-inches for the 675-foot segment.
- The existing 15-inch diameter gravity pipeline along Via Alerta, experiences a d/D of 0.74 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 18-inches for the 375-foot segment.
- The existing 15-inch diameter gravity pipeline along Avenida Los Padres from Via Alerta to Lift Station 81-01, experiences a d/D of 0.80 with the development flows and the DDM criteria is 0.67. The project will require the existing sewer pipeline to be upsized to 18-inches for the 1425-foot segment.
- The existing firm capacity of the Lift Station is 2.2 MGD. With the addition of the subject development flows, the Project is required to upsize the lift station to 3.3 MGD to support the subject development.

CVWD would like to participate in upsizing the proposed 15-inch diameter sewer pipeline segment along Jefferson Street and Varner Road to 21-inches to accommodate future regional growth as outlined in CVWD's sewer master plan. The upsizing from 15-inches to 21-inches would be installed by the developer and reimbursed by CVWD. In addition, CVWD would like to participate in upsizing the lift station from 3.3 MGD to 4.3 MGD for the same reasons as the pipeline upsize. The upsize of the lift station would also be installed by the developer and reimbursed by CVWD. Both of these reimbursement amounts are subject to CVWD Board approval.

Option 2 – (All Development Sewer Flows Routed North – CVWD proposed option as an alternative to Option 1)

In an effort to provide the consultant and/or developer another option that minimizes the offsite improvements, CVWD has provided the following option that would take all of the sewer flows from the Project and route them to the north. Please see below for additional details.

Onsite Piping

The Project would include an onsite collection system consisting of 8-inch, 12-inch, and 15-inch diameter gravity sewer pipelines. The proposed onsite pipe will connect to the existing sewer collection system along Avenue 38, just west of Water Reclamation Plant No. 7. All sewer flows from the development would be conveyed north to the existing 27-inch diameter gravity sewer pipeline. The alignments of the proposed pipelines would be similar as currently designed but would flow north for this option. The size and capacity of the proposed onsite sanitary sewer pipeline would be adequate for the anticipated sewer loading from the Project.

Offsite Piping

The development would contribute flows to the existing 27-inch diameter gravity sewer pipeline along Avenue 38. The development flows would then continue east, ultimately discharging to the Water Reclamation Plant No. 7's outfall. The hydraulic analysis indicates that the existing sewer pipeline on Avenue 38 is adequately sized to convey project flows under the DDM design criteria. With the addition of all the proposed sewer flows, the existing pipeline downstream from this development experience a peak d/D ratio of 0.51. CVWD's DDM criteria for d/D on sewer pipelines 8-inches and below is 0.50, the criteria for sewer pipelines between 10-inches and 27-inches is 0.67, and the criteria for sewer pipelines 30-inches and above is 0.75.

Option 3 – (Potential option that would split sewer flows between the north and south to accommodate the Project)

If neither option 1 or 2 are satisfactory to the consultant and/or developer, CVWD is offering the consultant to develop a third option that would take into consideration splitting the flows between the north and south sewer facilities to potentially decrease the impact on the lift station, offsite sewer improvements, and coordinating with existing Shadow Hills Development and Home Owners Association Boards. If the consultant and/or developer would like to pursue this option, please submit a new hydraulic modeling request.

These hydraulic model comments are for plan check purposes only. The ultimate design responsibility resides with the Engineer-of-Record for the project. The design shall comply with the rules, regulations, and specifications outlined in the DDM and should be submitted to CVWD for review.

The hydraulic modeling results are valid for one year from the date of this letter. Thereafter, CVWD may review and revise the requirements and/or require an updated hydraulic analysis.

CVWD received a deposit in the amount of $5,000 for the hydraulic model from the project developer. Any funds remaining after the project review is complete will be returned. If additional funds were expended for project review above the $5,000 deposit, an invoice will be issued.

Developer shall, at Developer's sole expense, be responsible for compliance with the laws of the State of California and the United States, including, but not limited to, applicable state and federal environmental laws, such as the California Environmental Quality Act, the National Environmental Policy Act, California Public Resources Code section 21000 et seq., and the Federal Endangered Species Act and the California Endangered Species Act, applicable to the design and construction of required facilities in this letter.

Please contact Tommy Fowlkes, Development Services Supervisor, for the calculation of the estimated fees, including the Sanitation Capacity Charge (SCC) for this project. In addition, Development Services will incorporate the project's requirements in CVWD's Sanitation System Installation Agreement.

If you have any questions on the hydraulic model results, please contact Armando Rodriguez, (760) 398-2651 extension 2365. If you have any questions on the SCC fees, please contact Tommy Fowlkes at extension 3535.

Sincerely,

Armando Rodriguez
Engineering Manager

Enclosure/1/as

AR: al\Eng\San\2023\Jan\Pulte North Indio Sewer HM Ltr.docx
File No.:0707.21.1, 0721.1

MAILED JAN 24 2023 CVWD

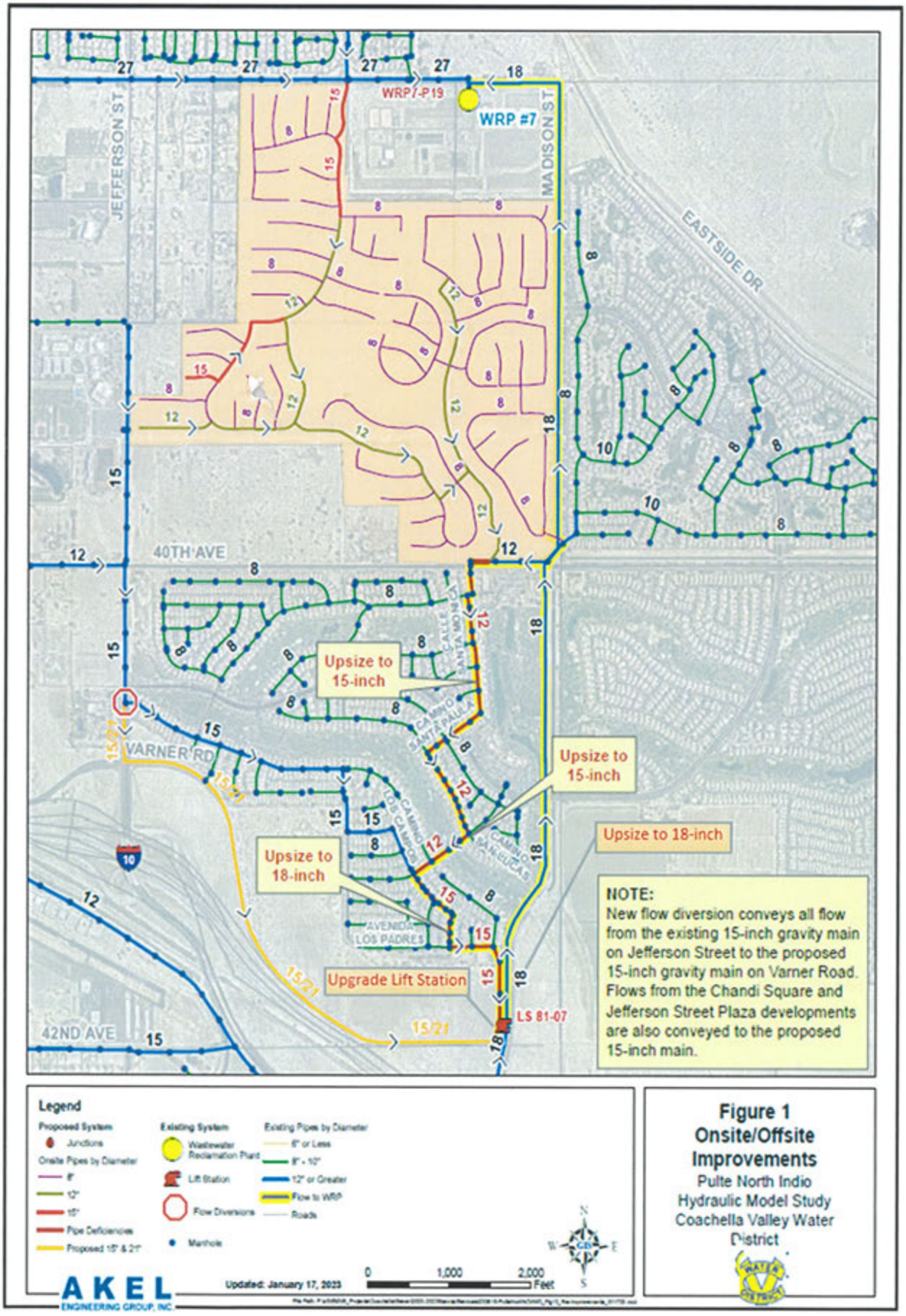


Figure 1
Onsite/Offsite Improvements
Pulte North Indio
Hydraulic Model Study
Coachella Valley Water District

APPENDIX M.2

IID Feasibility Study

June 21, 2022

Christy Wallace
Morrow Management
1130 Via Callejon
San Clemente, CA 92673

Subject: **AMENDED Pulte Home Company, LLC**
Debonne Property
APN's: 691-110-002, 003, 004, 008, 011, 014, 021, 023 and 025
North Indio, California

Dear Ms. Wallace:

This letter is in response to your correspondence dated December 15, 2021, requesting a Feasibility Study and Will Serve letter for your project located at Avenue 40 and Madison St, in the city of Indio.

The Imperial Irrigation District (IID) is willing to extend its electrical facilities to those developments that have obtained the necessary and required approval(s) of the City or County Planning Commission or such other governmental authority having jurisdiction over said developments. For the purpose of this Will Serve letter, the project is as described on Attachment A.

Based on the preliminary loading and construction phasing information provided by the project to the IID, and as a result of the completion of the loading and feasibility study to examine the requirements for serving the area of Avenue 40 and Madison Street. IID has concluded that it can extend electrical facilities to serve the project under the conditions as set forth herein. A detailed and final study will be developed once a Customer Service Proposal (CSP) and loading information is received. This information will allow IID to perform an accurate assessment of any potential impacts and required mitigations. Please be advised that the conditions of service may change as a result of the additional studies.

Based on the preliminary, high level analysis conducted by IID based upon the information supplied by the project, IID offers the following plan of service:

I. **Interim Plan of Service for a portion of Phase 1 (70 homes):**

It is anticipated that IID can accommodate the additional loading requirement of the proposed project Phase 1 for the first 70 homes by extending a new feeder/backbone (conduit, cable) from existing facilities with a closed loop configuration. The District's ability to provide service from existing infrastructure is based upon current available capacity and is contingent upon this development's construction progress in the area. The project must progress toward completion or IID is unable to hold system capacity to the detriment of other customers. Please be advised that service is conditioned upon:

1. Developer shall bear all costs associated with the construction of any additional distribution overhead and/or underground backbones, line extensions, upgrades or reconfigurations needed to extend electrical service to the proposed development.

2. Underground infrastructure that includes trenching, conduits, pull boxes, switch boxes and pads should be installed at the Developer's expense following IID approved plans and within the public utility easement (PUE) or a dedicated easement, if applicable. Physical field installation of underground infrastructures should be verified and approved by an IID inspector prior to cable installation as per IID Developer's Guide.

II. Permanent Plan of Service for remaining Phases (1,335 homes, club house and three well sites).

1. The additional power load requirements for the subsequent phases for the remaining power load will require the acquisition of a site, design and construction of a new substation with 2-25 MVA transformer banks 92/13.2 kV. In addition, transmission and distribution backbone line(s) extensions, distribution getaways and distribution feeders are required, all of which are at the expense of the Developer. A standard 315' by 315' site will be required at a strategic location approved by IID. Final site dimensions will be determined once evaluation is completed. Additional requirements to be determined, including, but not limited to, grading, fencing, applicable permits, zoning change, environmental compliance documentation, landscaping (if required by the City), and all rights-of-way and easements for the substation, and access rights for both ingress and egress, as well as power line facilities may be necessary, all of which are at the expense of the Developer.

2. Developer will be required to install the necessary conduit/vault systems following the Permanent Plan of Service and distribution getaways conduit systems from the new required substation.

3. Developer is required to extend a minimum of three feeders (conduit and cable) from the new substation to the proposed development.

4. Developer shall bear all costs associated with the construction of any additional facilities deemed necessary including, but not limited to, the new substation facilities, transmission line extensions, distribution getaways, distribution feeder breakers, feeder backbones and distribution overhead and/ or underground line extensions and upgrades necessary to extend electrical service to the proposed development. Additional requirements, including but not limited to, environmental compliance documentation, landscaping (if required by the City or County), all rights-of-way and easements for the substation and/or transmission and distribution line extensions, will be at the expense of the developer. The developer shall bear the cost of the substation infrastructure to serve the project but may be eligible for reimbursement from a third party user or third party users for a portion of the costs pursuant to existing IID regulations and/or approval by the IID Board of Directors.

5. Line extensions to serve the development will be made in accordance with IID Regulation No. 15, Regulation No. 2 and Regulation No.13. The final cost will be determined once the developer/builder submits a Customer Service Proposal application and final design is completed.

6. Please be advised that pursuant to IID process, the standard time frame for the implementation of a new substation transformer (engineering, equipment procurement and construction) requires a minimum of 18 months. As a result, Developer should adjust its project in-service dates accordingly. The procurement of the new substation banks will commence upon receipt of the Customer Service Proposal for the substation bank acquisition including payment for the full cost of the required equipment.

7. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.

8. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, etc.) need to be included as part of the project's California Environmental Quality Act and/or National Energy Policy Act documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until the environmental documentation is amended and environmental impacts are fully mitigated.

Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.

Please take note that, due to circumstances unknown to IID and unforeseen development, other projects could impact existing resources, which may affect IID's ability to serve this load if the project does not move forward to completion in a timely manner.

Based upon the above, by a date no later than **June 21, 2023**, you must provide the following documentation to IID: 1) Evidence of issuance of all local authorizations required to initiate construction, 2) Application for the installation of underground infrastructure system and payment of accompanying fees and 3) Application for service and payment of accompanying fees. Absent receipt of such evidence and documentation by the referenced date, a new study will be required including a revised Plan of Service.

If you have any questions, please contact Jose Gerardo at (760)398-5823. We look forward to working closely with you to facilitate the success of your project.

Sincerely,

Barraza, Guillermo

Digitally signed by Barraza, Guillermo
DN: dc=com, dc=IID, ou=Enterprise, ou=Energy, ou=Energy Planning and Engineering, ou=Energy Distribution Planning Engineering and Customer Operations, ou=Energy Distribution Planning and Engineering, cn=Barraza, Guillermo, email=GBarraza@IID.com
Date: 2022.06.22 12:28:27 -07'00'

Guillermo Barraza
Superintendent, Distribution System Planning and Engineering

cc: Daryl Buckley, Manager, Distribution Services and Maintenance Operations
Constance Bergmark, Manager Deputy, Planning and Engineering
Jose Gerardo, Supervisor, Distribution
Donald Vargas, Compliance Administrator

ATTACHMENT A

morrow
management

December 15, 2021

PHC239 (via UPS)

Imperial Irrigation District
Attn: Carlos Puente
81600 Avenue 58
La Quinta, California 92253

Subject: **Pulte Home Company, LLC**
Debonne Property
North Indio, California

Dear Carlos:

Enclosed is the IID invoice and check that represent the engineering fee for the System Study at the above referenced project.

- Check #0065407437 in the amount of **$10,000.00** payable to Imperial Irrigation District for the Service Notification # **4031341.**

Please process these payments promptly. Thank you.

Sincerely,

Morrow Management

Christy Wallace

Christy Wallace
CWS:cm
Enclosure(s)

IID
A century of service

DATE: December 09, 2021

BUSINESS PARTNER # 3469034

SERVICE NOTIFICATION # 4031341

PULTE HOMES COMPANY LLC
RYAN R MARSHALL PRES/SOHAIL BOKARI
DARVIN BAILEY JOHN CHADWICK
27401 LOS ALTOS, STE 400
MISSION VIEJO CA 92691

PROJECT LOCATION:
40TH AVE & MADISON ST
INDIO CA 92203

AMOUNT DUE: $10,000.00

PROJECT DESCRIPTION: SUBSTATION STUDY FOR THE FUTURE

DESCRIPTION	COST
Engineering Fee (System Study)	$ 10,000.00
TOTAL AMOUNT DUE	$10,000.00

THIS ESTIMATE IS SUBJECT TO REVIEW IF PAYMENT IS NOT RECEIVED BY 06/07/2022

IMPERIAL IRRIGATION DISTRICT
81800 AVENUE 58
LA QUINTA, CA 92253, PHONE: (760) 398-5841

PulteGroup **IMPERIAL IRRIGATION D090913001**

Vendor Number 090913001

Check Number 0065407437

Check Date 12/06/21

Invoice	Date	Co	Lot	Lot Address	Opt	Acct Cat	Acct Cat Description	Amount
052001105028383	12/01/21						Preacquisition Land Costs	10,000.00
**** TOTAL ****								10,000.00

THE ORIGINAL DOCUMENT HAS A WHITE REFLECTIVE WATERMARK ON THE BACK. HOLD AT AN ANGLE TO VIEW. DO NOT CASH IF NOT PRESENT

PulteGroup

PULTE HOMES CORP - Southern Ca
South Nevada
3350 Peachtree Road, NE
Suite 150
Atlanta, GA 30326

Check Number 0065407437
Check Date 12/06/21

Void After 180 Days

PAY
TEN THOUSAND AND 00/100 DOLLARS

$****10,000.00

Bank of America
Customer Connection
Atlanta, Dekalb County, GA

TO THE ORDER OF
IMPERIAL IRRIGATION D090913001
PO BOX 937
IMPERIAL, CA 92251-0937

⑈0065407437⑈ ⑆061112788⑆ 329903942 2⑈

PULTE HOME COMPANY, LLC

DEBONNE PROPERTY, NORTH INDIO

LOAD INFORMATION (ESTIMATED)

RESIDENTIAL Total # of Lots 1405

Descrip.	Plan Type	Sq Ft	A/C	Mix Percentage	# of Lots	Demand (kW)	Panel Size		
Classic	3514	1,438	3.5	10%	140.5	6.5	200		
	3516	1,650	3.5	10%	140.5	7	200		
	3517	1,762	4	10%	140.5	7.5	200		
Retreat	4217	1,832	4	10%	140.5	7.5	200		
	4218	1,858	4	10%	140.5	7.5	200		
	4219	2,008	4	10%	140.5	8	200		
	4221	2,187	4	10%	140.5	8.5	200		
Encore	5423	2,331	5	10%	140.5	9	200		
	5425	2,510	5	10%	140.5	9.5	200		
	5427	2,736	5	10%	140 5	10	200		
			Totals	100%	1405	113,805			

COMMERICAL

Descrip.	Serving Voltage	Phase	Panel Size	Demand (kVA)					
Clubhouse	120/208	Three	2000	313.9					
Well Site 1	277/480V	Three		290					
Well Site 2	277/480V	Three		290					
Well Site 3	277/480V	Three		290					
Misc.- Gates, Pedestals, etc.	120/240	Single		300					
			Total	1483.9					

9/29/2021

IN THE CITY OF [illegible]
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

ALTA/NSPS LAND TITLE SURVEY

BEING A PORTION OF
SECTION 4, T. 3 S., R. 7 E., S.B.M.

MSA CONSULTING, INC. OCTOBER - 2020

SCHEDULE A

[illegible]

LEGAL DESCRIPTION – EXHIBIT "A"

[illegible]

SCHEDULE B – SECTION II

[illegible]

THE FOLLOWING MATTERS AFFECT PARCELS 1 THROUGH 3

[illegible]

THE FOLLOWING MATTERS AFFECT PARCEL 4:

[illegible]

THE FOLLOWING MATTERS AFFECT PARCEL 5.

[illegible]

THE FOLLOWING MATTERS AFFECT PARCEL 7.

[illegible]

THE FOLLOWING MATTERS AFFECT PARCEL 8.

[illegible]

THE FOLLOWING MATTERS AFFECT ALL PARCELS.

[illegible]

(AFFECTS PARCELS 1-4 AND 6-8 AND OTHER LAND)

[illegible]

(AFFECTS PARCELS 1-4 AND 6-8 AND OTHER LAND)

[illegible]

FEDERALLY FILED EASEMENTS NOT SHOWN ON PRELIMINARY TITLE REPORT.

[illegible]

SURVEYOR'S STATEMENT

[illegible]

SURVEYOR'S NOTES

[illegible]

TOTAL GROSS AREA = 367.68 ACRES
(WITHIN DISTINCTIVE BORDER)

[illegible]

FLOOD ZONES

[illegible]

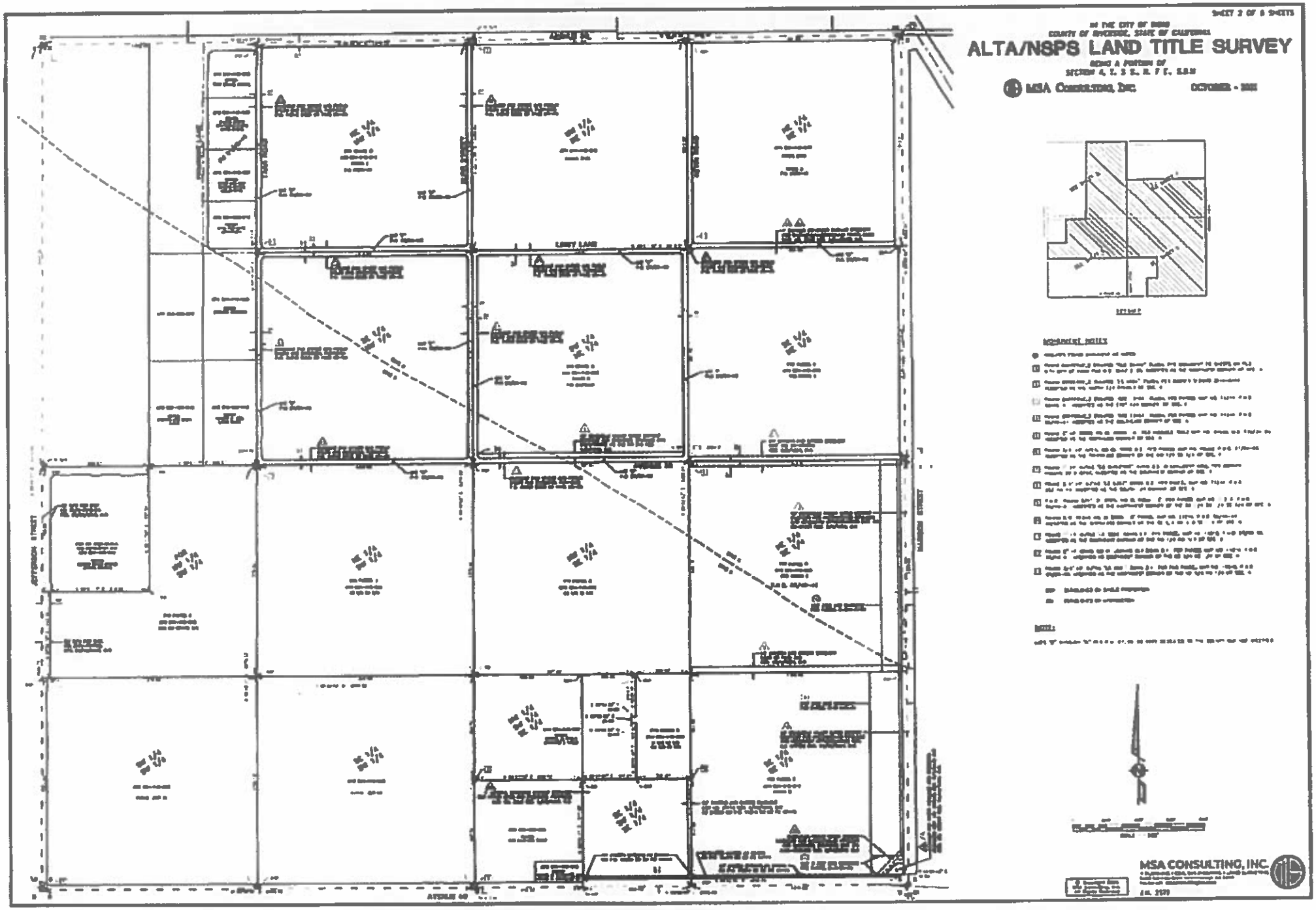
BENCH MARK

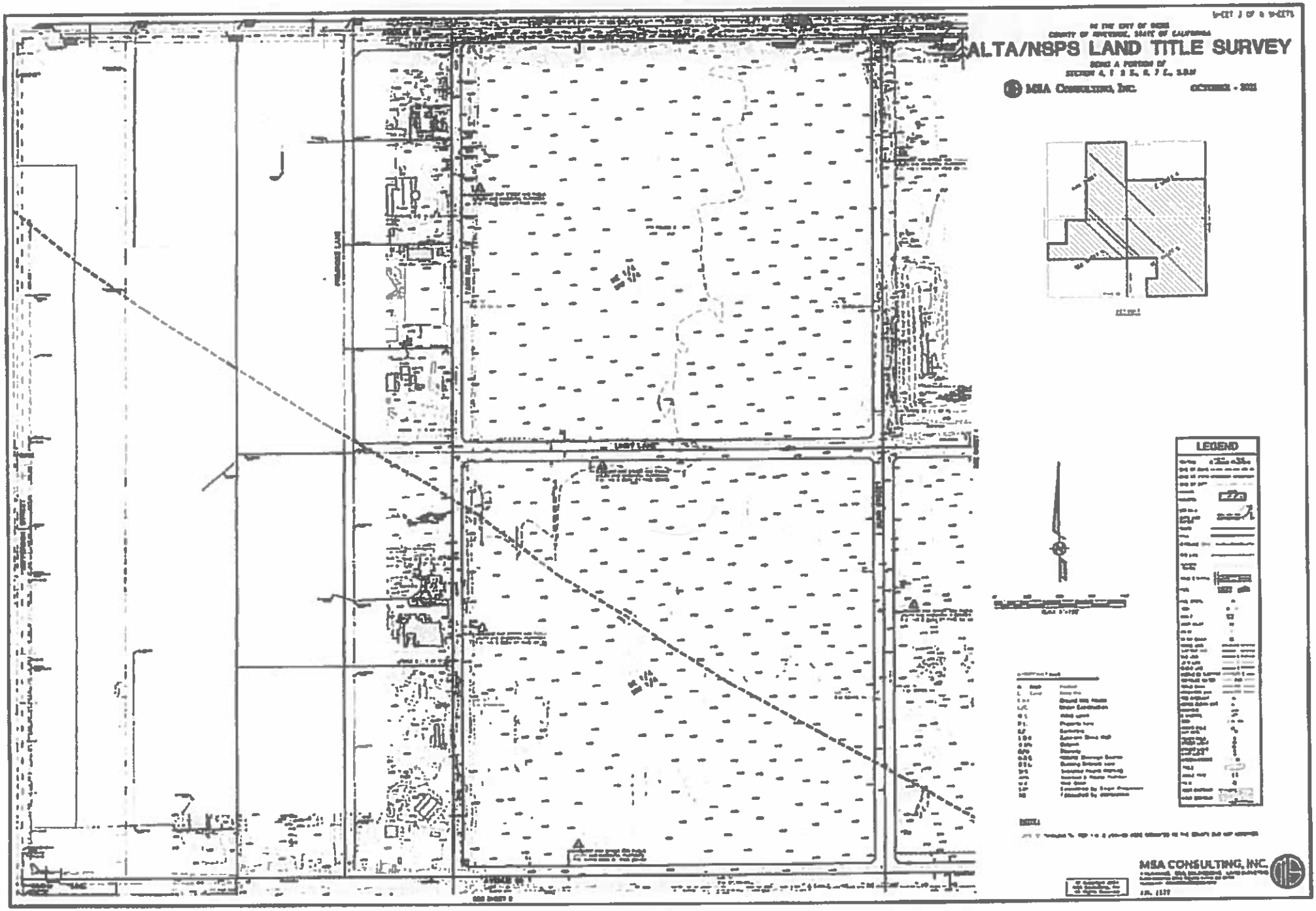
[illegible]

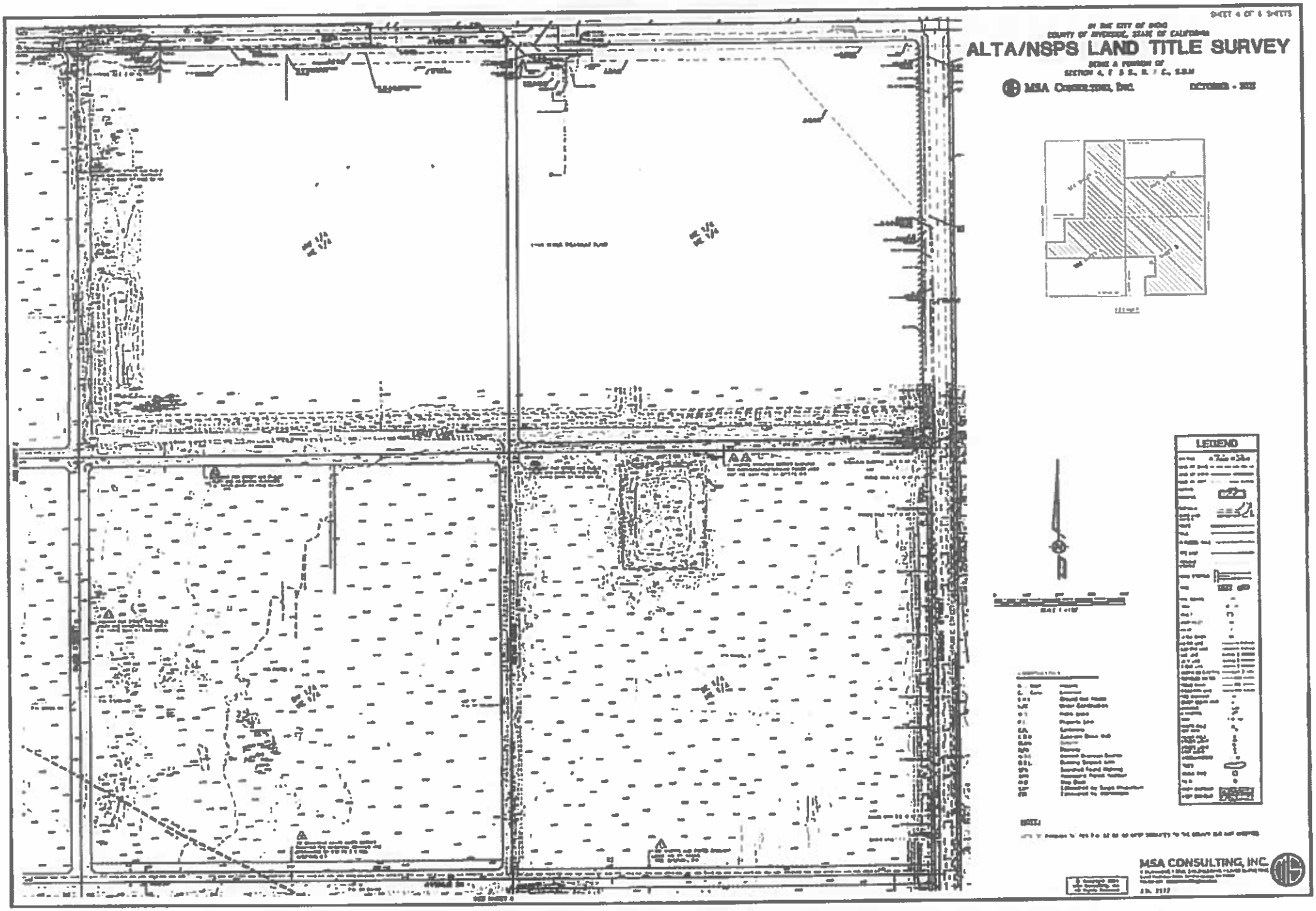
MISCELLANEOUS NOTES

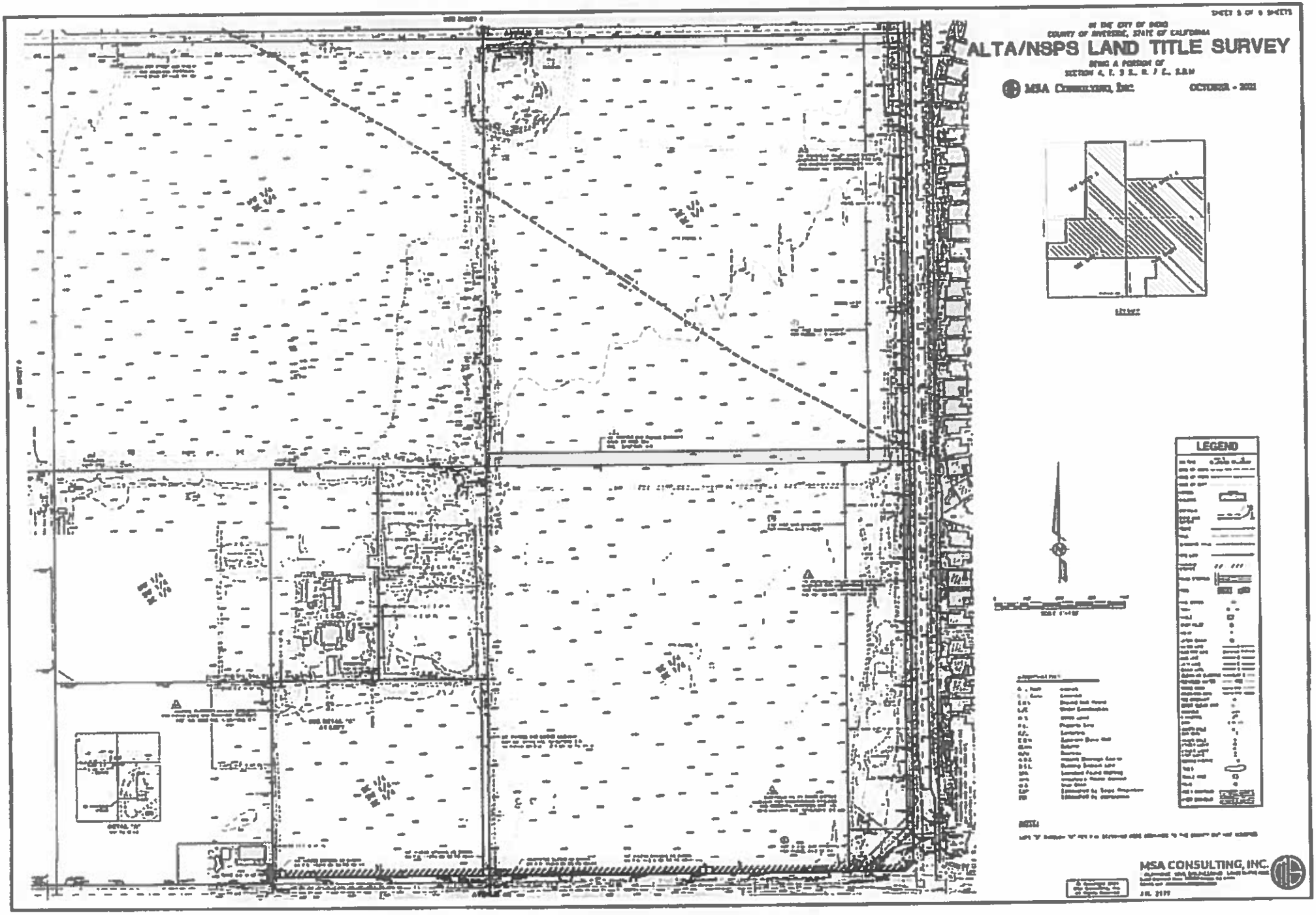
[illegible]

MSA CONSULTING, INC.

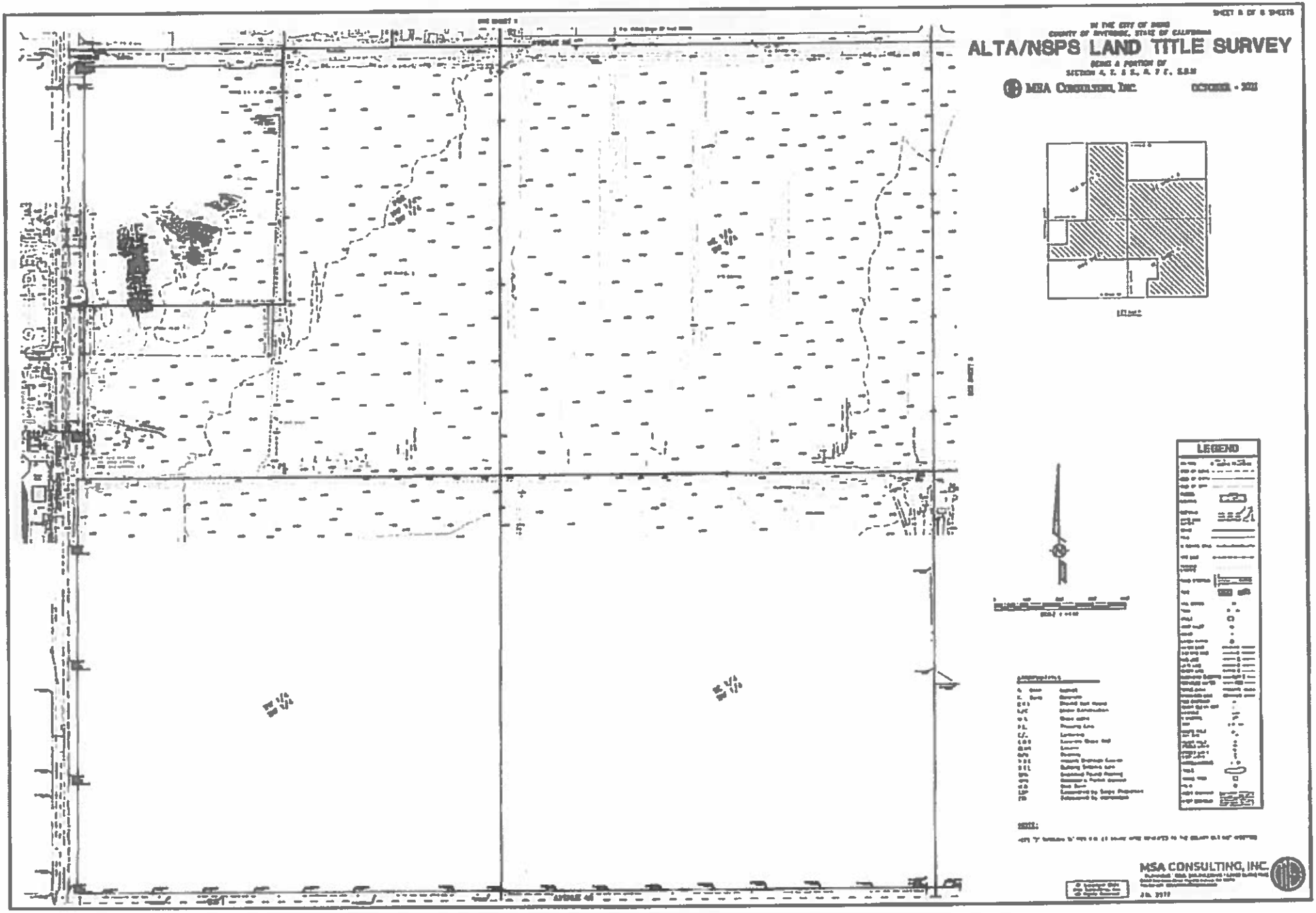

SHEET 2 OF 8 SHEETS
IN THE CITY OF INDIO
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
ALTA/NSPS LAND TITLE SURVEY
BEING A PORTION OF
MSA CONSULTING, INC.
OCTOBER
LIMIT LAND
JEFFERSON STREET
MADISON STREET
AVENUE 40
MSA CONSULTING, INC.


ALTA/NSPS LAND TITLE SURVEY
MSA CONSULTING, INC.
LEGEND
MSA CONSULTING, INC.


SHEET 4 OF 6 SHEETS
IN THE CITY OF INDIO
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
ALTA/NSPS LAND TITLE SURVEY
MSA CONSULTING, INC.
LEGEND
MSA CONSULTING, INC.



ALTA/NSPS LAND TITLE SURVEY
MSA CONSULTING, INC.
OCTOBER - 2021
LEGEND
MSA CONSULTING, INC.


ALTA/NSPS LAND TITLE SURVEY
MSA CONSULTING, INC.
LEGEND
MSA CONSULTING, INC.

APPENDIX N

Water Supply Assessment and Water Supply Verification

Water Supply Assessment
and
Water Supply Verification

for the Proposed

Desert Retreat

Prepared for:

Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Prepared by:

MSA Consulting, Inc.
34200 Bob Hope Drive
Rancho Mirage, CA 92270

January 2023

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1 Summary and Requirements

The environmental review of the Desert Retreat Project (Project) is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The City of Indio is the Lead Agency for the planning and environmental review of the proposed Project. The City of Indio has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project, and has requested that CVWD assist in preparing a Water Supply Assessment/Water Supply Verification (WSA/WSV) as part of the environmental review for the Project.

The Project is located in the eastern portion of the Coachella Valley within the City of Indio, Riverside County. The Project proposes to develop approximately 377.7 acres of vacant land to develop a gated active adult community of up to 1,500 single family detached homes, 26.11 acres of recreational uses, a 5.44-acre irrigation lake, 136.14 acres of open space, 2.32 acres for an Imperial Irrigation District substation, and 1.54 acres for CVWD well sites. The total non-residential building area for the proposed Project is 35,200 square feet and the total landscaped area is 9,915,715 square feet, as shown in **Tables 6-2 and 6-3**.

This WSA/WSV determined that the total projected water demand for the Project is 1,096.59 AFY, or 2.9 acre-feet per acre. This WSA/WSV demonstrates that sufficient water supplies exist, or will exist based on current water planning assumptions, to meet the projected demands of the Project, in addition to current and future projected water demands within CVWD's service area in normal, single-dry, and multiple-dry years over a 20-year projection. This WSA/WSV will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project completes construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. This WSA/WSV does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations including the CVWD Landscape Ordinance, and indoor water use performance standards provided in the California Water Code (CWC).

1.1 Regulatory Requirements

This WSA/WSV provides an assessment and verification of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill 610 (SB 610), SB 221, and SB 1262. This WSA/WSV also includes identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA/WSV has been prepared in compliance with the requirements under SB 610, SB 221, and SB 1262 by MSA Consulting, Inc. in consultation with CVWD and the City of Indio. This WSA/WSV does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations, including the CVWD Landscape Ordinance and indoor water use

performance standards provided in the California Water Code (CWC). This WSA/WSV will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project completes construction, to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify CVWD when construction begins. If neither the Project applicant nor the Lead Agency contacts CVWD within five years of approval of this WSA/WSV, it will be assumed that the Project no longer exists and the WSA/WSV provided by this document will become invalid.

1.1.1 Senate Bill 610

On January 1, 2002, Senate Bill 610 (SB 610) was enacted and codified in CWC Section 10910 et seq., requiring the preparation of a Water Supply Assessment (WSA) for certain new development projects. As stated in SB 610, the purpose of a WSA is to determine whether the PWS's "total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the PWS's existing and planned future uses, including agricultural and manufacturing uses."

CWC Section 10912 defines a "project" as any of the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project (about 250 acre-feet per year).

The intent of SB 610 is to improve the link between information on water supply availability and certain land-use decisions made by cities and counties.

1.1.2 Senate Bill 221

On January 1, 2002, Senate Bill 221 (SB 221) was enacted and amended Section 11010 of the Business and Professional Code. SB 221 also amended Section 65867.5 to add Section 66455.3 and 66473.7 to the Government Code. SB 221 establishes the relationship between the WSA prepared for a project and project approval under the Subdivision Map Act. Pursuant to CWC

Section 66473.7, the PWS must provide a written verification of sufficient water supply prior to the approval of a new subdivision. SB 221 states that "a Water Supply Verification (WSV) is required prior to approval of a tentative subdivision map, or a parcel map for which a tentative map is not required, or a development agreement for a subdivision of property of more than 500 dwelling units, except as specified, including the design of the subdivision or similar type of improvement."

1.1.3 Senate Bill 1262

On January 1, 2017, Senate Bill 1262 (SB 1262) was enacted and amended CWC Section 10910, requiring that information regarding the Sustainable Groundwater Management Act (SGMA) be included in a WSA if the water supply for a proposed project includes groundwater from a basin that is not adjudicated and was designated medium- or high-priority by the California Department of Water Resources (DWR).

1.2 Water Management Planning Documents

CVWD has prepared long-term planning documents to better manage the water supplies within its service area. These planning documents can be used for compliance with SB 610, SB 221, and SB 1262, and are discussed in further detail in the following sections.

1.2.1 Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMPA) was established by Assembly Bill 797 (AB 797) on September 21, 1983, and passage of this law recognized that water is a limited resource and that efficient water use and conservation would be actively pursued throughout the State. The UWMPA requires that municipal water suppliers serving either directly or indirectly more than 3,000 customers or supplying more the 3,000 acre-feet per year (AFY), prepare and adopt an Urban Water Management Plan (UWMP) every five years which defines their current and future water use, source of supply, source reliability, and existing conservation measures.

1.2.1.1 Coachella Valley Water District Urban Water Management Plan

CVWD prepared and adopted its 2005, 2010, and 2015 UWMPs to document CVWD's projected water demands and plans for delivering water supplies to its water service area during normal, single-dry, and multiple-dry years over a 20-year projection.

The six urban water suppliers in the Coachella Valley (CVWD, Coachella Water Authority, Desert Water Agency (DWA), Indio Water Authority (IWA), Mission Springs Water District (MSWD), and Myoma Dunes Mutual Water Company) collaboratively prepared the 2020 Coachella Valley Regional UWMP, including regional and individual agency content and other necessary elements as set forth in DWR's 2020 UWMP Guidebook. The 2020 Coachella Valley Regional UWMP was submitted to DWR on July 1, 2021.

1.2.2 Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three bills into law: Assembly Bill 1739, Senate Bill 1319, and Senate Bill 1168, which became collectively known as the Sustainable Groundwater

Management Act (SGMA), creating a framework for sustainable, local groundwater management for the first time in California history. DWR evaluated and prioritized the 515 groundwater basins identified in Bulletin 118, and 94 of these groundwater basins were designated as high- or medium-priority basins, as of December 2019, requiring them to be sustainably managed within 20 years. SGMA required local authorities to form local Groundwater Sustainability Agencies (GSAs) by June 30, 2017 to evaluate conditions in their local groundwater basins and adopt locally-based Groundwater Sustainability Plans (GSPs), or Alternatives to a GSP (Alternative Plans), tailored to their regional economic and environmental needs.

As defined by DWR, the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. CVWD's service area overlies the Indio, Mission Creek, and Desert Hot Springs Subbasins. The Indio and Mission Creek Subbasins have been designated medium-priority by DWR and are subject to the requirements of SGMA. The Desert Hot Springs Subbasin has been designated very low-priority by DWR and is not subject to the requirements of SGMA. The Project is located within the Indio Subbasin, which has been designated as a medium-priority groundwater basin by DWR under SGMA.

1.2.2.1 Alternative Plan for the Indio Subbasin

Twenty years before the adoption of SGMA, CVWD began the development of the initial water management plan for the Coachella Valley in 1994 after recognizing the need to sustainably manage the Coachella Valley Groundwater Basin. The original planning document is the 2002 Coachella Valley Water Management Plan (CVWMP). The 2002 CVWMP was updated in 2010 and adopted in 2012.

CVWD, DWA, CWA, and IWA, are the Indio Subbasin GSAs designated by DWR for their respective service areas. On December 29, 2016, CVWD, DWA, CWA, and IWA collaboratively submitted the 2010 CVWMP Update as an Alternative Plan for the Indio Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Indio Subbasin satisfies the objectives of SGMA and notified the Indio Subbasin GSAs that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to the SGMA by January 1, 2022 and every five years thereafter. The 2022 Alternative Plan Update for the Indio Subbasin was submitted to DWR on December 29, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018 and every year thereafter. CVWD, DWA, CWA, and IWA have collaboratively prepared and submitted the Indio Subbasin Annual Reports for Water Years 2016-2017 through 2020-2021.

1.2.2.2 Alternative Plan for the Mission Creek Subbasin

In 2004, CVWD, DWA, and MSWD reached an agreement and created the Mission Creek Subbasin Management Committee (Management Committee). The Management Committee jointly

prepared the 2013 Mission Creek-Garnet Hill Subbasin Water Management Plan (2013 MC-GH WMP).

On December 29, 2016, CVWD, DWA, and MSWD collaboratively submitted the 2013 MC-GH WMP as an Alternative Plan for the Mission Creek Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Mission Creek Subbasin satisfies the objectives of SGMA and notified the Management Committee that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to SGMA by January 1, 2022 and every five years thereafter. The 2022 Alternative Plan Update for the Mission Creek Subbasin was submitted to DWR on December 30, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018 and every year thereafter. CVWD, DWA, and MSWD have collaboratively prepared and submitted the Mission Creek Subbasin Annual Reports for Water Years 2016-2017 through 2020-2021.

1.2.3 Groundwater Replenishment

State Water Code (SWC) 31630-31639 provides CVWD with the authority to levy and collect water replenishment assessments to implement groundwater replenishment programs (GRPs) within its jurisdictional boundary. Groundwater replenishment is necessary to mitigate overdraft of the groundwater basin and associated undesirable results. The jurisdictional areas that benefit from the GRPs, and where CVWD levies replenishment assessments on groundwater production, are termed Areas of Benefit (AOBs). There are three AOBs within CVWD's boundary: the Mission Creek Subbasin AOB, the West Whitewater River Subbasin AOB, and the East Whitewater River Subbasin AOB. The GRP for the West Whitewater River Subbasin AOB was formed in 1976, the GRP for the Mission Creek Subbasin AOB was formed in 2003, and the GRP for the East Whitewater River Subbasin AOB was formed in 2004. The Project is located within the East Whitewater River Subbasin AOB.

1.2.3.1 Annual Engineer's Reports

CVWD is required to prepare and present to its Board of Directors annually an Engineer's Report on Water Supply and Replenishment Assessment on the conditions of the groundwater supplies and recommend Replenishment Assessment Charges (RACs) to be levied upon groundwater production greater than 25 AFY within each AOB in accordance with SWC 31630-31639. The Engineer's Report must include the following information: a summary of the conditions of groundwater supplies; the need for replenishment; a description of the replenishment programs, including the source and amount of replenishment waters, the costs associated with the GRP, the areas directly and indirectly benefited by the GRP, and the amount of groundwater produced in each area during the prior year; and a recommendation for the RAC to be levied on each AOB. The 2021-2022 Engineer's Report on Water Supply and Replenishment Assessment was prepared and presented to CVWD's Board of Directors on April 27, 2021.

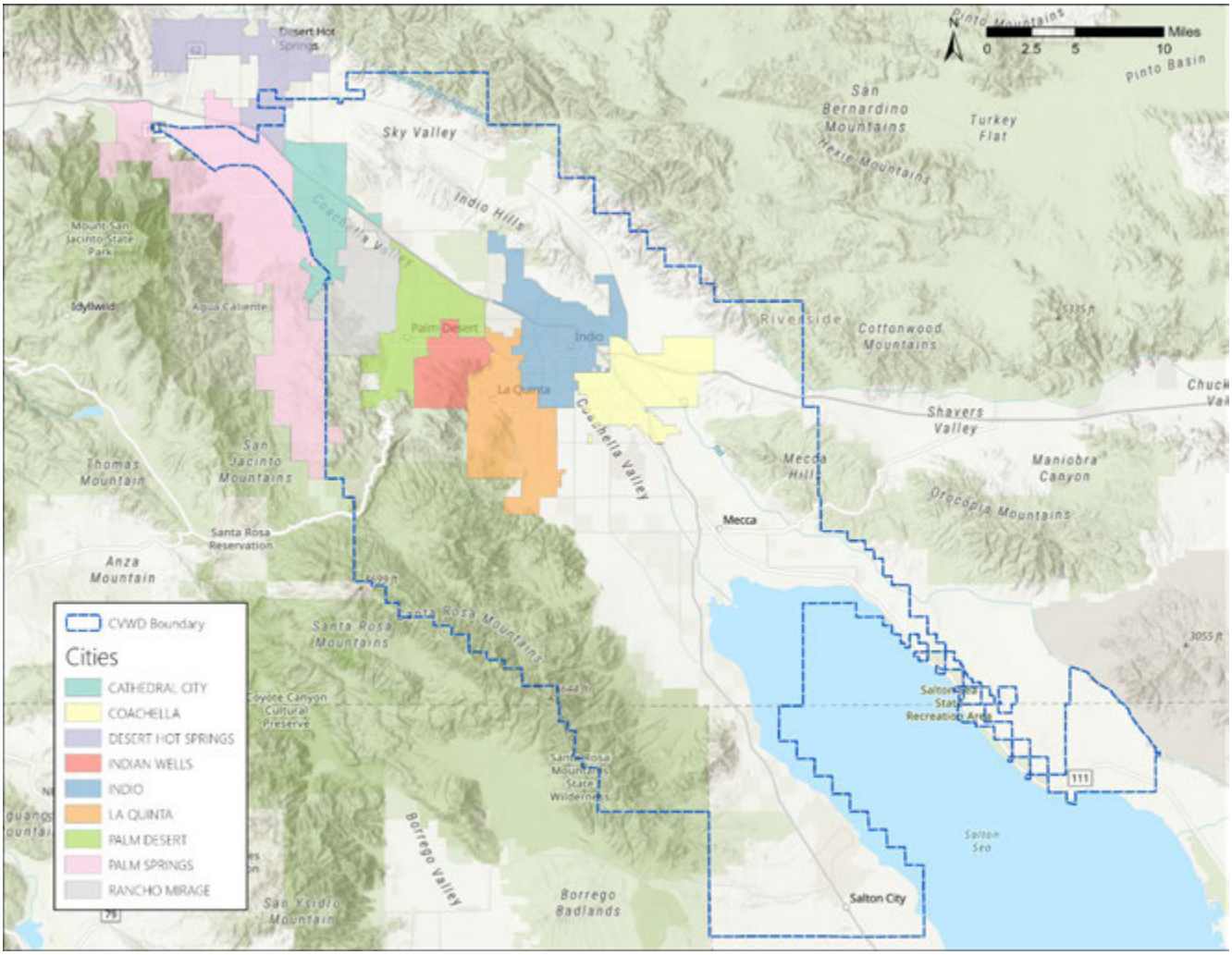
2 Public Water System

The City of Indio is the Lead Agency for the planning and environmental review of the proposed Desert Retreat Project (Project). The City of Indio has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project, and has requested that CVWD assist in preparing a Water Supply Assessment/Water Supply Verification (WSA/WSV) as part of the environmental review for the Project.

2.1 Coachella Valley Water District

CVWD was established in 1918 under the County Water District Act provisions of the California Water Code. CVWD provides water related services for domestic water, wastewater collection and treatment, recycled water, agricultural irrigation water, drainage management, imported water supply, groundwater replenishment, stormwater management, flood control, and water conservation. CVWD's boundary encompasses approximately 640,000 acres as shown in **Figure 2-1**, mostly within Riverside County, but also extending into northern Imperial and San Diego Counties.

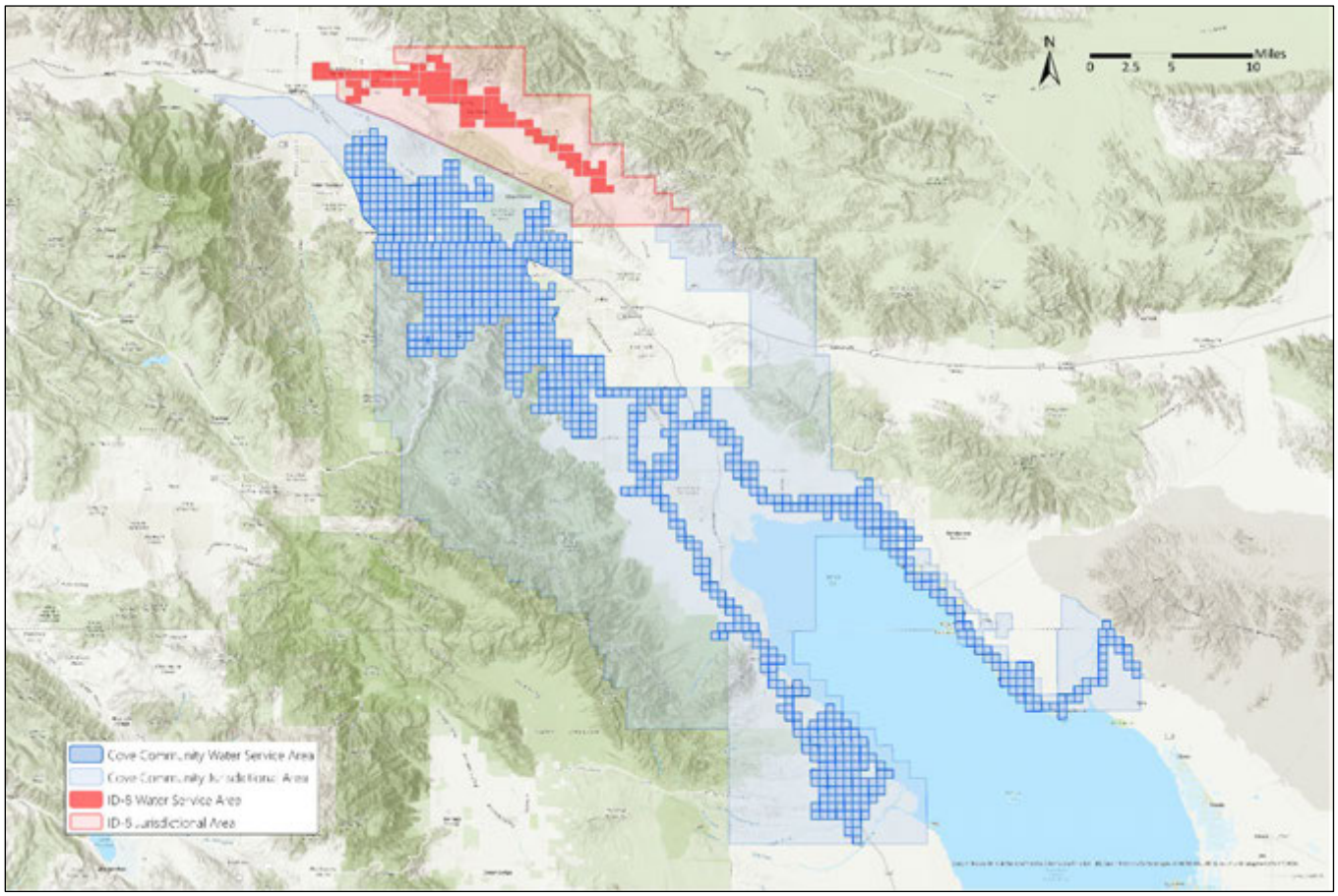
Figure 2-1: Coachella Valley Water District Boundary and Cities



2.1.2 Coachella Valley Water District – Potable Water Distribution Systems

CVWD has two domestic water service areas that serve potable water to its local communities: the Cove Communities system and Improvement District No. 8 (ID-8) as shown in **Figure 2-2**. CVWD previously had three water systems, but ID-11 was consolidated into the Cove Communities system in March 2021. CVWD had approximately 112,609 domestic water connections and served approximately 93,648 acre-feet (AF) of water in 2021. CVWD serves the Cities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, and La Quinta, and a portion of Indio, Coachella, and Cathedral City. Other areas served with domestic water by CVWD include a portion of lands near Desert Hot Springs and the Indio Hills. CVWD also serves other unincorporated communities including Thermal, Mecca, Oasis, Desert Shores, Salton Sea Beach, Salton City, North Shore, Bombay Beach, Hot Mineral Springs, and other portions of unincorporated Riverside and Imperial Counties. The Project is located within CVWD's Cove Communities domestic water distribution system.

Figure 2-2: Coachella Valley Water District Domestic Water Service Areas



The 2020 Regional UMWP projected that population in CVWD's urban water service area would increase as shown in **Table 2-1**.

Table 2-1: Current and Projected Population for CVWD's Service Area

Population Served	2020	2025	2030	2035	2040	2045
	268,952	292,077	315,202	338,274	360,813	383,300

Source: 2020 Coachella Valley Regional Urban Water Management Plan

2.2 Coachella Valley Hydrology

The bulk of natural groundwater replenishment comes from runoff from the adjacent mountains. Climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. Average annual precipitation varies from 3 to 6 inches of rain on the Coachella Valley floor to more than 30 inches in the surrounding mountains. Most of the precipitation occurs between December and February, except for summer thundershowers. Prevailing winds in the area are usually gentle, but occasionally increase to velocities as high as 30 miles per hour or more. Mid-summer temperatures commonly exceed 100 degrees Fahrenheit (°F), frequently

reach 110 °F, and periodically reach or exceed 120 °F, and the average winter temperature is approximately 60 °F as shown in **Table 2-2** and **Table 2-3**.

Table 2-2: Monthly Average Climate Data for Palm Springs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F)[1]	71	73	80	86	94	104	108	107	102	90	78	69	89
Min (°F)[1]	47	49	54	59	65	73	80	79	74	64	53	46	62
Rain (in)[1]	0.95	0.92	0.36	0.10	0.02	0.00	0.25	0.14	0.20	0.20	0.26	0.70	3.80
ETo (in)[2]	2.5	3.4	5.6	7.1	8.3	8.7	8.1	7.5	6.2	4.7	2.9	2.2	67.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Palm Springs Airport, 1998-2020

[2] CIMIS Station 208 – La Quinta II, 2007-2020

Table 2-3: Monthly Average Climate Data for Thermal

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F) [1]	71	74	81	87	95	103	107	106	101	91	79	69	89
Min (°F) [1]	39	43	49	55	63	69	76	75	68	57	45	38	56
Rain (in)[1]	0.64	0.61	0.34	0.08	0.01	0.01	0.13	0.12	0.32	0.19	0.17	0.34	2.96
ETo (in) [2]	2.7	3.9	6.4	8.0	9.3	9.3	9.6	9.1	7.1	5.3	3.2	2.4	70.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Desert Resorts Regional Airport, 1990-2020

[2] CIMIS Station 218 – Thermal South, 2010-2020

3 Public Water System – Existing Supply and Demand

Currently, all of Coachella Valley Water District's (CVWD's) urban potable water uses are supplied using groundwater. In addition to groundwater, CVWD has imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

3.1 Groundwater

Groundwater is the principle source of potable supply in the Coachella Valley and CVWD obtains groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. CVWD has the legal authority to manage the groundwater basin within its boundaries under the County Water District Law (California Water Code section 30000, et seq.) and as a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA).

Groundwater, to be supplied to the Project, is also used by other domestic water suppliers and by private pumpers for crop irrigation, fish farms, duck clubs, golf course irrigation, greenhouses, and industrial uses in the Coachella Valley.

3.1.1 Coachella Valley Groundwater Basin

The Coachella Valley Groundwater Basin is bounded on the north and east by the San Bernardino and Little San Bernardino Mountains, on the south and west by the Santa Rosa and San Jacinto Mountains, and on the south by the Salton Sea. At the west end of the San Gorgonio Pass, between Beaumont and Banning, the basin boundary is defined by a surface drainage divide separating the Coachella Valley Groundwater Basin from the Beaumont Groundwater Basin of the Upper Santa Ana Drainage Area.

The southern boundary is formed primarily by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea running between the Santa Rosa Mountains and Mortmar. Between the Salton Sea and Travertine Rock, at the base of the Santa Rosa Mountains, the southern boundary crosses the Riverside County Line into Imperial and San Diego Counties.

Although there is interflow of groundwater throughout the Coachella Valley Groundwater Basin, fault barriers, constrictions in the basin profile, and areas of low permeability limit and control movement of groundwater. Based on these factors, the Coachella Valley Groundwater Basin has been divided into subbasins and subareas as described by DWR in 1964 and 2003, and by the United States Geological Survey (USGS) in 1974.

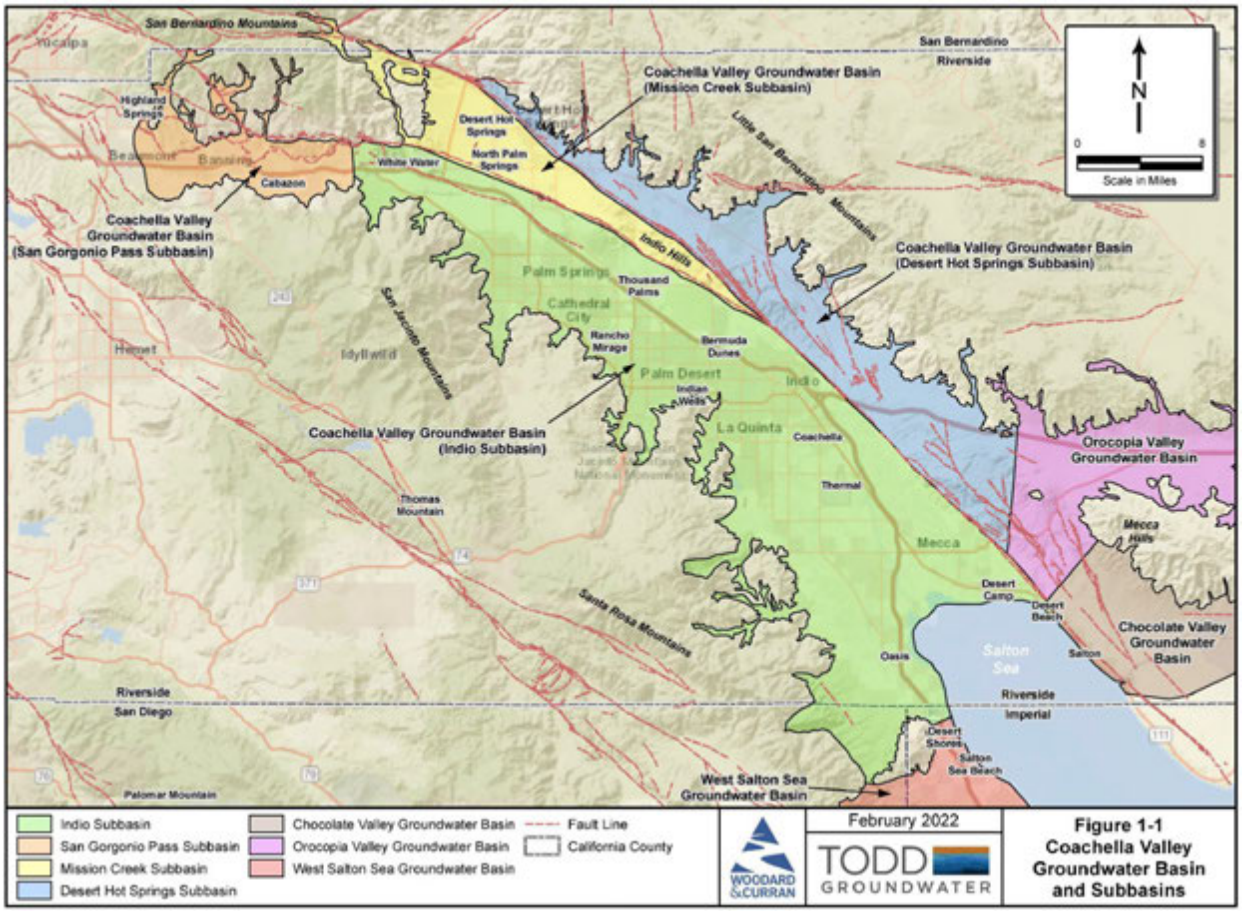
3.1.1.1 Coachella Valley Groundwater Basin – Subbasins

As shown on **Figure 3-1,** the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. The subbasins are defined without regard to water quantity or quality. They delineate areas underlain by formations which

readily yield stored groundwater through water wells and offer natural reservoirs for the regulation of water supplies.

The boundaries between subbasins within the Coachella Valley Groundwater Basin are generally defined by faults that impede the lateral movement of groundwater. Minor subareas have also been delineated based on one or more of the following geologic or hydrologic characteristics: types of water-bearing formations, water quality, areas of confined groundwater, forebay areas, groundwater divides, and surface drainage divides.

Figure 3-1: Coachella Valley Groundwater Basin and Subbasins



Source: Indio Subbasin Annual Report for Water Year 2020-2021

The following is a list of the subbasins in the Coachella Valley Groundwater Basin as designated by DWR in Bulletin 118:

- Indio Subbasin (Subbasin 7-21.01)
- Mission Creek Subbasin (Subbasin 7-21.02)
- San Gorgonio Pass Subbasin (Subbasin 7-21.03)
- Desert Hot Springs Subbasin (Subbasin 7-21.04)

DWR designated the Indio, Mission Creek, and San Gorgonio Pass Subbasins as medium-priority, and the Desert Hot Springs Subbasin as very low priority. None of the subbasins are adjudicated or in a state of overdraft.

In 1964, DWR estimated that the subbasins in the Coachella Valley Groundwater Basin contained approximately 39,200,000 acre-feet (AF) of water in the first 1,000 feet below the groundwater surface. The capacities of the subbasins are shown in **Table 3-1**.

Table 3-1: Groundwater Storage in the Coachella Valley Groundwater Basin

Subbasin/Subarea	Storage (AF) [1]
Indio Subbasin	
Palm Springs Subarea	4,600,000
Thousand Palms Subarea	1,800,000
Oasis Subarea	3,000,000
Garnet Hill Subarea	1,000,000
Thermal Subarea	19,400,000
Indio Subbasin Subtotal	**29,800,000**
Mission Creek Subbasin	2,600,000
San Gorgonio Subbasin	2,700,000
Desert Hot Springs Subbasin	4,100,000
Total	**39,200,000**

Source: DWR Bulletin 108 (1964)

[1] First 1,000 feet below ground surface. (DWR, 1964)

3.1.2 Groundwater Demand

Groundwater is the principle source of potable supply in the Coachella Valley and CVWD obtains groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. CVWD's groundwater demand in the Coachella Valley Groundwater Basin for 2017 through 2021 is shown in **Table 3-2**.

Table 3-2: CVWD Groundwater Demand in the Coachella Valley Groundwater Basin

Groundwater Production (AF)	2017	2018	2019	2020	2021
Indio Subbasin	93,798	96,176	93,130	96,661	98,484
Mission Creek Subbasin	2,917	2,786	2,642	3,182	3,062
Total	**96,715**	**98,962**	**95,772**	**99,843**	**101,546**

3.1.3 Groundwater Sustainability

Long-term sustainability is typically assessed based on changes in groundwater storage over a historical period on the order of ten to twenty years that includes wet and dry periods.

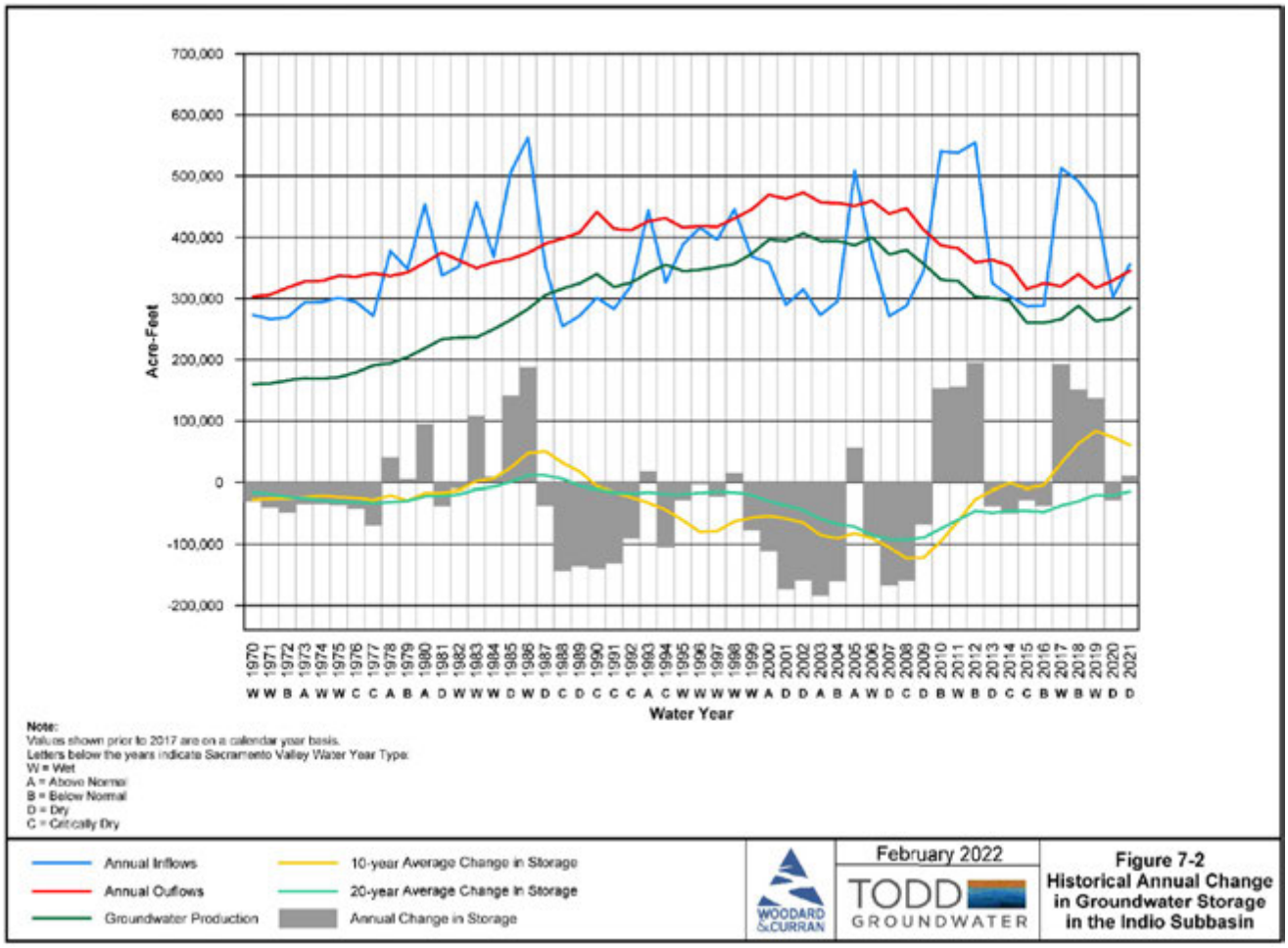
3.1.3.1 Indio Subbasin

Figure 3-2 shows the historical annual change in groundwater storage from 1970 through Water Year (WY) 2020-2021 in the Indio Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater

storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage is often negative.

As shown in **Figure 3-2**, annual inflows to the Indio Subbasin are highly variable with years of high inflows corresponding to wet years when SWP delivery volumes were greater. Higher inflows in the mid-1980s occurred when the Metropolitan Water District of Southern California (MWD) commenced large-scale advanced water deliveries to the Indio Subbasin. After an extended period of decline, both the 10-year and 20-year running-average change in storage have shown positive trends since 2009.

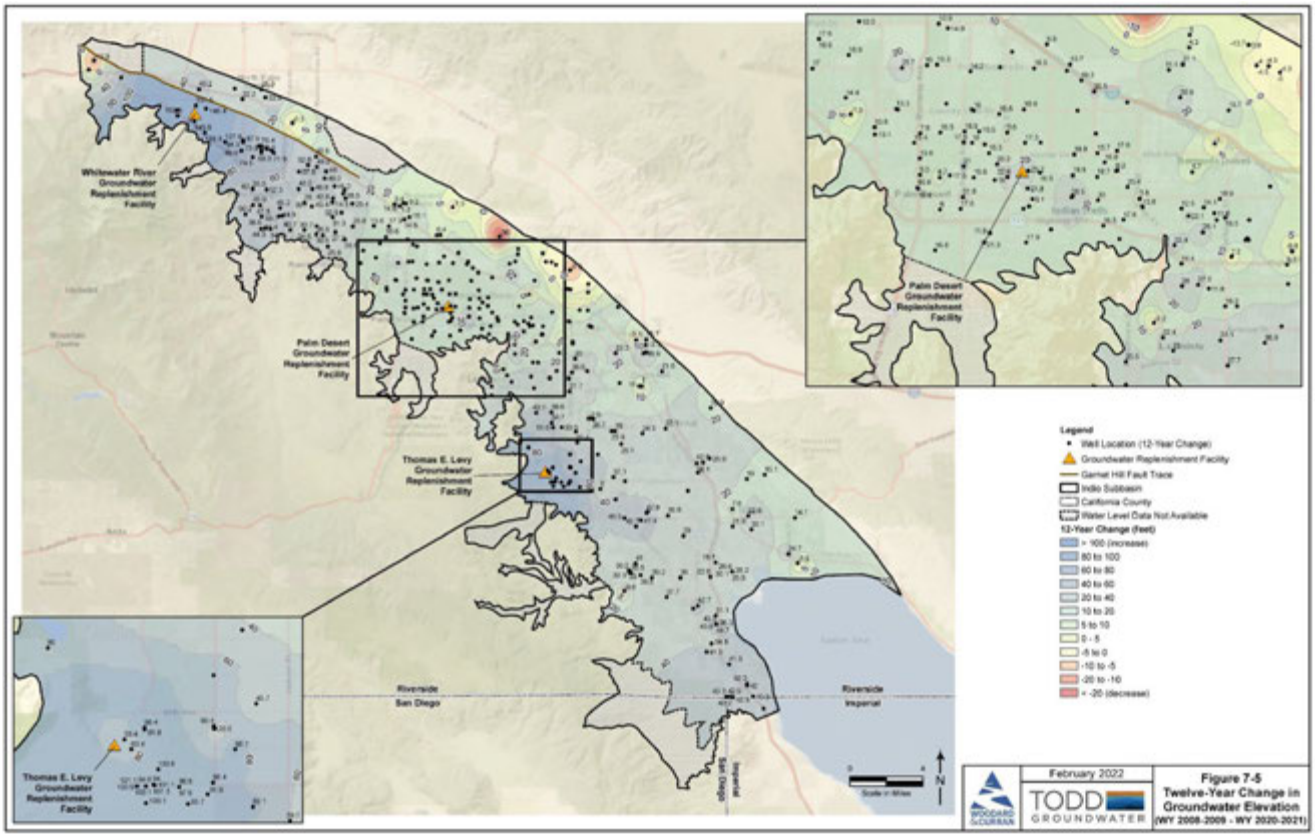
Figure 3-2: Historical Annual Change in Groundwater Storage in the Indio Subbasin



Source: Indio Subbasin Annual Report for Water Year 2020-2021

As shown in **Figure 3-3**, groundwater levels have increased significantly in the Indio Subbasin from WY 2008-2009 to WY 2020-2021. The 2022 Indio Subbasin Alternative Plan Update uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Indio Subbasin. The Indio Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Alternative Plan.

Figure 3-3: 12-Year Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2020-2021 in the Indio Subbasin



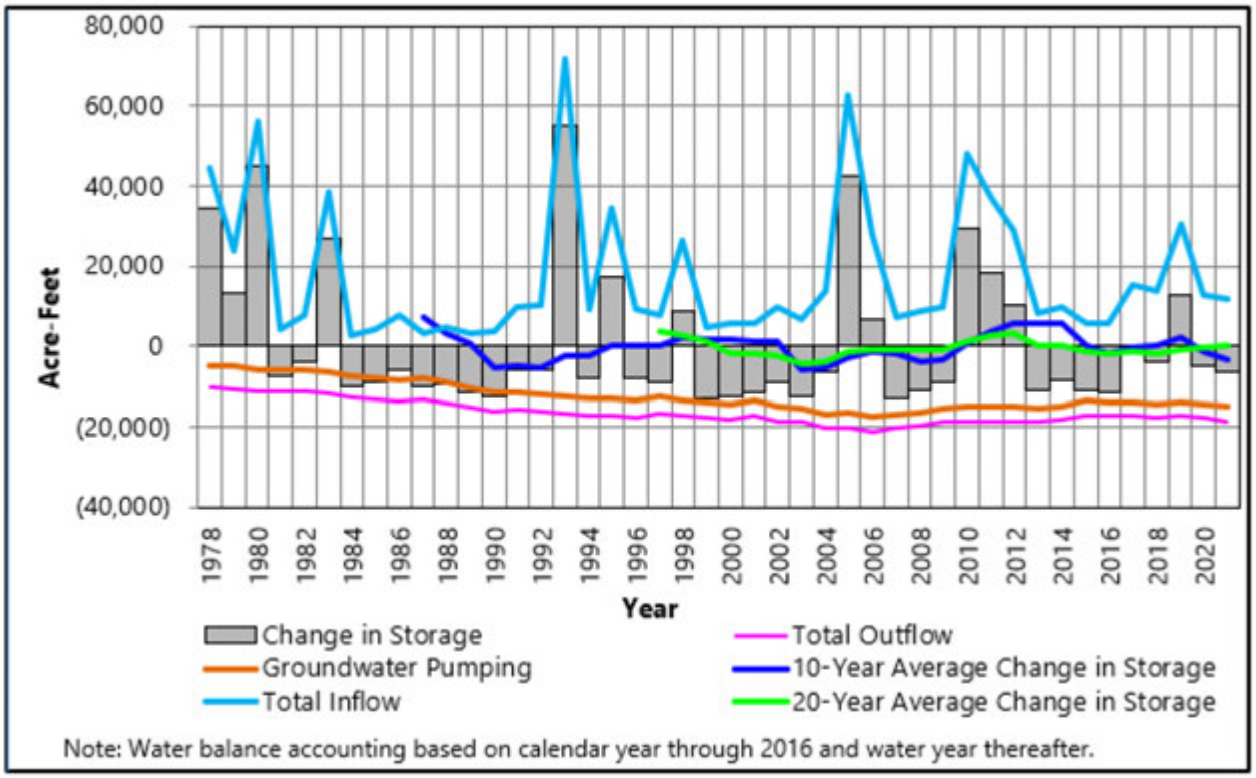
Source: Indio Subbasin Annual Report for Water Year 2020-2021

3.1.3.2 Mission Creek Subbasin

Figure 3-4 shows the historical annual change in groundwater storage from 1978 through WY 2019-2020 in the Mission Creek Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage is often negative.

As shown in **Figure 3-4**, after a period of decline, starting in 2004 both the 10-year and 20-year running-average change in groundwater storage have shown upward trends. Annual inflows to the Mission Creek Subbasin are highly variable with years of high inflows corresponding to years when SWP delivery volumes were greater. The 20-year running-average change in storage shows that the Mission Creek Subbasin has been in balance since 2012.

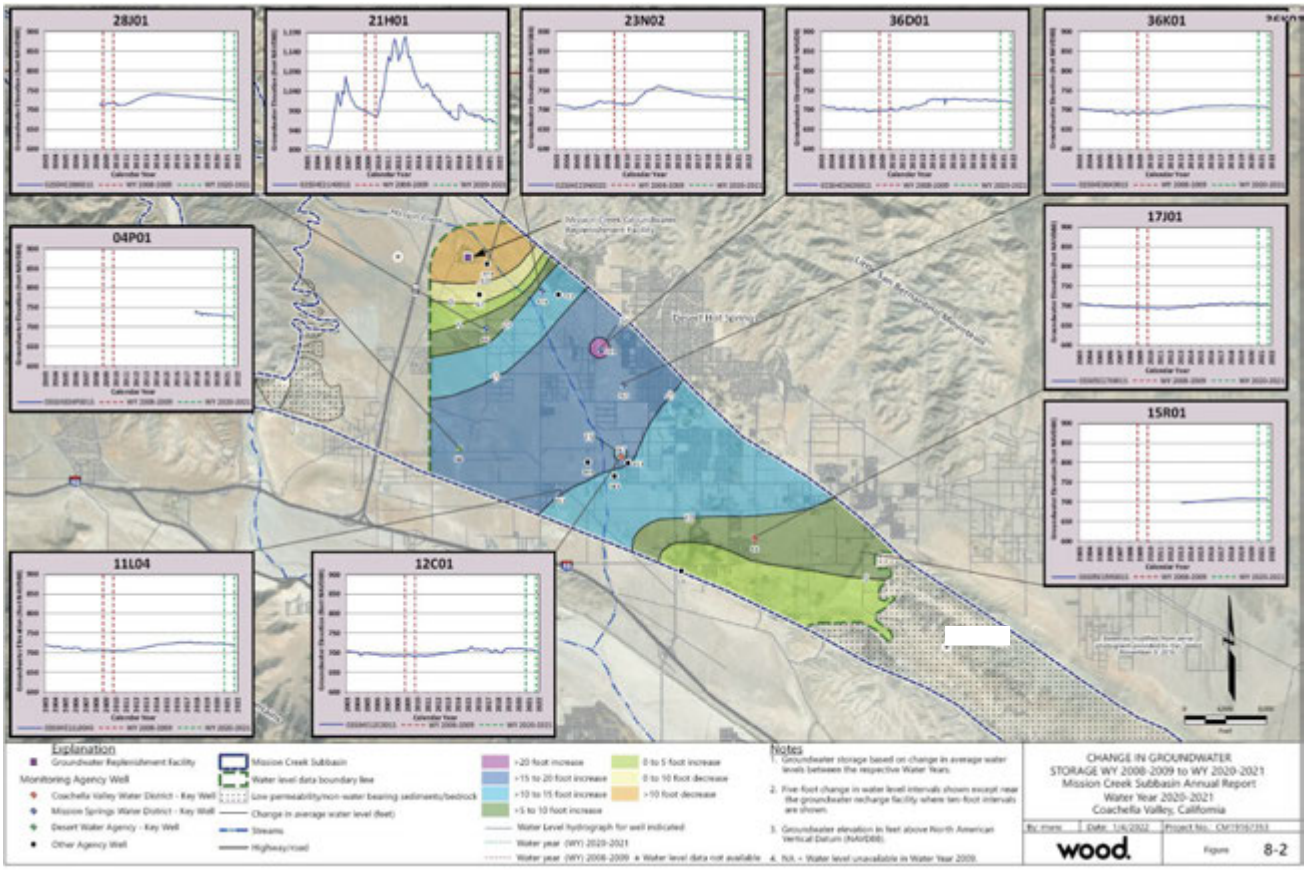
Figure 3-4: Historical Annual Change in Groundwater Storage in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2020-2021

Groundwater levels have increased significantly in the Mission Creek Subbasin over the past 10 years from WY 2008-2009 to WY 2020-2021 as shown in **Figure 3-5**. The 2022 Mission Creek Subbasin Alternative Plan Update uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Mission Creek Subbasin. The Mission Creek Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Alternative Plan.

Figure 3-5: 12-Year Change in Groundwater Elevation from Water Year 2010-2011 through Water Year 2020-2021 in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2020-2021

3.2 Imported Water

CVWD has two sources of imported water available: Colorado River water delivered via the Coachella Canal and SWP water exchanged for Colorado River water delivered through the Colorado River Aqueduct. These imported water sources are used to recharge the groundwater basin and as an alternative to meet non-potable demands from irrigation of agriculture, golf, and urban uses that would have otherwise been met by pumping groundwater. In the future, if urban demand significantly increases, resulting in shifts in land use from agriculture to urban, Colorado River water may be treated and delivered directly to customers through CVWD's potable water distribution system.

3.2.1 Colorado River Water

Colorado River water has been a significant water supply source for the Indio Subbasin since the Coachella Canal was completed in 1949. CVWD is the only agency in the Indio Subbasin that receives Colorado River water allocations. The Colorado River is managed and operated in accordance with the Law of the River, a collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court decree, and federal administrative actions that govern the rights to use Colorado River water

within the seven Colorado River Basin states. The 1922 Colorado River Compact apportioned the waters of the Colorado River Basin between the Upper Colorado River Basin (i.e., Colorado, Wyoming, Utah, and New Mexico) and the Lower Basin (i.e., Nevada, Arizona, and California). The 1922 Colorado River Compact allocates 15 million AFY of Colorado River water as follows: 7.5 million AFY to the Upper Basin and 7.5 million AFY to the Lower Basin, plus up to 1 million AFY of surplus supplies. The Lower Basin's water was further apportioned among the three Lower Basin states by the 1928 Boulder Canyon Project Act and the 1931 Boulder Canyon Project Agreement, typically called the 1931 Seven Party Agreement, which allocates California's apportionment of Colorado River water among Palo Verde Irrigation District, Imperial Irrigation District (IID), CVWD, Metropolitan Water District of Southern California (MWD), City of Los Angeles, City of San Diego, and County of San Diego. The 1964 U.S. Supreme Court decree in Arizona v. California established Arizona's basic annual apportionment at 2.8 million AFY, California's at 4.4 million AFY, and Nevada's at 0.3 million AFY. Mexico is entitled to 1.5 million AFY of the Colorado River under the 1944 United States-Mexico Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande. However, this treaty did not specify a required quality for water entering Mexico. In 1973, the United States and Mexico signed Minute No. 242 of the International Boundary and Water Commission requiring certain water quality standards for water entering Mexico. California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act, which provides that in years of insufficient supply on the main stem of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This assures full supplies to the Coachella Valley, except in periods of extreme drought.

The Coachella Canal is a branch of the All-American Canal that brings Colorado River water into the Imperial and Coachella Valleys. Under the 1931 Seven Party Agreement, CVWD receives 330,000 AFY of Priority 3A Colorado River water diverted from the All-American Canal at the Imperial Dam. The Coachella Canal originates at Drop 1 on the All-American Canal and extends approximately 123 miles, terminating in CVWD's Lake Cahuilla. The service area for Colorado River water delivery under CVWD's contract with the U.S. Bureau of Reclamation (USBR) is defined as Improvement District No. 1 (ID-1), which encompasses 136,400 acres covering most of the East Valley and a portion of the West Valley north of Interstate 10. Under the 1931 Seven Party Agreement, CVWD has water rights to Colorado River water as part of the first 3.85 million AFY allocated to California. CVWD is in the third priority position along with IID.

In 2003, CVWD, IID, and MWD successfully negotiated the 2003 Quantification Settlement Agreement (2003 QSA), which quantifies Colorado River allocations through 2077 and supports the transfer of water between agencies. Under the 2003 QSA, CVWD has a base entitlement of 330,000 AFY. CVWD negotiated water transfer agreements with MWD and IID that increased CVWD supplies by an additional 123,000 AFY. CVWD's net QSA supply will increase to 424,000 AFY by 2026 and remain at that level until 2047, decreasing to 421,000 AFY until 2077, when the agreement terminates. As of 2021, CVWD's available Colorado River water diversions at Imperial Dam under the QSA were 399,000 AFY. This includes the base entitlement of 330,000 AFY, the MWD/IID Transfer of 20,000 AFY, IID/CVWD First Transfer of 50,000 AFY, and IID/CVWD Second Transfer of 28,000 AFY. CVWD's QSA diversions also deducts the -26,000 AFY transferred to San

Diego County Water Authority (SDCWA) as part of the Coachella Canal Lining Project and the -3,000 AFY transfer to Indian Present Perfected Rights. Additionally, under the 2003 QSA, MWD transferred 35,000 AFY of its State Water Project (SWP) Table A Amount to CVWD. This SWP water is exchanged for Colorado River water and can be delivered at Imperial Dam for delivery via the Coachella Canal to the eastern portion of the Indio Subbasin or at Lake Havasu for delivery via the Colorado River Aqueduct to the western portion of the Indio Subbasin at the Whitewater River Groundwater Replenishment Facility (WWR-GRF). The 2019 Second Amendment guaranteed delivery of the 35,000 AFY from 2019 to 2026, for a total of 280,000 AFY of water to the WWR-GRF during that timeframe. MWD can deliver the water through CVWD's Whitewater Service Connections (for recharge at WWR-GRF) or via the Advance Delivery account.

The MWD/IID Transfer originated in a 1989 agreement with MWD to receive 20,000 AF of its Colorado River supply. The 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water defined the exchange and delivery terms between MWD, CVWD, and DWA. The 2019 Second Amendment to Delivery and Exchange Agreement reduced CVWD's annual delivery of the MWD/IID Transfer to 15,000 AFY, for a total of 105,000 AF, if taken at the Whitewater Service Connections (for recharge at WWR-GRF) between 2020 and 2026. For those seven years, MWD keeps the remaining 5,000 AFY, after which CVWD's allocation increases back up to 20,000 AFY. CVWD's total allocations under the QSA, including MWD's transfer of 35,000 AFY and the MWD/IID Transfer, will increase from 424,000 AFY in 2020 to 459,000 AFY by 2026 and remain at that level for the remainder of the 75-year term of the QSA. **Table 3-3** lists total Colorado River entitlements under existing agreements.

Table 3-3: CVWD Colorado River Entitlements (AFY)

Diversion	2020	2025	2030	2035	2040	2045
Base Entitlement	330,000	330,000	330,000	330,000	330,000	330,000
1988 MWD/IID Approval Agreement	20,000	20,000	20,000	20,000	20,000	20,000
IID/CVWD First Transfer	50,000	50,000	50,000	50,000	50,000	50,000
IID/CVWD Second Transfer[1]	23,000	48,000	53,000	53,000	53,000	53,000
Coachella Canal Lining	-26,000	-26,000	-26,000	-26,000	-26,000	-26,000
Indian Present Perfected Rights Transfer	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
QSA Diversions	**394,000**	**419,000**	**424,000**	**424,000**	**424,000**	**424,000**
MWD SWP Transfer[2]	35,000	35,000	35,000	35,000	35,000	35,000
Total Diversions	**429,000**	**454,000**	**459,000**	**459,000**	**459,000**	**459,000**
Assumed Conveyance Losses (5%)	-21,200	-22,700	-22,950	-22,950	-22,950	-22,950
MWD/IID Approval Agreement Transfer[3]	-5,000	-5,000	0	0	0	0
Total Available Deliveries	**402,800**	**426,300**	**436,050**	**436,050**	**436,050**	**436,050**

Source: 2022 Alternative Plan Update for the Indio Subbasin

[1] The Second IID/CVWD Transfer began in 2018 with 13,000 AF of water. This amount increases annually by 5,000 AFY for a total of 53,000 AFY in 2026.

[2] The 35,000 AFY MWD/CVWD SWP Transfer may be delivered at either Imperial Dam or Whitewater River and is not subject to SWP or Colorado River reliability.

[3] Accounts for -5,000 AFY reduction in MWD/IID Approval Agreement deliveries from 2020-2026 per the 2019 Amendments with MWD.

The Colorado River deliveries to CVWD at the Imperial Dam/Coachella Canal from 2017 through 2021 are shown in **Table 3-4.**

Table 3-4: Colorado River Deliveries to CVWD at the Imperial Dam/Coachella Canal

Diversions (AF)	2017	2018	2019	2020	2021
Imperial Dam/Coachella Canal	335,321	338,035	343,971	350,618	357,543

Source: U.S. Bureau of Reclamation, Lower Colorado Region, Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada. 2021 data is provisional.

CVWD's recharge volumes of Colorado River water from 2017 through 2021 are shown in **Table 3-5**.

Table 3-5: CVWD Groundwater Recharge of Colorado River Water

Groundwater Recharge (AF)	2017	2018	2019	2020	2021
Thomas E. Levy GRF	34,614	33,348	36,143	37,536	37,971
Palm Desert GRF	0	0	7,757	9,700	10,633
Total	**34,614**	**33,348**	**43,900**	**47,236**	**48,604**

Source: 2022-2023 CVWD Annual Engineer's Reports on Water Supply and Replenishment Assessment

3.2.2 State Water Project

The SWP is managed by DWR and includes 705 miles of aqueduct and conveyance facilities extending from Lake Oroville in Northern California to Lake Perris in Southern California. The SWP has contracts to deliver 4.172 million AFY to the State Water Contractors. The State Water Contractors consist of 29 public entities with long-term contracts with DWR for all, or a portion of, their water supply needs. In 1962 and 1963, DWA and CVWD, respectively, entered contracts with the State of California for a total of 61,200 AFY of SWP water. SWP water has been an important component of the region's water supply mix since CVWD and DWA began receiving and recharging SWP exchange water at the WWR-GRF. Starting in 1973, CVWD and DWA began exchanging their SWP water with MWD for Colorado River water delivered via MWD's Colorado River Aqueduct. Because CVWD and DWA do not have a physical connection to SWP conveyance facilities, MWD takes delivery of CVWD's and DWA's SWP water, and in exchange, delivers an equal amount of Colorado River water to the Whitewater Service Connections (for recharge at WWR-GRF and Mission Creek Groundwater Replenishment Facility). The exchange agreement was most recently re-established in the 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water.

Each SWP contract contains a "Table A" exhibit that defines the maximum annual amount of water each contractor can receive excluding certain interruptible deliveries. DWR uses Table A amounts to allocate available SWP supplies and some SWP project costs among the contractors. Each year, DWR determines the amount of water available for delivery to SWP contractors based on hydrology, reservoir storage, the requirements of water rights licenses and permits, water quality, and environmental requirements for protected species in the Sacramento-San Joaquin River Delta (Delta). The available supply is then allocated according to each SWP contractor's Table A amount.

CVWD's and DWA's collective increments of Table A water are listed in Table **3-6**. Original Table A SWP water allocations for CVWD and DWA were 23,100 AFY and 38,100 AFY, respectively, for a combined amount of 61,200 AFY. CVWD and DWA obtained a combined 100,000 AFY transfer from MWD under the 2003 Exchange Agreement. In 2004, CVWD purchased an additional 9,900 AFY of SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake Basin) in Kings County. In 2007, CVWD and DWA made a second purchase of Table A SWP water from Tulare Lake Basin totaling 7,000 AFY. In 2007, CVWD and DWA also completed the transfer of 16,000 AFY of Table A Amounts from the Berrenda Mesa Water District in Kern County. These latter two transfers became effective in January 2010. With these additional transfers, the total SWP Table A Amount for CVWD and DWA is 194,100 AFY. **Table 3-7** shows the recharge of SWP Exchange Water from 2017 through 2021.

Table 3-6: State Water Project Table A Allocations

	Original SWP Table A (AFY)	Tulare Lake Basin 2004 Transfer (AFY)	Metropolitan Water District 2003 Transfer (AFY)	Tulare Lake Basin 2007 Transfer (AFY)	Berrenda Mesa 2007 Transfer (AFY)	Total (AFY)
CVWD	23,100	9,900	88,100	5,250	12,000	138,350
DWA	38,100	0	11,900	1,750	4,000	55,750
Total	**61,200**	**9,900**	**100,000**	**7,000**	**16,000**	**194,100**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

Table 3-7: CVWD and DWA Groundwater Recharge of State Water Project Exchange Water

Groundwater Recharge (AF)	2017	2018	2019	2020	2021
Whitewater River GRF	385,994	129,725	235,600	126,487	15,006
Mission Creek GRF	9,248	2,027	3,688	1,768	0
Total	**395,242**	**131,752**	**239,288**	**128,255**	**15,006**

Source: CVWD 2022-2023 Annual Engineer's Reports on Water Supply and Replenishment Assessment

3.2.3 Other SWP Water

There are other types of SWP water that can be purchased, such as individual water purchase opportunities and transfers/exchanges. These may be conveyed to CVWD and DWA as available, but no commitments exist.

In 2008, CVWD and DWA entered into separate agreements with DWR for the purchase and conveyance of supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program (Yuba Accord). This program provides dry year supplies through a water purchase agreement between DWR and Yuba County Water Agency, which settled long-standing operational and environmental issues over instream flow requirements for the lower Yuba River. The amount of water available for purchase varies annually and is allocated among participating SWP contractors based on their Table A amounts. CVWD and DWA may purchase up to 1.72 percent and 0.69 percent, respectively, of available Yuba Accord water, in years it is made available. Yuba Accord deliveries have varied from zero in multiple years to a total of 2,664 AFY to CVWD and DWA in 2013.

Article 21 water (described in Article 21 of the SWP water contracts), "Interruptible Water," is water that State Water Contractors may receive on a short-term basis in addition to their Table A water if they request it in years when it is available. Article 21 water is used by many contractors to help meet demands in low allocation years. Article 21 water is not available every year, amounts vary when it is available, and is proportionately allocated among participating Contractors. The availability and delivery of Article 21 water cannot interfere with normal SWP operations and cannot be carried over for delivery in a subsequent year.

3.3 Surface Water

CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.1 River/Stream Diversion

Surface water supplies come from several local rivers and streams including the Whitewater River, Snow Creek, Falls Creek, and Chino Creek, as well as a number of smaller creeks and washes. Because surface water supplies are affected by variations in annual precipitation, the annual supply is highly variable. The 50-year hydrologic period from 1970 to 2019 had an annual average watershed runoff of 52,506 AFY, with approximately 43,300 AFY in natural infiltration. Runoff during the 25-year period from 1995 to 2019 was below average, with 39,196 AFY in watershed runoff and 29,200 AFY in natural infiltration. CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.2 Stormwater Capture

The Coachella Valley drainage area is approximately 65 percent mountainous and 35 percent typical desert valley with alluvial fan topography buffering the valley floor from the steep mountain slopes. The mean annual precipitation ranges from 30 inches or more in the San Bernardino Mountains to less than 3 inches at the Salton Sea. Three types of storms produce precipitation in the drainage area: general winter storms, general thunderstorms, and local thunderstorms. Longer duration, lower intensity rainfall events tend to have higher recharge rates, but runoff from flash flooding can result from all three types of storms. Otherwise, there is little to no flow in most of the streams in the drainage area.

Significant amounts of local runoff are currently captured at the Whitewater River GRF and in the debris basins and unlined channels of the western Coachella Valley. Additional stormwater will be captured when the Thousand Palms Flood Control Project is completed and when flood control is constructed in the Oasis area. However, limited data exists to estimate the amount of additional stormwater that could be captured by new facilities in the Coachella Valley. Nonetheless, large-scale stormwater capture is not expected to yield sufficient water to be worth the investment as a single purpose project. Small-scale stormwater retention systems located in areas of suitable geology to allow percolation could capture small intensity storms as well as street runoff. The potential yield of these system is not known at this time, but stormwater

capture should be considered in conjunction with projects that construct stormwater and flood control facilities.

3.4 Wastewater and Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other purposes. Recycled wastewater has historically been used for irrigation of golf courses and municipal landscaping in the Coachella Valley since as early as the 1960s. As growth occurs in the eastern Coachella Valley, the supply of recycled water is expected to increase, creating an additional opportunity to maximize local water supply.

CVWD operates five water reclamation plants (WRPs), two of them (WRP-7 and WRP-10) generate recycled water for irrigation of golf courses and large landscaped areas. WRP-4 became operational in 1986 and serves the communities from La Quinta to Mecca. WRP-4 effluent is not currently recycled, however, it will be in the future when the demand for recycled water is developed and tertiary treatment is constructed. The other two WRPs serve communities near the Salton Sea. A sixth WRP (WRP-9) was decommissioned in July 2015. The wastewater treated by CVWD from 2016 through 2020 is shown in **Table 3-8**. **Table 3-9** shows the recycled water produced by CVWD from 2016 through 2020. CVWD will continue to expand its recycled water program by connecting additional recycled water customers to meet the non-potable water demands in the western and eastern portions of the Coachella Valley.

Table 3-8: Wastewater Treated by CVWD

Wastewater (AF)	2017	2018	2019	2020	2021
WRP-1	19	19	16	18	24
WRP-2	13	12	16	13	15
WRP-4	5,695	5,900	6,065	6,353	6,452
WRP-7	3,124	3,275	3,246	3,236	3,287
WRP-10	9,710	10,124	9,663	9,238	8,980
Total	**18,561**	**19,330**	**19,006**	**18,858**	**18,758**

Table 3-9: Recycled Water Produced by CVWD

Recycled Water (AF)	2017	2018	2019	2020	2021
WRP-7	1,267	2,246	1,657	1,936	2,136
WRP-10	4,702	7,857	7,100	7,521	7,285
Total	**5,969**	**10,103**	**8,757**	**9,457**	**9,421**

3.5 Conservation

Water conservation, and the reduced groundwater production associated with water conservation, benefits the groundwater basin and is an important element of the Alternative Plans and the 2020 Regional UWMP.

CVWD has utilized several programs to ensure water conservation within its service area. CVWD has implemented allocation-based conservation water pricing (i.e. tiered rates) to prevent water waste or unreasonable use of water. In addition, CVWD's indoor rebate programs are designed to assist homeowners and commercial customers reduce water usage by upgrading toilets, replacing inefficient devices, and installing new technology to improve efficiency. CVWD also has outdoor rebate programs that are designed to assist homeowners, homeowners associations, and commercial customers reduce outdoor water usage by converting turf to desert landscaping, installing smart irrigation controllers, and improving the efficiency of irrigation systems. CVWD offers seminars, workshops, and classes to help educate the public regarding the need for water conservation and the conservation programs that are available.

3.6 Landscape Ordinance

CVWD Landscape Ordinance 1302.5 requires a series of reduction methods, including requirements that new developments install weather-based irrigation controllers that automatically adjust watering. Additional requirements include setbacks of spray emitters from impervious surfaces, as well as use of porous rock and gravel buffers between grass and curbs to eliminate run-off onto streets. With the exception of turf, all landscaping including groundcover and shrubbery must be irrigated with a drip system. Also, the maximum water allowance for landscaped areas through the CVWD service area has been reduced. This reduction goal requires that developers maximize the use of native and other drought-tolerant landscape materials and minimize use of more water-intensive landscape features, including turf and fountains.

3.7 Water Shortage Contingency Planning

Based on the experiences from the 2013-2015 drought, CVWD's domestic Water Shortage Contingency Plan provides the shortage levels summarized in **Table 4-9**. The trigger levels used to determine the water shortage level depend on the local water situation or applicable State manadates. CVWD has a diverse mix of water supplies and benefits from a large groundwater basin providing storage. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years.

Table 3-10: Urban Water Shortage Contingency Plan Shortage Levels

Shortage Level	Shortage Range	Water Supply Condition
1	Up to 10%	Normal water supplies
2	Up to 20%	Slightly limited water supplies
3	Up to 30%	Moderately limited water supplies
4	Up to 40%	Limited water supplies
5	Up to 50%	Significantly limited water supplies
6	Up to 60%	Severe shortage or catastrophic incident

Source: 2020 CVWD Water Shortage Contingency Plan

4 Public Water System – Projected Supply and Demand

Coachella Valley Water District (CVWD) projects that a majority of its urban potable water uses will continue to be supplied from local groundwater. In addition to groundwater, CVWD has secured imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

4.1 Projected Urban Demand and Supply

The following tables from the 2020 Regional Urban Water Management Plan (Regional UWMP) provide the CVWD's projected water supplies and demands. Potable water demand projections for the CVWD service area are summarized in **Table 4-1**.

Table 4-1: CVWD Projected Urban Retail Demands

	Projected Water Use				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	60,142	63,824	67,331	69,816	71,695
Multi-Family	6,873	7,245	7,742	8,267	9,045
CII	7,060	7,244	7,438	7,709	7,985
Landscape	34,193	36,205	38,226	39,865	41,516
Other	1,457	1,563	1,670	1,755	1,840
Losses	13,736	14,501	15,222	15,670	16,085
Total	**123,461**	**130,582**	**137,629**	**143,081**	**148,166**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

A summary of existing and planned urban water supply volumes by source are presented in **Table 4-2**. It should be noted that the supplies and demands presented in the tables below include recycled water delivered to CVWD's non-potable customers based on the DWR standardized tables and 2020 UWMP Guidebook. DWR requires the supply reliability table to include both potable and recycled water, however, CVWD's recycled water is not a potable water supply and is not delivered to CVWD's potable water customers. Instead, recycled water is used to offset the groundwater pumping of private well owners (mainly for golf course and landscape irrigation) to mitigate overdraft.

These projections were based on 2010 U.S. Census Data, DWR's Population Tool, the Southern California Association of Governments' (SCAG) 2020 Connect SoCal Regional Transportation Plan, and seasonal occupancy data from the Greater Palm Springs Convention and Visitors Bureau.

Table 4-2: CVWD Projected Urban Water Supplies

Water Supply	Projected Water Supply (AFY)				
	2025	2030	2035	2040	2045
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Total	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

4.2 Normal, Single-Dry, Multiple-Dry Year Comparison

The following tables from the 2020 Regional UWMP provide CVWD's projected water supplies and demands in a normal year, single-dry year, and multiple-dry years.

During normal years, CVWD will be able to meet current and future urban water demand needs projected in the 2020 Regional UWMP through groundwater pumping and recycled water as shown in **Table 4-3**.

Table 4-3: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During single-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4-**4. Water supplies during the single-dry year are 100 percent reliable. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years. Thus, the supply and demand comparison for the single-dry year is the same as the normal year.

Table 4-4: Single-Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During multiple-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4-5**. Similar to the single-dry year, the multiple-dry year water supply reliability is 100 percent. Thus, the supply and demand comparison for the multiple-dry years is the same as the normal year. CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

CVWD's total current urban water demand was 110,967 acre-feet (AF) for 2021, including 101,546 AF of groundwater and 9,421 AF of recycled water.

Table 4-5: Multiple-Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fourth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fifth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

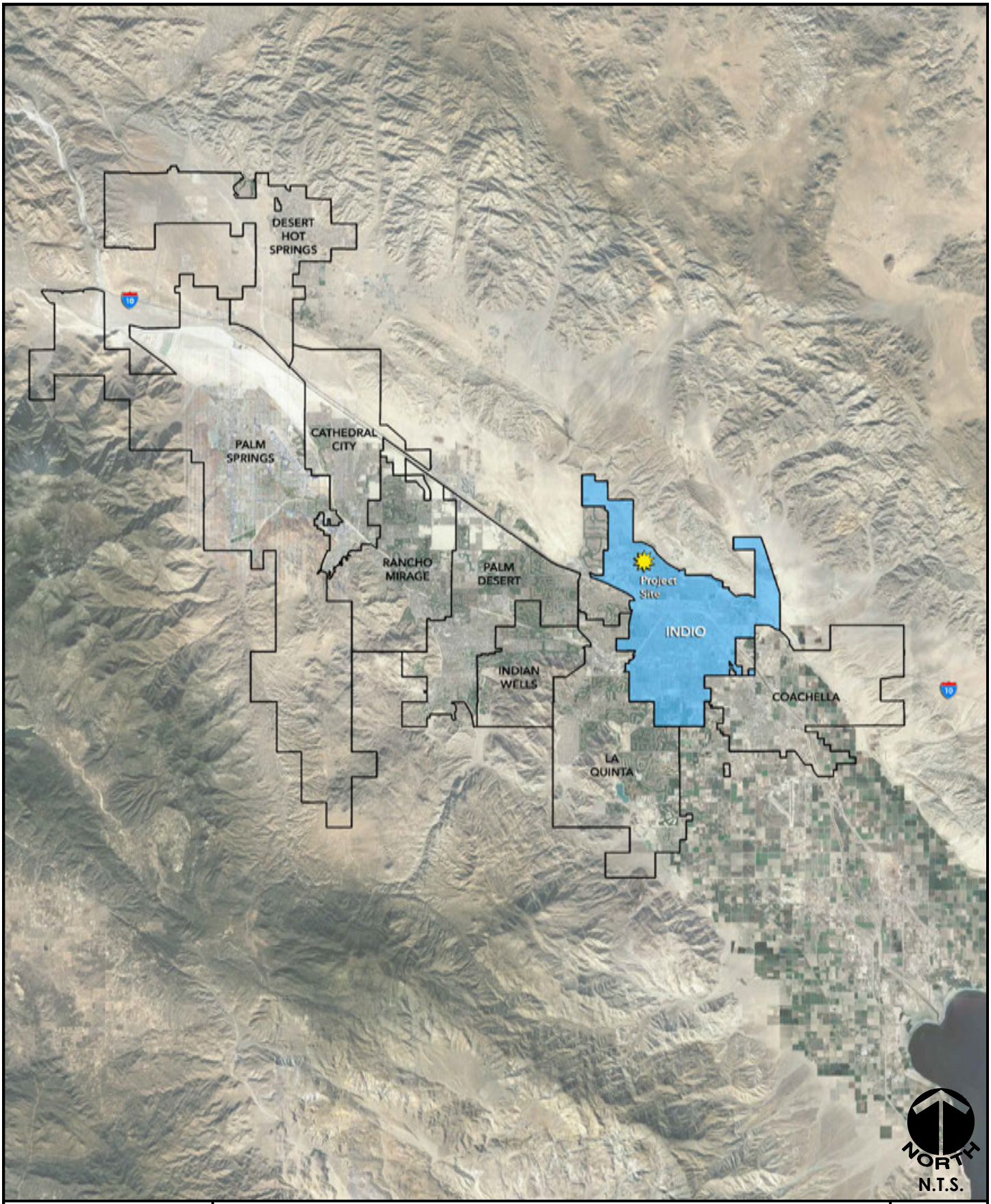
Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

5 Project Description

The Desert Retreat (Project) is located in the eastern portion of the Coachella Valley within the incorporated limits of the City of Indio, Riverside County as shown in **Figure 5-1: Project Regional Location Map**. The Project will be accessible from 40th Avenue to the south, 38th Avenue to the north, and Madison Street to the east, and is also bounded by Jefferson Street to the west, as shown in **Figure 5-2: Project Vicinity Map**. The Project proposes to develop approximately 377 acres of vacant land in the Coachella Valley to develop a gated active adult community of up to 1,500 single family detached homes, 26.11 acres of recreational uses, a 5.44-acre irrigation lake, 136.14 acres of open space, 2.32 acres for an Imperial Irrigation District (IID) substation, and 1.54 acres for CVWD well sites as shown in **Figure 5-3: Project Site Plan** and **Table 5-1: Project Land Use Summary**. The total non-residential building area for the proposed Project is 35,200 square feet and the total landscaped area is 9,915,715 square feet, as shown in **Tables 6-2 and 6-3**.

Table 5-1: Project Land Use Summary

Planning Area	Specific Plan/Land Use Designation	Land Area (Acres)	Target Density (EDUs/Acre)	Estimated Dwelling Units (EDUs)	Non-Residential Building Area (ft^2)
Residential	Residential	206.12	7.3	1,500	N/A
Recreational – Clubhouse & Guardhouse	Recreational – Clubhouse & Guardhouse	26.11	N/A	N/A	35,200
Non-Potable Irrigation Lake	Irrigation Lake	5.44	N/A	N/A	N/A
Open Space	Open Space	66.93	N/A	N/A	N/A
Open Space – Private Street	Open Space – Private Street	67.22	N/A	N/A	N/A
Open Space – Public Right of Way	Open Space – Public Right of Way	1.99	N/A	N/A	N/A
IID Substation	IID Substation	2.32	N/A	N/A	N/A
CVWD Well Sites	CVWD Well Sites	1.54	N/A	N/A	N/A
Total		**377.67**		**1,500**	**35,200**



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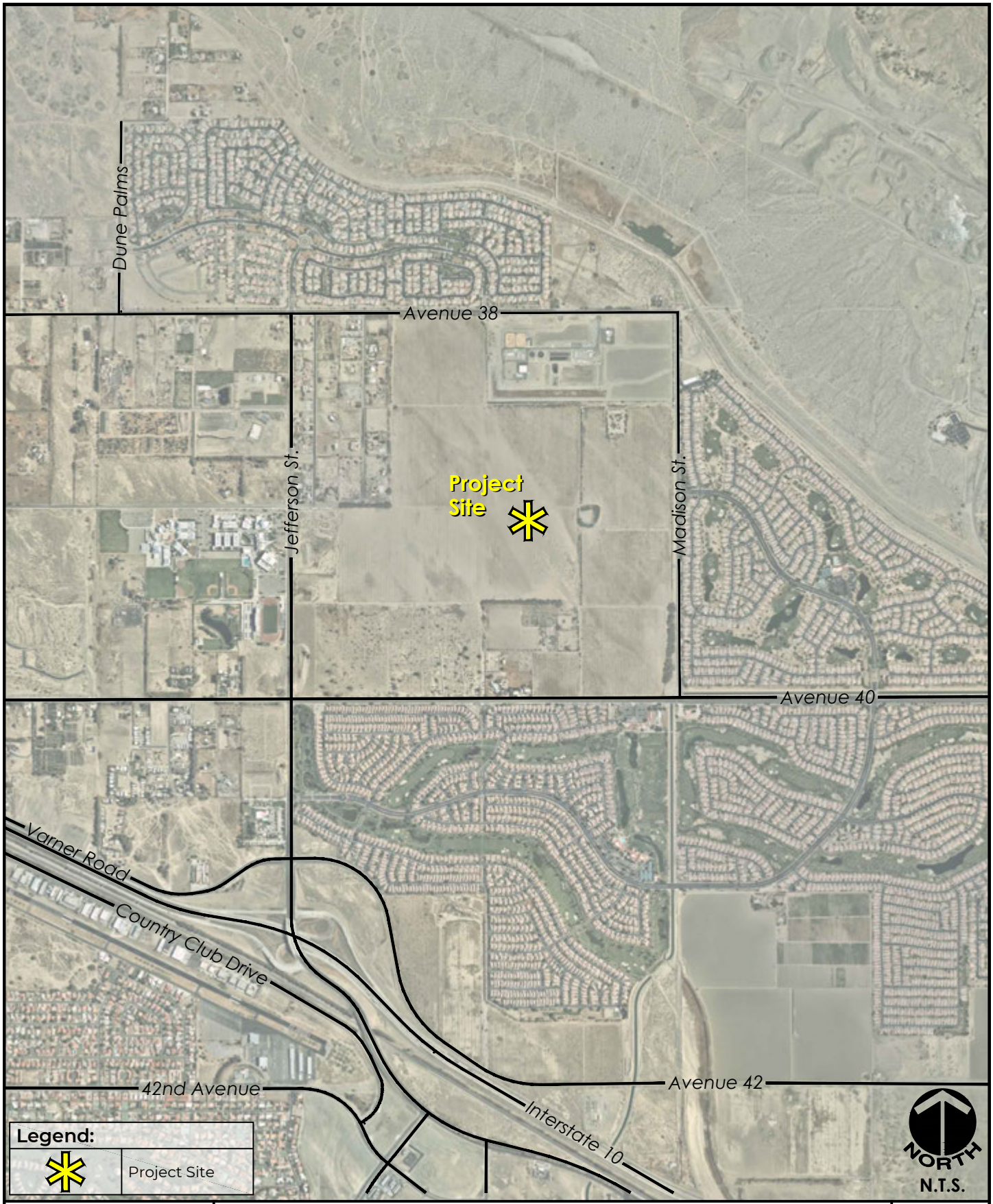
REGIONAL LOCATION MAP

DESERT RETREAT
WATER SUPPLY ASSESSMENT

EXHIBIT **5-1**



VICINITY MAP

DESERT RETREAT
WATER SUPPLY ASSESSMENT

EXHIBIT **5-2**

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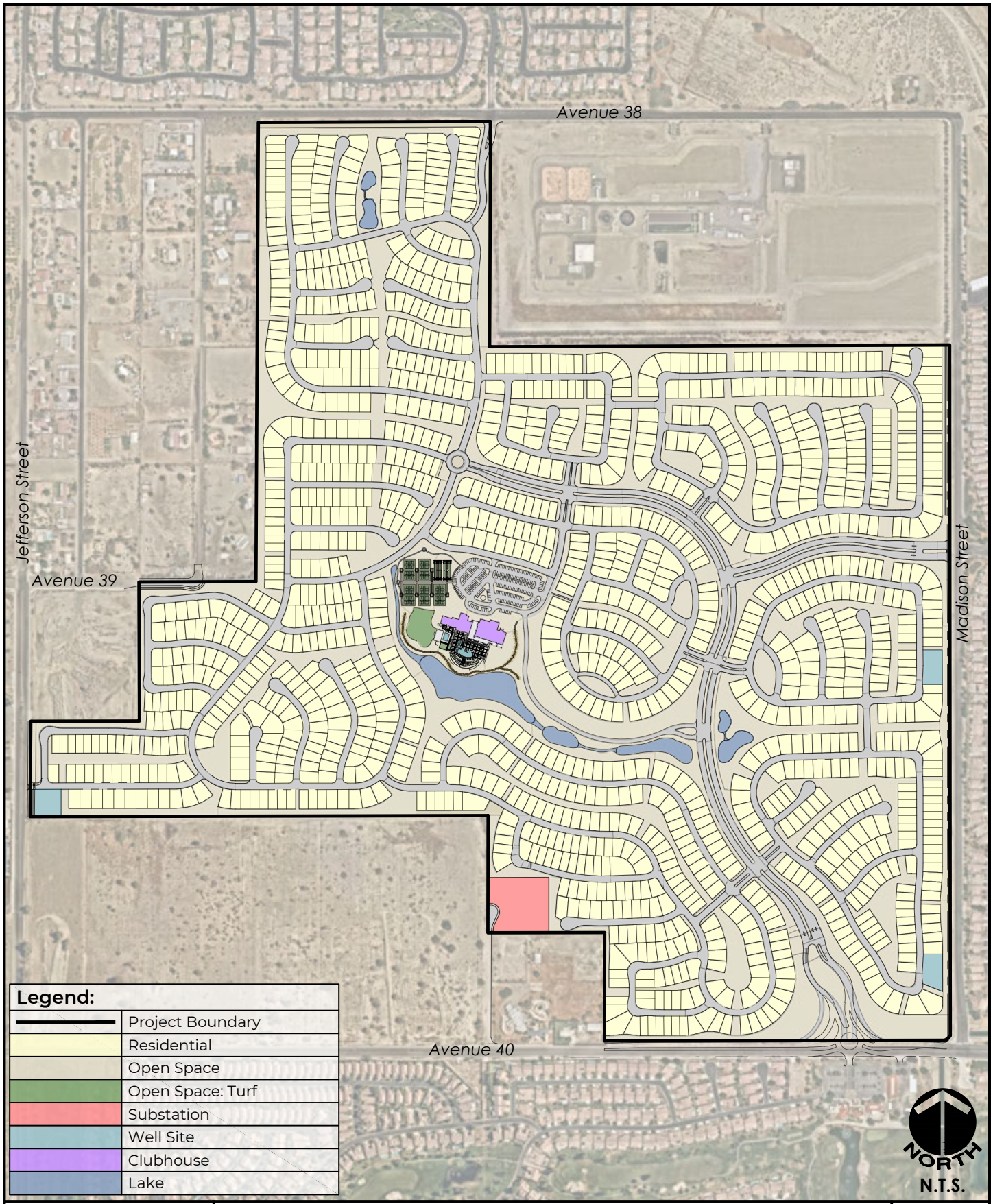

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SITE PLAN

DESERT RETREAT
WATER SUPPLY ASSESSMENT

EXHIBIT
5-3

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6 Project Water Demands

The Project proposes to develop approximately 377 acres of vacant land in the Coachella Valley to develop a gated active adult community of up to 1,500 single family detached homes, 26.11 acres of recreational uses, a 5.44-acre irrigation lake, 136.14 acres of open space, 2.32 acres for an Imperial Irrigation District (IID) substation, and 1.54 acres for CVWD well sites.

6.1 Projected Indoor Residential Water Demand

The projected indoor residential unit usage for this Water Supply Assessment/Water Supply Verification (WSA/WSV) is based on indoor water use performance standards as defined in the California Water Code (CWC) Section 10910 approved November 10, 2009, codified in CWC section 10608.20 (b)(2)(A). The projected indoor residential water demand for the Project totals 280.93 acre-feet per year (AFY) as shown in **Table 6-1** below. SB 606 and AB 1668 established guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. Based on results of the Indoor Residential Water Use Study, DWR and the State Water Resources Control Board jointly recommended that the indoor residential standard remain at 55 gallons per capita per day (gpcd) through 2024 and decline to 47 gpcd in 2025 and to 42 gpcd starting in 2030.

Table 6-1: Projected Indoor Residential Water Demand

Planning Area	Land Area (Acres)	Estimated Dwelling Units (EDUs)	Estimated Occupants per Home [1]	Gallons per Day (gpd) per Occupant [2]	gpd/EDU	Water Demand (gpd)	Water Demand (AFY)
Residential	206.12	1,500	3.04	55	167.2	250,800	280.93
Total	**206.12**	**1,500**				**250,800**	**280.93**

[1] CA Department of Finance Table 2: E-5 City/County Population and Housing Estimates, 2022 for the City of Indio.
[2] CA Indoor Water Use Performance Standard

6.2 Projected Indoor Commercial and Industrial Water Demand

The projected indoor commercial and industrial unit usage for this WSA/WSV are based on the American Water Works Association Research Foundations (AWWARF's) Commercial and Industrial End Uses of Water. The projected indoor commercial and industrial water demand for the Project totals 11.10 AFY as shown in **Table 6-2** below.

Table 6-2: Projected Indoor Commercial and Industrial Water Demand

Planning Area	Indoor Area (ft^2)	Water Demand Factor (gal/sf/year)[1]	Water Demand (gpd)	Water Demand (AFY)
Recreational Clubhouse	29,200	35	5,120	3.14
Recreational Clubhouse Restaurant	5,200	331	4,715.62	5.28
Recreational Guardhouse	800	35	76.71	0.09
Total	**35,200**		**9,912.33**	**8.50**

[1] AWWARF Commercial and Institutional End Uses of Water, 2000.

6.3 Projected Outdoor Irrigation Water Demand

The projected outdoor irrigation water usage is based on the Maximum Applied Water Allowance (MAWA) equation from Appendix D of Coachella Valley Water District's (CVWD's) Landscape Ordinance No. 1302.5, which meets the water conservation goals of the California Department of Water Resources (DWR) Model Efficient Landscape Ordinance (MWELO). The Project's outdoor irrigation demand will be met with potable water and CVWD non-potable water. It is anticipated that the residential outdoor areas will be irrigated with potable water and non-residential outdoor areas will be irrigated with non-potable water. The projected residential outdoor demand that will be met with potable water is 352.38 AFY as shown in **Table 6-3** below. The projected non-residential outdoor demand that will be met with non-potable water is 454.78 AFY. The total projected outdoor demand for the Project is 807.15 AFY as show in **Table 6-3** below. If the completed Project does not utilize non-potable water to meet all non-residential outdoor irrigation demand as stated here, the calculated outdoor irrigation demand will need to be revised.

Table 6-3: Projected Outdoor Irrigation Water Demand

Planning Area	Landscaped Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
Residential	4,938,222.96	83.34	0.45	0.62	314,583.20	352.38
Recreational – Clubhouse & Guardhouse	853,013.70	83.34	0.55	0.62	66,415.74	74.40
Non-Potable Irrigation Lake	236,966.40	83.34	1.1	0.62	36,900.46	41.33
Open Space	1,895,056.02	83.34	0.55	0.62	147,549.27	165.28
Open Space – Private Streets	1,903,267.08	83.34	0.55	0.62	148,188.58	165.99
Open Space – Public Right of Way	30,339.54	83.34	0.55	0.62	2,362.24	2.65
IID Substation	35,370.72	83.34	0.55	0.62	2,753.97	3.08
CVWD Well Sites	23,478.84	83.34	0.55	0.62	1,828.07	2.05
Total	**9,915,715.26**				**720,581.53**	**807.15**

[1] Reference Evapotranspiration (ETo) for ETo Zone 5 from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D. Landscape Ordinance 1302.5 defines an area irrigated with non-potable water as a "Special Landscape Area" and therefore an ETAF of 0.55 is used for those areas. The Project's landscape plan will need to comply with CVWD's Landscape Ordinance and any other applicable laws and regulations for outdoor water use.

[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

6.4 Projected Outdoor Recreational Water Demand

The Project will not have any outdoor recreational water usage.

6.5 Projected Total Water Demand

The total projected water demand for the Project is 1,096.59 AFY or 2.9 acre-feet per acre, as shown in **Table 6-4** below. It is anticipated that 454.78 of the total Project demand will be met with non-potable water.

Table 6-4: Projected Total Water Demand

Planning Area	Land Area (Acres)	Indoor Residential Demand (AFY)	Indoor Commercial and Industrial Demand (AFY)	Outdoor Irrigation Demand (AFY)	Total Water Demand (AFY)
Residential	206.12	280.93	N/A	352.38	633.31
Recreational - Clubhouse and Guardhouse	26.11	N/A	8.50	74.40	82.90
Non-Potable Irrigation Lake	5.44	N/A	N/A	41.33	41.33
Open Space	66.93	N/A	N/A	165.28	165.28
Open Space – Private Streets	67.22	N/A	N/A	165.99	165.99
Open Space – Public Right of Way	1.99	N/A	N/A	2.65	2.65
IID Substation	2.32	N/A	N/A	3.08	3.08
CVWD Well Sites	1.54	N/A	N/A	2.05	2.05
Total	**377.67**	**280.93**	**8.50**	**807.15**	**1,096.59**

6.6 Projected Water Sources

The Project is anticipated to utilize the CVWD Domestic System and CVWD Non-Potable System to provide water for Project demands, as specified in **Table 6-5**. It is anticipated that all indoor demand and residential outdoor irrigation demand will be met with domestic water. The Project will connect to the existing public water system at three locations. In addition, the Project is required to design and install an 18-inch diameter pipeline on 38th Avenue from Primrose Lane easterly along the Project frontage to the Project entrance at the intersection of 38th Avenue and Talavera Boulevard. CVWD will require the Project to contribute to the construction of a new 7-million-gallon reservoir to accommodate the Project's storage requirement. Furthermore, the Project is required to construct three well sites with locations approved by CVWD.

In order to reduce the domestic water demand for the development, the Project will construct a private water well to serve as a backup water supply for the common area landscaping. It is anticipated that all non-residential outdoor irrigation demand will be met with non-potable water.

Table 6-5: Projected Water Sources

Planning Area	Land Area (Acres)	Indoor Residential Demand	Indoor Commercial and Industrial Demand	Outdoor Irrigation Demand
Residential	206.12	CVWD Domestic System		CVWD Domestic System
Recreational – Clubhouse & Guardhouse	26.11		CVWD Domestic System	CVWD Non-Potable System
Non-Potable Irrigation Lake	5.44			CVWD Non-Potable System
Open Space	66.93			CVWD Non-Potable System
Open Space – Private Streets	67.22			CVWD Non-Potable System
Open Space – Public Right of Way	1.99			CVWD Non-Potable System
IID Substation	2.32			CVWD Non-Potable System
CVWD Well Sites	1.54			CVWD Non-Potable System

6.7 Conservation Measures

The Project incorporates many sustainable and water saving features, including:

- Retain and treat all stormwater on-site from up to a 100-year storm event.
- Low flow toilets and low gallon-per-minute plumbing fixtures.
- Tankless water heaters.
- Timed irrigation watering systems and irrigation rain sensors. All irrigation will be state of the art equipment selected for water efficiency performance.
- The Project will require use of “xeriscape” planting principles and establish a palette of drought-tolerant trees, shrubs and plants that require little or no irrigation.
- Turf is restricted to active outdoor recreation areas only.

In addition to these water conservation measures, the Project plans to utilize non-potable water to irrigate common area landscaping, including street parkways and open space areas to reduce the Project’s reliance on the CVWD Domestic Water System.

7 Assessment and Verification – Availability of Sufficient Supplies

7.1 Water Supply Assessment

Based on the analysis in this Water Supply Assessment/Water Supply Verification (WSA/WSV), the projected total water demand for the Desert Retreat (Project) will be 1,096.59 acre-feet per year (AFY), or 2.9 acre-feet per acre. CVWD's long-term water management planning ensures that adequate water supplies are available to meet existing and future water needs within its service area. CVWD's current urban water demand was 101,546 acre-feet (AF) for 2021, and the projected urban water demand by 2045 is 148,166 AF. This Project's water demand of 1,096.59 AFY accounts for approximately 2.3 percent of the total planned increases in demand of 48,323 AF by 2045.

This WSA/WSV provides an assessment and verification of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill 610 (SB 610), SB 221, and SB 1262. This WSA/WSV also includes identification of existing water supply entitlements, water rights, water service contracts, and agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA/WSV has been prepared in compliance with the requirements of SB 610, SB 221, and SB 1262 by MSA Consulting Inc. in consultation with CVWD and the City of Indio. This WSA/WSV does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations including the CVWD Landscape Ordinance, and indoor water use performance standards provided in the CWC.

This WSA/WSV will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project completes construction to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify CVWD when construction begins. If neither the Project applicant nor the Lead Agency contacts CVWD within five years of approval of this WSA/WSV, it will be assumed that the Project no longer exists and the WSA/WSV provided by this document will become invalid.

7.2 Water Supply Verification

A WSA/WSV has been prepared for the Project pursuant to the requirements of Senate Bill 221 (SB 221) because it includes a Tentative Parcel Map. This document provides verification that adequate water supply for the Project is available, as required by California Government Code Section 66473.7.

8 References

American Water Works Association Research Foundation, *Commercial and Institutional End Uses of Water*, 2000

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United States Bureau of Reclamation, *Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada*