Appendix A

Notice of Preparation and Comments

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

Notice of Preparation (NOP) of a Draft Environmental Impact Report 1868 and 1870 Ogden Drive

To: Office of Planning and Research, Responsible Agencies, Trustee Agencies, Organizations, and Interested Parties

Lead Agency: City of Burlingame, 501 Primrose Road, Burlingame, CA 94010

The City of Burlingame is the Lead Agency preparing a Draft Environmental Impact Report (EIR) for the proposed project at 1868 and 1870 Ogden Drive in Burlingame. The project description and probable environmental effects that will be analyzed in the Draft EIR for this project are described below. This Notice of Preparation (NOP) requests comments regarding the scope and content of the environmental information that is relevant to your area of interest, or to your agency's statutory responsibilities regarding the proposed project. Public agencies may use this EIR when considering subsequent approvals related to this proposed project.

Due to the time limit mandated by State law, your response must be sent at the earliest possible date within 30 days after receipt of this notice, but no later than August 10, 2020. Please include your name and contact information, and direct your response to:

Catherine Keylon, Senior Planner
City of Burlingame
Planning Division
501 Primrose Road
Burlingame, CA. 94010
Email: ckeylon@burlingame.org

Comments should focus on possible impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the proposed project in light of the EIR's purpose to provide useful and accurate information about such factors.

Project Location and Existing Conditions: The project site is a single parcel within north Burlingame, approximately 0.5 mile from the Millbrae Multimodal Transit Center, which provides Caltrain, Bay Area Rapid Transit (BART), San Mateo County Transit District (SamTrans), and additional transit and shuttle services. The project site is located on the east side of Ogden Drive with the majority of the lot being covered by impervious surfaces.[1] There is minimal landscaping with grass, bushes, and some trees located in the front of the existing building. The project site is bounded by office buildings and supporting parking lots to the north and east. There is a residential apartment building located south and adjacent to the project site and other residential apartment buildings are located across Ogden Drive, west of the project site. In addition, Mills High School is located approximately 300 feet from the project site. Figure 1 depicts the location of the project site.

---

[1] For the purposes of describing the Project site, Ogden Drive is assumed to run in a north–south direction and Trousdale Drive in an east–west direction.

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

Project Description: All existing features associated with the project site would be removed, including the one-story office building. The project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The residential units would include 35 studio units, 30 one-bedroom units, and 55 two-bedroom units. Six of these residential units would be below market rate (BMR) units. The project would include 150 parking tandem spaces and 81 bicycle parking spaces for residents and 12 bicycle parking spaces for guests. The project would also include a public plaza, common open space, and private open space. The basement of the proposed project would include vehicle and bicycle parking; the ground floor of the building would include vehicle and bicycle parking, a lobby, community space, and public plaza; the second floor of the building would include residential units and residential community space; the third floor would include residential units and a common deck; and the fourth to sixth floors would include residential units. Figure 2 provides a depiction of the proposed site plan.

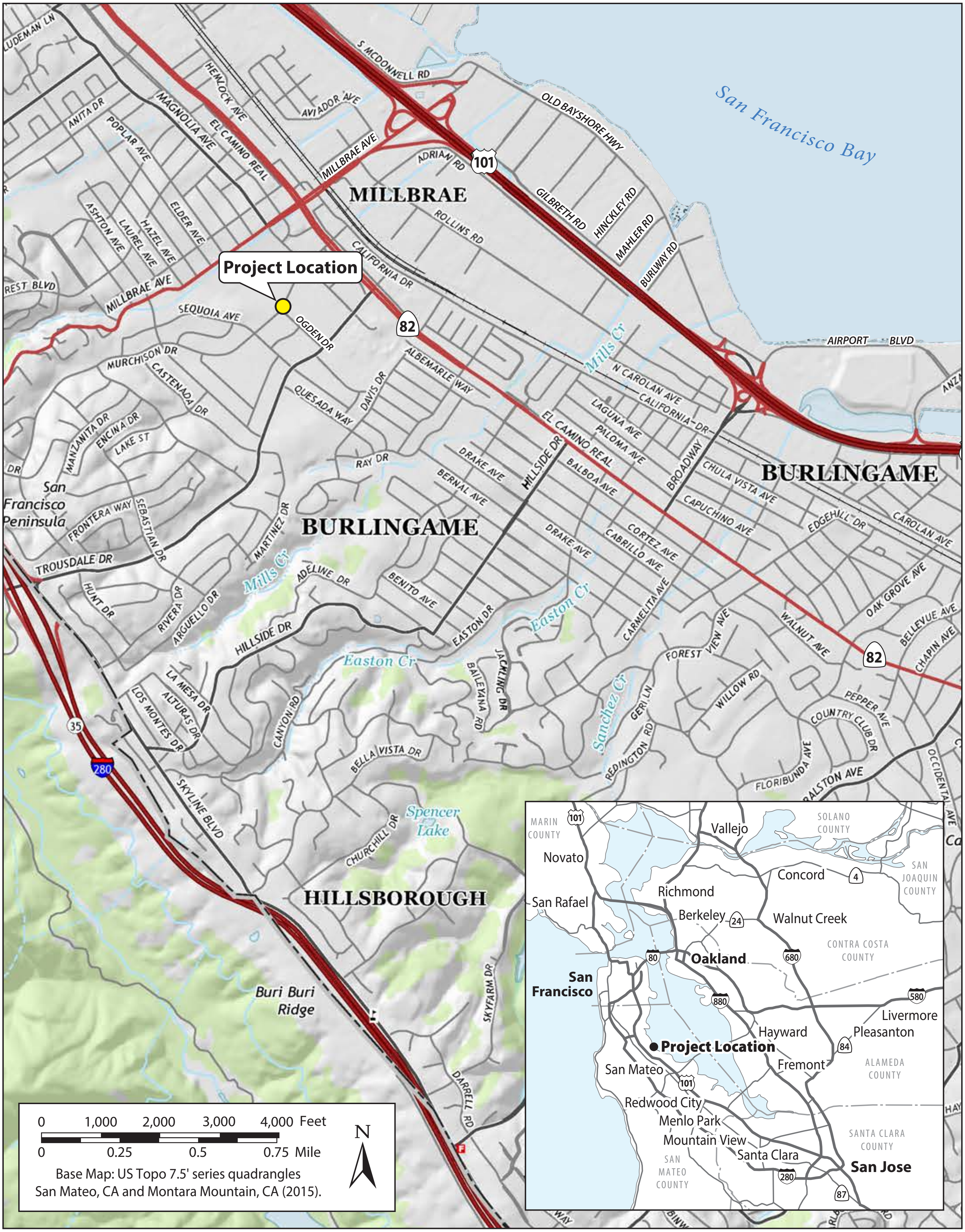
Probable Environmental Effects: The EIR will evaluate the proposed project for environmental effects during construction as well as operation. However, based on preliminary review, the following topics will be scoped out of the EIR: aesthetics, agricultural and forestry resources, air quality, archeological resources and tribal cultural resources, biological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. It is anticipated that the proposed project will have an impact to a historical resource due to past events that occurred at the existing building. Where significant impacts for the proposed project are identified, the EIR will develop and propose mitigation measures to avoid or reduce the impact but it may not be possible to fully avoid identified impacts. The impacts of the proposed project in conjunction with past, present, and reasonably foreseeable future projects will also be considered.

The Draft EIR will also examine a reasonable range of alternatives to the project, including the CEQA-mandated No Project Alternative and other potential alternatives that may be capable or reducing or avoiding potential environmental effects.

Signature: Catherine Keylon

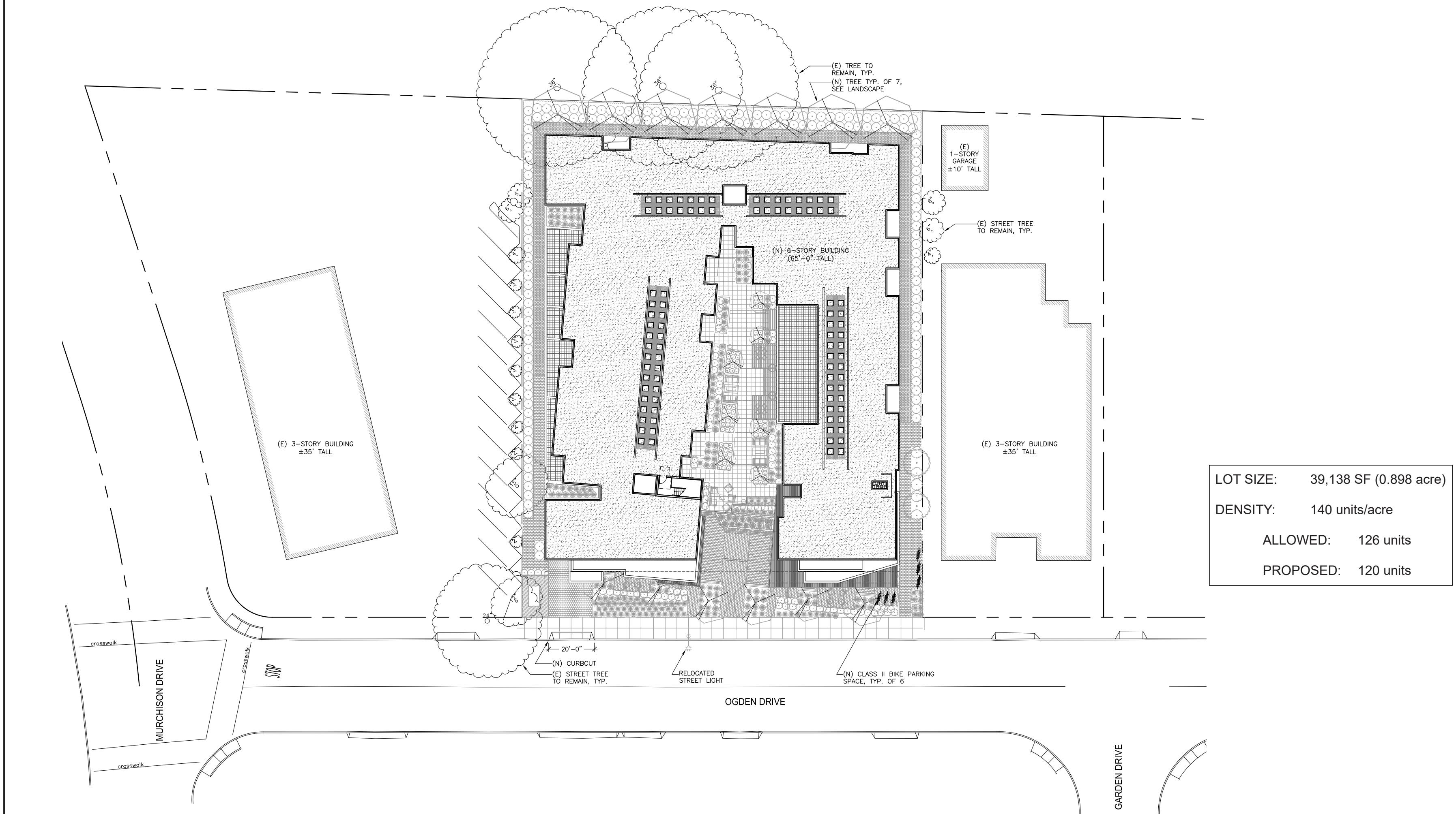
Catherine Keylon, Senior Planner, City of Burlingame

Date: July 10, 2020



Graphics … 00091.20 (6-10-20) JC

Figure 1
Project Location
1868 Ogden Drive Project



Source: Levy Design Partners Inc., 2020.

Graphics ... 00091.20 (6-11-20) JC

Figure 2
Site Plan
1868 Ogden Drive Project

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 4, 2020

Ms. Catherine Keylon, Senior Planner
City of Burlingame
Planning Division
501 Primrose Road
Burlingame, CA 94010
ckeylon@burlingame.org

Subject: 1868 Ogden Drive Project, Notice of Preparation, SCH No. 2020070230, City of Burlingame, San Mateo County

Dear Ms. Keylon:

California Department of Fish and Wildlife (CDFW) personnel have reviewed the Notice of Preparation (NOP) for the 1868 Ogden Drive Project (Project). CDFW is submitting comments on the NOP to inform the City of Burlingame, as the Lead Agency, of our concerns regarding potentially significant impacts to biological resources associated with the proposed Project.

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources (e.g., biological resources). CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA), the Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

PROJECT LOCATION

The Project is located on a single parcel located on the east side of Ogden Drive at the cross streets of Ogden Drive and Murchison Drive in northern Burlingame, San Mateo County.

The Project site is bounded by urban development, which includes office buildings, parking lots, a residential apartment building, and Mills High School.

PROJECT DESCRIPTION

The proposed Project includes the removal of all existing infrastructure and features within the Project site, including a one-story office building, to construct a six-story residential building with 120 residential units and a 150-parking space parking structure.

COMMENTS

CDFW offers the following comments and recommendations to assist the City of Burlingame in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on biological resources.

COMMENT 1: Artificial Lighting

Issue: The Project could increase artificial lighting. Artificial lighting often results in light pollution, which has the potential to significantly and adversely affect biological resources.

Evidence the impact would be significant: Night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Aquatic species can also be affected, for example, salmonids migration can be slowed or stopped by the presence of artificial lighting (Tabor et al. 2004, Nightingale et al. 2006).

Recommendations to minimize significant impacts: CDFW recommends eliminating all non-essential artificial lighting. If artificial lighting is necessary, CDFW recommends avoiding or limiting the use of artificial lights during the hours of dawn and dusk, when many wildlife species are most active. CDFW also recommends that outdoor lighting be shielded, cast downward, and does not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards at http://darksky.org/).

COMMENT 2: Exterior Windows

Issue: The glass used for exterior building windows could result in bird collisions, which can cause bird injury and mortality.

Evidence the impact would be significant: Birds, typically, do not see clear or reflective glass, and can collide with glass (e.g., windows) that reflect surrounding landscape and/or habitat features (Klem and Saenger 2013, Sheppard 2019). When birds collide with glass, they can be injured or killed. In the United States, the estimated annual bird mortality is between 365-988 million birds (Loss et al. 2014).

Recommendations to minimize significant impacts: CDFW recommends incorporating visual signals or cues to exterior windows to prevent bird collisions. Visual signals or cues include, but are not limited to, patterns to break up reflective areas, external window films and coverings, ultraviolet patterned glass, and screens. For best practices on how to reduce bird collisions with windows, please go to the United States

Fish and Wildlife Service's website for Buildings and Glass (https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/buildings-and-glass.php).

COMMENT 3: Nesting Birds

Issue: Project construction could result in disturbance of nesting birds.

Evidence the impact would be significant: Noise can impact bird behavior by masking signals used for bird communication, mating, and hunting (Bottalico et al. 2015). Birds hearing can also be damaged from noise and impair the ability of birds to find or attract a mate and prevent parents from hearing calling young (Ortega 2012).

Recommendations to minimize significant impacts: If ground-disturbing or vegetation-disturbing activities occur during the bird breeding season (February through early-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of Fish and Game Codes.

To evaluate and avoid for potential impacts to nesting bird species, CDFW recommends incorporating the following mitigation measures into the Project's draft Environmental Impact Report, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 1: Nesting Bird Surveys

To maximize the probability that nests are detected, CDFW recommends that a qualified avian biologist conduct pre-Project activity nesting bird surveys no more than seven days prior to the start of ground or vegetation disturbance and if there is a lapse of four days or more between construction, CDFW recommends that nesting bird surveys cover a sufficient area around the Project area to identify nests and determine their status. A sufficient area means any area potentially affected by the Project.

During nesting bird surveys, CDFW recommends that a qualified avian biologist establish behavioral baseline of all identified nests. During Project activities, CDFW recommends having the qualified avian biologist continuously monitor nests to detect behavioral changes resulting from Project activities. If behavioral changes occur, CDFW recommends stopping the activity, that is causing the behavioral change, and consulting with a qualified avian biologist on additional avoidance and minimization measures.

Recommended Mitigation Measure 2: Nesting Bird Buffers

During Project activities, if continuous monitoring of nests by a qualified avian biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of

250 feet around active nests of non-listed bird species and a 1,000-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified avian biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography. CDFW recommends that a qualified avian biologist advise and support any variance from these buffers.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code section 711.4; Pub. Resources Code, section 21089). 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.

Thank you for the opportunity to comment on the Project's NOP. If you have any questions regarding this letter or for further coordination with CDFW, please contact Ms. Monica Oey, Environmental Scientist at (707) 428-2088 or monica.oey@wildlife.ca.gov; or Ms. Randi Adair, Senior Environmental Scientist (Supervisory), at randi.adair@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Gregg Erickson
BE74D4C93C604EA...

Gregg Erickson
Regional Manager
Bay Delta Region

cc: State Clearinghouse

REFERENCES

Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. Ecology 58:98–108.

Bottalico, Pasquale & Spoglianti, Dorina & Bertetti, Carlo & Falossi, Marco. 2015. Effect of noise generated by construction sites on birds, paper presented at Internoise 2015, International Congress and Exposition on Noise Control Engineering.

Klem, D. and P. G. Saenger. 2013. Evaluating the Effectiveness of Select Visual Signals to Prevent Bird-window Collisions. The Wilson Journal of Ornithology 125(2):406-411.

Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. Frontiers in Ecology and the Environment 2:191–198.

Loss, S.R., T. Will, S.S. Loss, and P.P. Marra. 2014. Bird-building collisions in the United States: estimates of annual mortality and species vulnerability. Condor 116: 8-23.

Nightingale, B., T. Longcore, and C. A. Simenstad. 2006. Artificial night lighting and fishes. Pages 257–276 in C. Rich and T. Longcore, editors. Ecological.

Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. The Condor 108:130–139.

Ortega, C. P. 2012. Chapter 2: Effects of noise pollution on birds: A brief review of our knowledge. Ornithological Monographs 47: 6-22.

Sheppard, C. D. 2019. Evaluating the relative effectiveness of patterns on glass as deterrents of bird collisions with glass. Global Ecology and Conservation 20:e00795.

Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. Current Biology 19:1123–1127. Elsevier Ltd.

Tabor, R. A., G. S. Brown, and V. T. Luiting. 2004. The effect of light intensity on sockeye salmon fry migratory behavior and predation by cottids in the Cedar River, Washington. North American Journal of Fisheries Management 24:128–145.

STATE OF CALIFORNIA   Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 13, 2020

Catherine Keylon, Senior Planner
City of Burlingame Planning Division
501 Primrose Road
Burlingame, CA 94010

Re: 2020070230, 1868 Ogden Drive Project, San Mateo County

Dear Ms. Keylon:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

- **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- **a.** Avoidance and preservation of the resources in place, including, but not limited to:
  - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
  - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - **i.** Protecting the cultural character and integrity of the resource.
  - **ii.** Protecting the traditional use of the resource.
  - **iii.** Protecting the confidentiality of the resource.
- **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
   - **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
   - **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
   - **a.** If part or all of the APE has been previously surveyed for cultural resources.
   - **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
   - **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
   - **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   - **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
   - **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

July 13, 2020

Catherine Keylon, Senior Planner
City of Burlingame
Planning Division
501 Primrose Road
Burlingame, CA. 94010

RE: C/CAG Airport Land Use Committee Staff Comments - Notice of Preparation for the Proposed 1868 - 1870 Ogden Drive Project in Burlingame.

Dear Ms. Keylon,

In response to your notice on the above matter, C/CAG Airport Land Use Committee staff offers the following input for your consideration:

- The project site is located within Area B of the Airport Influence Area (AIA) boundary for San Francisco International Airport. Accordingly, the DEIR should discuss potential impacts related to the noise, height/airspace protection, safety and overflight compatibility criteria and policies contained in the 2012 Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (SFO ALUCP).

Please also note that since the City of Burlingame has not submitted its Zoning Ordinance to the ALUC for consistency review to ensure compatibility with the 2012 SFO ALUCP, in accordance with SFO ALUCP Policy GP-10-1, the project will be subject to formal review by the C/CAG Airport Land Use Committee (ALUC) and C/CAG, acting as the Airport Land Use Commission, for a determination of consistency with the SFO ALUCP prior to local agency action on the project.

Thank you for the opportunity to review and comment on this NOP. If you have any questions, please contact me at kkalkin@smcgov.org.

Sincerely,

Susy Kalkin
ALUC Staff

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

August 10, 2020

SCH #2020070230
GTS # 04-SM-2020-0326
GTS ID: 19952
SM/82/15.74

Catherine Keylon, Senior Planner
City of Burlingame
Planning Division
501 Primrose Rd
Burlingame, CA 94010

1868, 1870 Ogden Drive – Notice of Preparation (NOP)

Dear Catherine Keylon:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the 1868, 1870 Ogden Drive Project. We are committed to ensuring that impacts to the State's multimodal transportation system and to our natural environment are identified and mitigated to support a safe, sustainable, integrated and efficient transportation system. The following comments are based on our review of the July 2020 NOP.

Project Understanding
The proposed project would demolish current site features. The project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The residential units would include 35 studio units, 30 one-bedroom units, and 55 two-bedroom units. Six of these residential units would be below market rate (BMR) units. The project would include 150 parking tandem spaces and 81 bicycle parking spaces for residents and 12 bicycle parking spaces for guests. Access to the site is from State Route (SR)- 82, approximately 0.3 miles from proposed project site.

Travel Demand Analysis
Please note that a travel demand analysis that provides a Vehicle Miles Traveled (VMT) analysis will be required as part of the California Environmental Quality Act

(CEQA) process.) With the enactment of Senate Bill (SB) 743, Caltrans is focusing on transportation infrastructure that supports smart growth and efficient development to ensure alignment with State policies using efficient development patterns, innovative travel demand reduction strategies, multimodal improvements, and VMT as the primary transportation impact metric. The travel demand analysis should include:

- VMT analysis pursuant to the Office of Planning and Research's Guidelines. Projects that result in automobile VMT per capita above the threshold of significance for existing (i.e. baseline) city-wide or regional values for similar land use types may indicate a significant impact. If necessary, mitigation for increasing VMT should be identified. Mitigation should support the use of transit and active transportation modes. Potential mitigation measures that include the requirements of other agencies such as Caltrans are fully enforceable through permit conditions, agreements, or other legally-binding instruments under the control of the City.
- A schematic illustration of walking, biking and auto conditions at the project site and study area roadways. Potential safety issues for all road users should be identified and fully mitigated.
- The project's primary and secondary effects on pedestrians, bicycles, travelers with disabilities and transit performance should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access to pedestrians, bicycle, and transit facilities must be maintained.

Additionally, please clarify whether the project is located in a Transit Priority Area. As well, please provide the Floor Area Ratio of the project.

Vehicle Trip Reduction
From Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, the project site is identified as **Place Type 2a: Close-in Centers** where location efficiency factors, such as community design, and regional accessibility are moderately strong. Given the place, type and size of the project, it should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions. Such measures are critical to facilitating efficient site access. The measures listed below can promote smart mobility and reduce regional VMT.

- Project design to encourage walking, bicycling and transit access;

- Transit and trip planning resources such as a commute information kiosk;
- Ten percent vehicle parking reductions;
- Charging stations and designated parking spaces for electric vehicles;
- Carpool and clean-fuel parking spaces;
- Designated parking spaces for a car share program;
- Unbundled parking;
- Secured bicycle storage facilities;
- Bicycle route mapping resources;
- Bicycle repair facilities;
- Participation/Formation in/of a Transportation Management Association (TMA) in partnership with other developments in the area; and
- Aggressive trip reduction targets with Lead Agency monitoring and enforcement.

Transportation Demand Management programs should be documented with annual monitoring reports by a TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets. Also, reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is available online at: http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Multimodal, Bicycle and Pedestrian Planning
The project's primary and secondary effects on pedestrians, bicyclists, travelers with disabilities, and transit users should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access for pedestrians and bicyclists to transit facilities must be maintained. The proposed project exhibits strong locational connections to bicycle and transit networks, including Caltrain, bicycle trails, and connections to major employment centers. The inclusion of well-marked, well-connected bicycle/ pedestrian facilities can encourage mode shift here. These smart growth approaches, given the project location and adequate TDM measures, should be consistent with MTC's Regional Transportation Plan/SCS and would help meet Caltrans Strategic Management Plan targets.

Transportation Impact Fees

The City of Burlingame should identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed project; viable funding sources such as the City's existing development and/or transportation impact fee programs should also be identified. We encourage a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

Lead Agency

As the Lead Agency, the City of Burlingame is responsible for all project mitigation, including any needed improvements to the State Transportation Network (STN). The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Laurel Sears at laurel.sears@dot.ca.gov. Additionally, for future notifications and requests for review of new projects, please contact LDIGR-D4@dot.ca.gov.

Sincerely,

Mark Leong

Mark Leong
District Branch Chief
Local Development - Intergovernmental Review

cc: State Clearinghouse

Appendix B

Transportation Impact Analysis and Transportation Demand Management Plan

HEXAGON TRANSPORTATION CONSULTANTS, INC.

1868 Ogden Drive Residential Development

Draft Transportation Impact Analysis

Prepared for:

ICF

November 9, 2020

Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Phone: 408.971.6100
Hexagon Job Number: 20JL07
Client Name: Mr. Leo Mena

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed residential development at 1868 Ogden Drive in Burlingame, California. The project proposes to demolish a 26,000 s.f. office building and develop the 0.898-acre site with 120 residential units, with a parking garage. Vehicle access to the proposed parking garage would be provided via the proposed full access driveway on Ogden Drive.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame, the City of Millbrae, and the City/County Association of Governments (C/CAG) of San Mateo County Congestion Management Program (CMP). The study includes an analysis of AM and PM peak-hour traffic conditions during weekday commute periods at 7 study intersections in the vicinity of the project site. Potential impacts to pedestrians, bicycles, and transit were also considered.

Based on trip generation rates recommended by the Institute of Transportation Engineers (ITE), it is estimated that the proposed project would generate 400 new daily trips, with 13 net trips occurring during the AM peak hour and 23 net trips occurring during the PM peak hour. The trip estimates account for the trip credits for the existing uses on-site.

The results of the intersection level of service analysis under existing, background, and cumulative conditions, with and without the project, are summarized in Table ES-1. The results determined that under all scenarios with and without the project, most of the study intersections would operate in accordance with local standards during both AM and PM peak hours. The El Camino Real/Millbrae Avenue intersection would operate at a substandard level of service under background and cumulative scenarios. However, the addition of project trips would not have a significant impact on traffic operations at the intersections.

The Project ‘s transportation impact on vehicles miles traveled (VMT) was evaluated based on the CEQA Guidelines published by Governor’s Office of Planning and Research (OPR). According to CEQA Guidelines, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. The project is located within a half mile of bus stops for SamTrans Route ECR along El Camino Real, which is considered a high-quality transit corridor. Therefore, the project is expected to have a less-than-significant impact on vehicles miles travelled.

This report also makes the following conclusions and recommendations for the project:

- Based on the estimated peak-hour volumes at the Ogden Drive/Trousdale Drive and the Magnolia Avenue/Murchison Drive intersections, the average delay can be improved by installation of a traffic signal at the intersections. Because the level of service deficiency is estimated to occur under cumulative conditions, the project should be required to contribute a pro-rated share of the cost to install a new traffic signal at both intersections. The project should bond to pay for its share of the signals, if warranted within the next 5 years. The project fair share is calculated to be 4.0 percent of the signal costs at the Ogden Drive/Trousdale Drive intersection and 5.9 percent of the signal costs at the Magnolia Avenue/Murchison Drive intersection. Although the intersections meet the peak-hour signal warrant under the cumulative conditions, both with and without the project traffic, the need for intersection improvement or modification of traffic control at the intersections should be evaluated further with new traffic counts and field observations in the future when traffic returns to pre-Covid levels.

- Red curbs should be painted next to the project driveway to avoid issues associated with on-street parking obstructing the vision of exiting drivers.
- Signs prohibiting parking during garbage pickup hours should be placed adjacent to the proposed staging areas on Ogden Drive. The trash bins should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak-hour traffic conditions.
- A loading space should be provided along the project frontage. Loading areas would allow for residents to be picked up or dropped off. This loading space would also be utilized by moving trucks.

Table ES-1
Intersection Level of Service Summary

					Existing					Background					Cumulative (2040)				
					No Project		With Project			No Project		With Project			No Project		With Project		
#	Intersection	Control	LOS Standard	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)
1	Ogden Drive & Murchison Drive[1,2]	AWSC	None	AM	13.4	B	13.4	B	0.0	14.0	B	14.0	B	0.0	18.1	C	18.8	C	0.7
				PM	14.0	B	14.7	B	0.7	14.8	B	15.6	C	0.8	18.8	C	20.2	C	1.4
2	Ogden Drive & Trousdale Drive[2]	AWSC	None	AM	18.9	C	19.2	C	0.3	20.5	C	20.8	C	0.3	34.9	D	35.4	E	0.5
				PM	11.5	B	11.6	B	0.1	12.0	B	12.1	B	0.1	13.6	B	13.7	B	0.1
3	Magnolia Avenue & Murchison Drive[1,2]	AWSC	None	AM	16.1	C	16.4	C	0.3	17.1	C	17.3	C	0.2	29.1	D	30.0	D	0.9
				PM	17.7	C	18.5	C	0.8	19.3	C	20.3	C	1.0	36.8	E	40.6	E	3.8
4	Magnolia Avenue & Trousdale Drive[2]	Signal	D	AM	16.6	B	16.8	B	0.2	17.0	B	17.1	B	0.1	32.5	C	32.8	C	0.3
				PM	46.6	D	46.9	D	0.3	48.1	D	48.4	D	0.3	79.9	E	80.2	F	0.3
5	El Camino Real & Millbrae Avenue[2]	Signal	E	AM	75.4	E	76.5	E	1.1	**101.8**	**F**	**103.2**	**F**	1.4	**120.2**	**F**	**121.5**	**F**	1.3
				PM	74.6	E	74.2	E	-0.4	**92.6**	**F**	**92.6**	**F**	0.0	**103.3**	**F**	**103.6**	**F**	0.3
6	El Camino Real & Murchison Dr[2]	Signal	D	AM	21.2	C	21.7	C	0.5	25.3	C	25.8	C	0.5	26.7	C	27.3	C	0.6
				PM	25.4	C	25.4	C	0.0	32.4	C	32.3	C	-0.1	32.8	C	32.6	C	-0.2
7	El Camino Real & Trousdale Drive	Signal	D	AM	20.4	C	20.5	C	0.1	21.3	C	21.3	C	0.0	24.5	C	24.5	C	0.0
				PM	23.0	C	23.2	C	0.2	24.7	C	24.9	C	0.2	32.5	C	32.8	C	0.3

Notes:
AWSC = all-way stop control
1. Recent counts were not available. Volumes were extrapolated from nearby intersections.
2. Cumulative traffic volumes were estimated by applying a growth rate to the existing volumes.
Bold indicates a substandard level of service.

1.
Introduction

This report presents the results of the transportation impact analysis (TIA) conducted for the proposed residential development at 1868 Ogden Drive in Burlingame, California. The project site is located on Ogden Drive, south of Murchison Drive (see Figure 1) and is located within the North Burlingame Residential (NBMU) Zoning District in Burlingame. The project proposes to develop the 0.898-acre site with 120 residential units, with a parking garage. The site is currently developed with a 26,000 square-foot office building with a parking garage. The existing building would be demolished as part of the project. Vehicle access to the proposed parking garage would be provided via a new full access driveway on Odgen Drive (see Figure 2).

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame, the City of Millbrae, and the San Mateo City/County Association of Governments (C/CAG) of San Mateo County. C/CAG is a Joint Powers Authority that plans, funds, and delivers transportation programs and projects in San Mateo County. C/CAG administers the San Mateo County Congestion Management Program (CMP).

The study analyzes the traffic impacts of the project on the key intersections in the vicinity of the site during the weekday AM and PM peak hours of commute traffic. A signal warrant analysis was prepared to determine the need for signalization at the unsignalized study intersections. An analysis of vehicle queuing, site access and on-site circulation, parking, and transit, bicycle, and pedestrian access is also included. Given that the project is expected to add fewer than 100 peak hour trips, a C/CAG trip reduction analysis was not prepared. Additionally, the study includes a vehicle miles traveled (VMT) analysis.

Traffic conditions were evaluated for the following 7 intersections in the vicinity of the project site (see Figure 1). The study intersections include 4 signalized intersections and 3 unsignalized intersections. The El Camino Real/Millbrae Avenue intersection is designated as a CMP intersection.

Figure 1
Site Location and Study Intersections

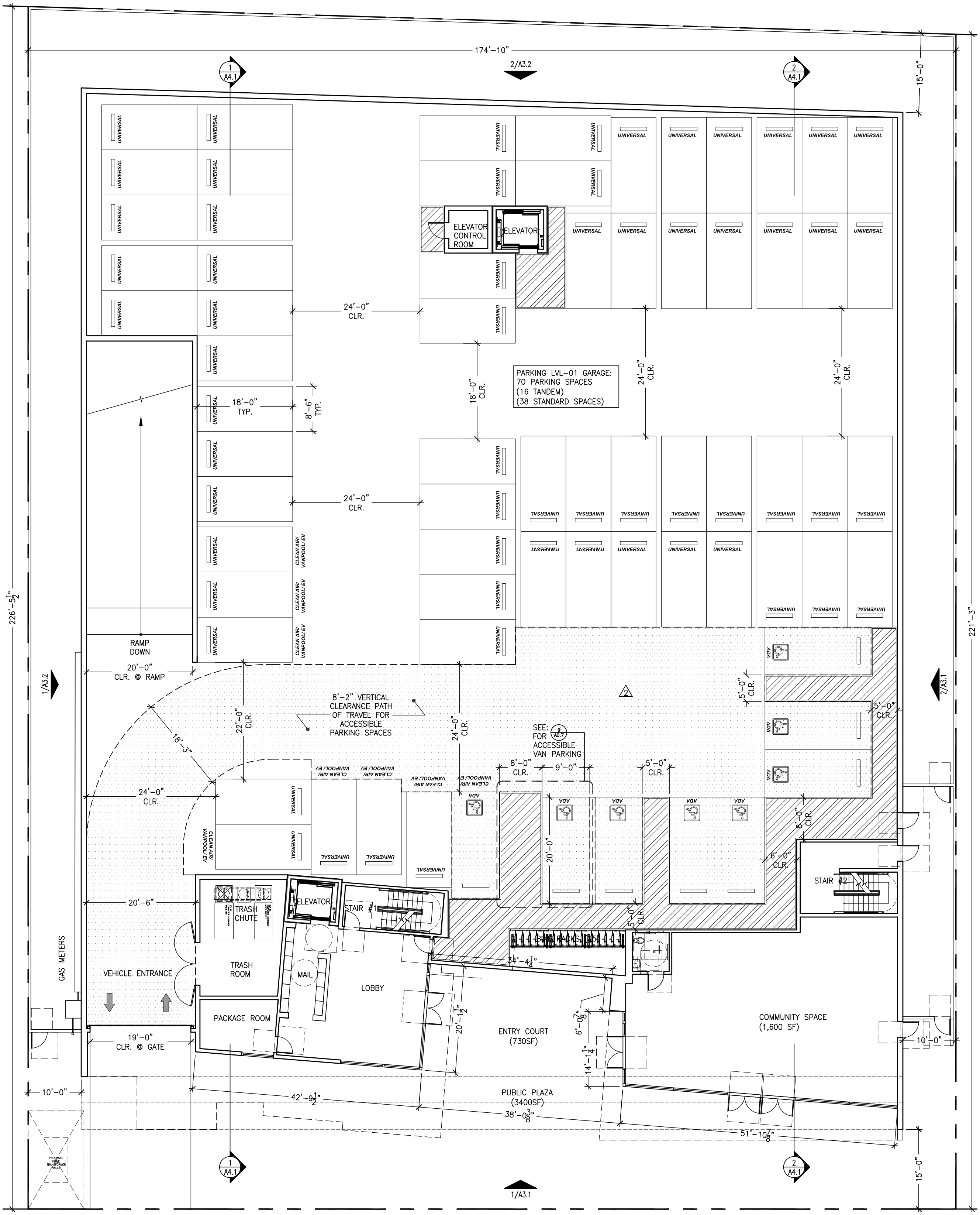


Figure 2
Site Plan

City of Burlingame:

- Ogden Drive and Trousdale Drive (unsignalized)
- Magnolia Avenue and Trousdale Drive
- El Camino Real and Trousdale Drive

City of Millbrae:

- El Camino Real and Millbrae Avenue
- Ogden Drive and Murchison Drive (unsignalized)
- Magnolia Avenue and Murchison Drive (unsignalized)
- El Camino Real and Murchison Drive

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. It is during these periods that the most congested traffic conditions occur on the roadways.

Intersection traffic conditions were evaluated for the following scenarios:

1. ***Existing Conditions.*** Existing traffic volumes at study intersections were estimated based on available traffic counts conducted for local traffic studies, EIRs, and the 2019 CMP monitoring report. Due to Covid-19 and regional shelter-in-place orders, new traffic counts could not be collected for the study. Therefore, a growth rate of 1% per year was applied to the traffic counts that are more than two years old to estimate the traffic volumes for existing conditions. Traffic volumes for the study intersections without available count data were extrapolated from the traffic volumes of the adjacent study intersections. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.
2. ***Existing Plus Project Conditions.*** Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
3. ***Background Conditions*. ** Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information were obtained from the Cities of Burlingame and Millbrae.
4. ***Background Plus Project Conditions.*** Background plus project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project. Project conditions were evaluated relative to background conditions to determine potential project impacts.
5. ***Cumulative Conditions.*** Cumulative traffic volumes represent traffic growth through the year 2040. Cumulative traffic volumes were obtained from the 2040 Burlingame General Plan. Study intersections not included in the general plan were estimated based on the closest nearby intersection. Cumulative plus project conditions were evaluated relative to cumulative conditions to determine potential project impacts.

Methodology

This section presents the methods used to determine traffic conditions at the study intersections and the traffic impacts of the project. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from local traffic studies and EIRs and the Cities of Burlingame and Millbrae. The following data were collected from these sources.

- Peak-hour intersection turning-movement volumes
- Lane configurations
- Intersection signal timing and phasing
- List of approved projects

Intersection Level of Service Methodologies and Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

Signalized Intersections

The Cities of Burlingame and Millbrae evaluate level of service at signalized intersections based on the *Highway Capacity Manual (HCM) 2010* level of service methodology. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. Table 1 presents the level of service definitions and the correlation between delay and level of service for signalized intersections. This study utilizes Synchro software to determine intersection levels of service based on the HCM method.

Traffic operations at the study intersections were evaluated against the standards of the applicable municipality, while the CMP intersection was evaluated against the standards of the C/CAG CMP. While the City of Burlingame does not have a Council-adopted level of service threshold, a standard of LOS D or better has typically been applied in local traffic studies and EIRs. The City of Millbrae seeks to maintain LOS D for signalized intersections, except for CMP intersections where LOS E is acceptable. The C/CAG has developed a LOS standard of E for CMP intersections on El Camino Real (SR 82). Therefore, for the study, the LOS E standard is applied to the El Camino Real/Millbrae Avenue CMP intersection, while the LOS D standard is applied to the remaining signalized study intersections.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010), p.10-16.

Unsignalized Intersections

The study evaluated four unsignalized study intersections in the City of Burlingame. Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Levels of service for unsignalized intersections were analyzed using Synchro software based on the 2010 HCM methodology for unsignalized intersection. The 2010 HCM method evaluates unsignalized intersections on the basis of average stopped delay for all-way stop controlled intersections, and for the worst-case approach for two-way stop-controlled intersections. Table 2 shows the correlation between delay and level of service for unsignalized intersections.

The City of Burlingame does not have a formally adopted level of service standard for unsignalized intersections.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p17-2.

Traffic Signal Warrant

The level of service analysis for unsignalized intersections was supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak-hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.

Intersection Vehicle Queuing

The analysis of intersection operations is typically supplemented with a vehicle queuing analysis at study intersections where the project would add a substantial number of vehicle trips to the left-turn movements. The analysis provides a basis for estimating future left-turn pocket storage requirements at the study intersections. The analysis is based on the 95th percentile queue length calculated by the Synchro software.

The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about one cycle during the peak hour for a signal with a 120-second cycle length). Therefore, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the “design queue length.”

Vehicle Miles Traveled (VMT) Analysis

Per California Senate Bill 743, the California Natural Resources Agency, with assistance from the Governor’s Office of Planning and Research (OPR), adopted new CEQA guidelines in December 2018. The new guidelines state that automobile delay, as measured by level of service (LOS), will no longer constitute a significant environmental impact under CEQA, and that VMT is considered the most appropriate metric to evaluate a project’s transportation impacts. Local agencies have until July 2020 to adopt the new policy that establishes the thresholds and procedures for evaluating transportation impacts based on VMT. The City has not yet adopted any thresholds or guidelines related to VMT. The legislation is intended to promote infill development, a diversity of land uses, transit, active transportation modes while reducing greenhouse gas emissions. OPR recommends the following threshold for residential projects:

> *"A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or a city VMT per capita."*

Notwithstanding OPR's recommended threshold, lead agencies have the discretion to choose the VMT analysis methodology and to set or apply their own thresholds of significance. Cities have until July 2020 to adopt the new procedures and thresholds related to VMT. The City of Burlingame has not yet adopted any analysis procedures, standards, or guidelines related to VMT. However, the City has been requiring projects to study VMT as part of a traffic study. Therefore, an analysis of VMT for this project is presented for informational purposes only to aid decision makers during this transition period from LOS to VMT. Because the City has not adopted thresholds of significance for VMT, it is not intended to provide any indication of the transportation impacts of the project under SB 743, and the intersection level of service/traffic operations analysis is performed to identify the potential transportation issues related to the project.

Significant Impact Criteria

Intersection Impact Criteria

The City of Burlingame does not have any Council-adopted definitions of significant traffic impacts. The following standards typically have been used in traffic studies and EIRs. The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Burlingame if for any peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better to an unacceptable LOS E or F with the addition of project trips; <u>or</u>
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions <u>and</u> the addition of project trips causes the average delay at the intersection to increase by five (5) or more seconds.

The City of Millbrae defines a significant impact at study intersections if any of the following happen with the addition of project trips:

1. Cause an intersection degrades from an acceptable LOS D or better to an unacceptable LOS E or F; <u>or</u>
2. Increase the average delay at a signalized intersection operating at an unacceptable level (LOS E or F) by five (5) or more seconds.

A significant impact typically is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

CMP Signalized Intersection Impact Criteria

At a CMP signalized intersection in the County of San Mateo, a project is determined to create a significant adverse impact on traffic conditions if, during either the AM or PM peak hour:

1. The level of service at the intersection degrades from an acceptable LOS E or better to an unacceptable LOS F with the addition of project trips; or
2. The level of service at the intersection is an unacceptable LOS F under cumulative with project conditions and the addition of project trips causes the average delay at the intersection to increase by four (4) or more seconds

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to “no project” conditions or better.

Report Organization

This report has a total of seven chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 3 presents the intersection levels of service under background conditions with the addition of traffic from approved developments in the Cities of Burlingame and Millbrae. Chapter 4 describes the method used to estimate project traffic, the intersection operations under existing plus project conditions and background pus project conditions, and potential project impacts on the roadway network. Chapter 5 presents the intersection levels of service under the cumulative plus project conditions, utilizing estimated traffic volumes from the City of Burlingame 2040 General Plan. Chapter 6 presents the VMT analysis. Chapter 7 presents the analysis of other transportation-related issues, including vehicle queuing analysis at selected intersections, traffic operations at unsignalized intersections, site access and on-site circulation, parking, and potential impacts on bicycle, pedestrian, and transit facilities.

2.
Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via US 101. Local access to the site is provided on El Camino Real (SR 82), Millbrae Avenue, Trousdale Drive, Murchison Drive, and Ogden Drive. These roadways are described below. Although all streets in the study area run at a diagonal compared to the ordinal directions, for the purposes of this study, US 101 and all parallel streets are considered to run north-south, and cross streets are considered to run east-west.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. Access to and from the project study area is provided via a full interchange at Millbrae Avenue.

El Camino Real (SR 82) is a north/south arterial that extends northward to San Francisco, and southward to San Jose. In the project vicinity, El Camino Real has six lanes north of Dufferin Avenue, with left turn lanes at signalized intersections. South of Dufferin Avenue, El Camino Real is narrowed to four lanes. The posted speed limit in the project area is 35 mph. In the project area, El Camino Real provides frontage roads between Murchison Drive and Dufferin Avenue. A continuous northbound frontage road extends between Murchison Drive and Dufferin Avenue. A southbound frontage road extends between Murchison Drive and Trousdale Drive. Sidewalks are present along the east side of the northbound frontage road, the west side of the southbound frontage road, and at the signalized intersections in the project area. Sidewalks also exist on both sides of El Camino Real, north of Murchison Drive. On-street parking is prohibited on both sides of El Camino Real, but permitted on both sides of the southern frontage road and along the east side of the northern frontage road. El Camino Real provides access to the project via its intersections with Murchison Drive and Trousdale Drive.

Millbrae Avenue is an east/west arterial that extends westward from Old Bayshore Highway to Vallejo Drive and I-280, where it terminates. Millbrae Avenue connects the western residential areas of the City of Millbrae to the regional roadways, El Camino Real and US 101. Millbrae has six lanes between El Camino Real and US 101, with a median that provides left-turn pockets at the major intersections. The posted speed limit in the project area is 35 mph. Although there are sidewalks on both sides of Millbrae Avenue, the sidewalk on the north side terminates at the Chevron gas station, located just east of Millbrae Station. Access to the project site from Millbrae Avenue is provided via El Camino Real.

Trousdale Drive an east/west arterial that extends westward from California Drive to I-280. Trousdale Drive has four lanes west of El Camino Real and two lanes east of El Camino Real. The posted speed limit on Trousdale Drive west of El Camino Real is 35 mph. There are sidewalks on both sides of the street and on-street parking is permitted on both sides of the street between El Camino Real and California Drive. Trousdale Drive provides access to the project via its intersection with Ogden Drive.

Murchison Drive an east/west collector street that extends from California Drive to Vallejo Drive near Mills Estates, where it transitions into Hunt Drive. Murchison Drive has two lanes west of El Camino Real and four lanes east of El Camino Real. There are sidewalks on both sides of the street and on-street parking is permitted on both sides of the street. Murchison Drive provides access to the project via its intersection with Ogden Drive.

Ogden Drive is a north/south local road between Murchison Drive and Trousdale Drive. Ogden Drive has two lanes. There are sidewalks along both sides of the street. Parking is permitted along both sides of Ogden Drive. Ogden Drive provides direct access to the site via a new full-access driveway.

Existing Pedestrian Facilites

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Ogden Drive, Murchison Drive, Trousdale Drive, and El Camino Real north of Murchison Drive, along the west side of the southern El Camino Real frontage road, and along the east side of the northern El Camino Real frontage road. Crosswalks with pedestrian signal heads and push buttons are provided on the east, south, and west legs of the El Camino Real/Trousdale Drive intersection and all approaches of the El Camino Real/Murchison Drive and El Camino Real/Millbrae Avenue intersections within walking distance of the site. Within a typical walking distance (a half mile or 10 minutes), continuous pedestrian facilities are present between the site and the surrounding land uses, including the Millbrae Station and bus stops in the area.

Existing Bicycle Facilites

Bicycle facilities in the vicinity of the project site include bike/pedestrian paths, bike lanes, and bike routes. Bike/pedestrian paths (Class I facilities) are off-street paths with exclusive right-of-way for non-motorized transportation used for commuting as well as recreation. Bike lanes (Class II facilities) are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes (Class III) are existing rights-of-way that accommodate bicycles but are not separate from the existing travel lanes. The existing bicycle facilities within the study area are described below and are shown on Figure 3.

North-South bicycle connections consist of a bike lane/bike route along California Drive, from Broadway to Linden Avenue (north of Millbrae Avenue) where bicycle riders can access the Millbrae Station. Closer to the project site, there are bike lanes on both sides of California Drive between Broadway and Murchison Drive, which transitions into bike routes between Murchison Drive and Linden Avenue. A bike route also exists on El Camino Real, north of Millbrae Avenue.

East-West bicycle connections in the study area consist of designated bike routes on Trousdale Drive between Magnolia Avenue and Ashton Avenue and Rosedale Avenue/Ray Drive between California Drive and Devereux Drive. The Spur Trail bike path exists between South Ashton Avenue (at Mosta Grove Park) and Magnolia Avenue (behind Mills High School).

Figure 3
Existing Bicycle Facilties

Existing Transit Services

Existing public transit services in the study area are provided by the San Mateo County Transit District (SamTrans), San Mateo County's Transportation Demand Management Agency (commute.org), Caltrain, and Bay Area Rapid Transit (BART). SamTrans operates bus services in San Mateo County; commute.org provides free fixed-route shuttle services between the Caltrain/BART stations and corporate campuses or major employment areas during weekday commute hours; Caltrain provides commuter rail service along the San Francisco Peninsula, through the South Bay to San Jose and Gilroy; BART provides commuter rail service between the San Francisco Peninsula, Berkeley, Oakland, Fremont, Walnut Creek, Dublin/Pleasanton, and other cities in the East Bay.

The nearest bus stop is located on Trousdale Drive at Magnolia Avenue, approximately 1,450 feet from the project site, and is served by SamTrans Route 46 on school days, during school start and end hours. The next closest bus stops are located on El Camino Real at the Murchison Drive intersection, approximately 1,560 to 1,770 feet from the project site, which is served by SamTrans Routes ECR and 397 in both directions, and SamTrans Route SFO traveling northbound. The project site is also within walking distance (0.6 mile) of the Millbrae multimodal transit station (Millbrae Station). The station is served by Caltrain baby bullet, limited, and local lines, BART Richmond-Millbrae line (Red) and Millbrae-SFO-Antioch line (Purple/Yellow), three SamTrans bus routes (ECR, 38, 397, SFO), three shuttle routes (NB, BAY, NFC) operated by commute.org, and two shuttle routes (MB and Sierra Point) operated by Caltrain. The transit service routes that run through the study area and the bus/shuttle stops near the project site are summarized in Table 3 and shown on Figure 4.

Existing Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from field observations (see Figure 5).

Existing peak-hour traffic volumes (see Table 6) at study intersections were estimated based on available traffic counts conducted for local traffic studies, EIRs, and the 2019 CMP monitoring report for the CMP intersections. Peak-hour traffic counts for three study intersections were collected within two years, which are typically considered as recent traffic counts that can be used directly for a traffic study. Two of the study intersections do not have recent traffic counts. Due to Covid-19 and regional shelter-in-place orders, new traffic counts could not be collected for these intersections. Therefore, a growth rate of 1% per year was applied to the older traffic counts to estimate the existing traffic volumes. There are no traffic count data available for the Ogden Drive/Murchison Drive and Magnolia Avenue/Murchison Drive intersection. Therefore, the existing traffic volumes at the intersection were estimated based on the traffic volumes of the adjacent study intersections (Ogden Drive/Trousdale Drive, Magnolia Avenue/Trousdale Drive, and El Camino Real/Murchison Drive) and available tube counts on Murchison Drive (between Ogden Drive and Magnolia Avenue). Traffic count dates and sources and the adjustment applied to the study intersections are summarized in Appendix A.

Table 3
Existing Transit Services

Transit Route	Route Description	Headway [1]	Nearest Stop and Distance to Project Site
<u>SamTrans Bus Services</u>			
SamTrans ECR	Daly City BART - Palo Alto Transit Center	15 mins	El Camino Real at Murchison Drive, 1,560 feet
SamTrans Route 38	Safe Harbor - Airport/Linden	N/A[2]	Millbrae Station West Plaza, 2,880 feet
SamTrans 46	Burlingame Intermediate School - Carolan	2-10 mins[3]	Trousdale Drive at Magnolia Avenue, 1,450 feet
SamTrans 397	Palo Alto Transit Center - San Francisco	60 mins[4]	El Camino Real at Murchison Drive, 1,560 feet
SamTrans SFO	Millbrae Station - San Francisco International Airport (SFO)	30 mins	El Camino Real at Murchison Drive, 1,770 feet
<u>Shuttle Services[5]</u>			
Millbrae/Broadway (MB)	Millbrae Station - Broadway Caltrain Station	30 mins	Millbrae Station West Plaza, 2,880 feet
North Burlingame (NB)	Millbrae Station - Burlingame Easton Neighborhood	30 mins	Mills-Peninsula Health Services at 1501 Trousdale Drive, 2,060 feet
Burlingame-Bayside Shuttle (Bay)	Millbrae Station - Airport Boulevard/Bay View Place Intersection	30 mins	Millbrae Station East Plaza, 3,720 feet
North Foster City Shuttle (NFC)	Millbrae Station - North Foster City business parks	30 mins	Millbrae Station East Plaza, 3,720 feet
<u>Commuter Rail Services</u>			
Caltrain	San Francisco - Gilroy	25 mins	Millbrae Station, 2,880 feet
Caltrain "Baby Bullet"	San Francisco - San Jose Tamien	30 mins	Millbrae Station, 2,880 feet
BART (Red)	Richmond - Millbrae	15 mins	Millbrae Station, 2,880 feet
BART (Purple/Yellow)	Millbrae - SFO - Antioch	15 mins	Millbrae Station, 2,880 feet

<u>Notes</u>:
These were services available before Covid-19 and shelter-in-place orders, unless otherwise stated.
1. Approximate headways during peak commute periods on weekdays.
2. Route 38 is a limited service, effective 4/26/2020, with one stop in the morning at 8:18 AM and one stop in the evening at 7:36 PM.
3. Route 46 is a limited school day only service, operating Monday-Friday from 7:35 - 8:10 AM, Monday, Wednesday, Thursday and Friday from 3:10 - 3:45 PM, and Tuesdays from 2:10 - 2:40 PM.
4. Route 397 is a limited overnight service, operating from 12:30 AM - 6:30 AM.
5. Shuttles run during weekday commute hours and is open to the general public and free to riders.

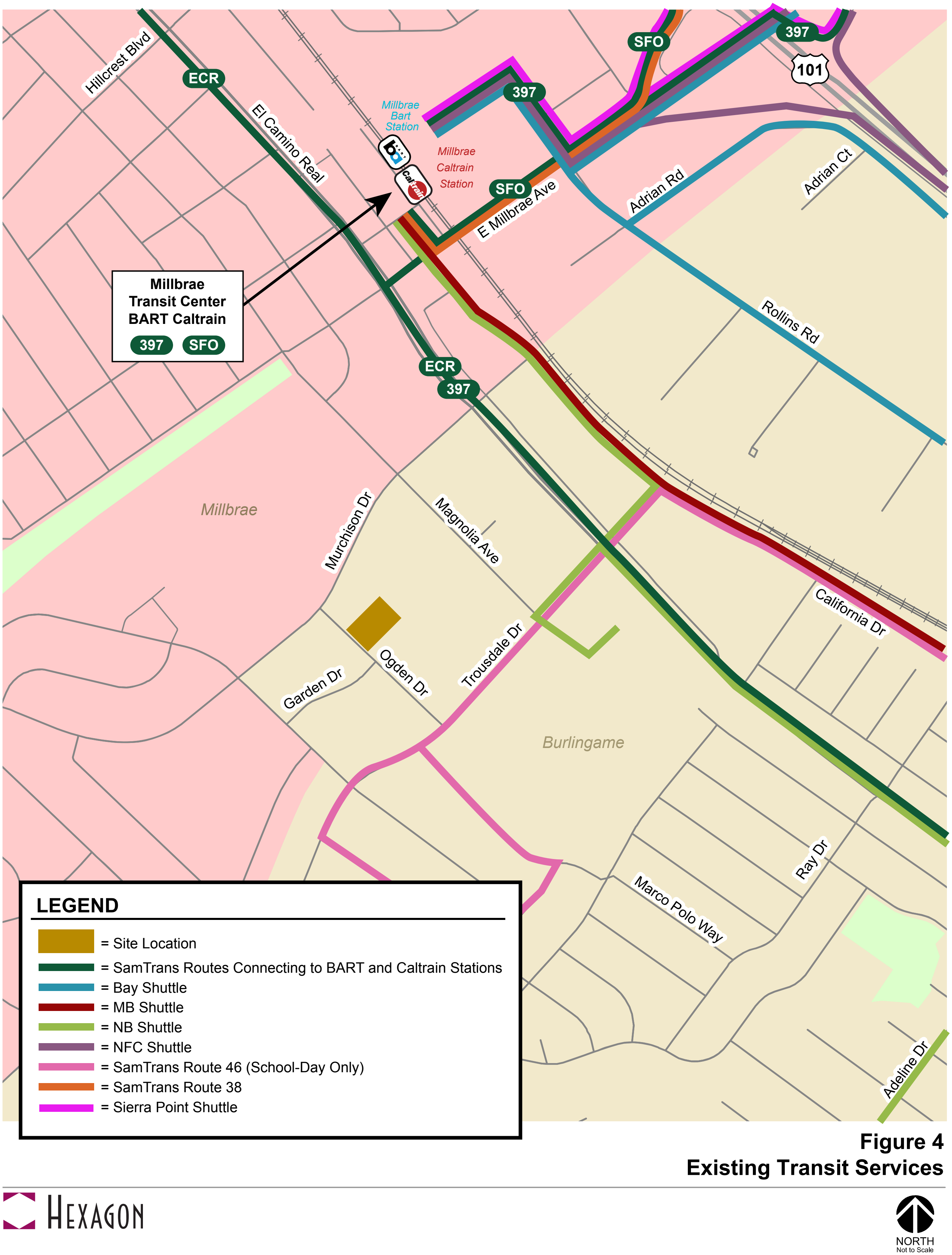


Figure 4
Existing Transit Services

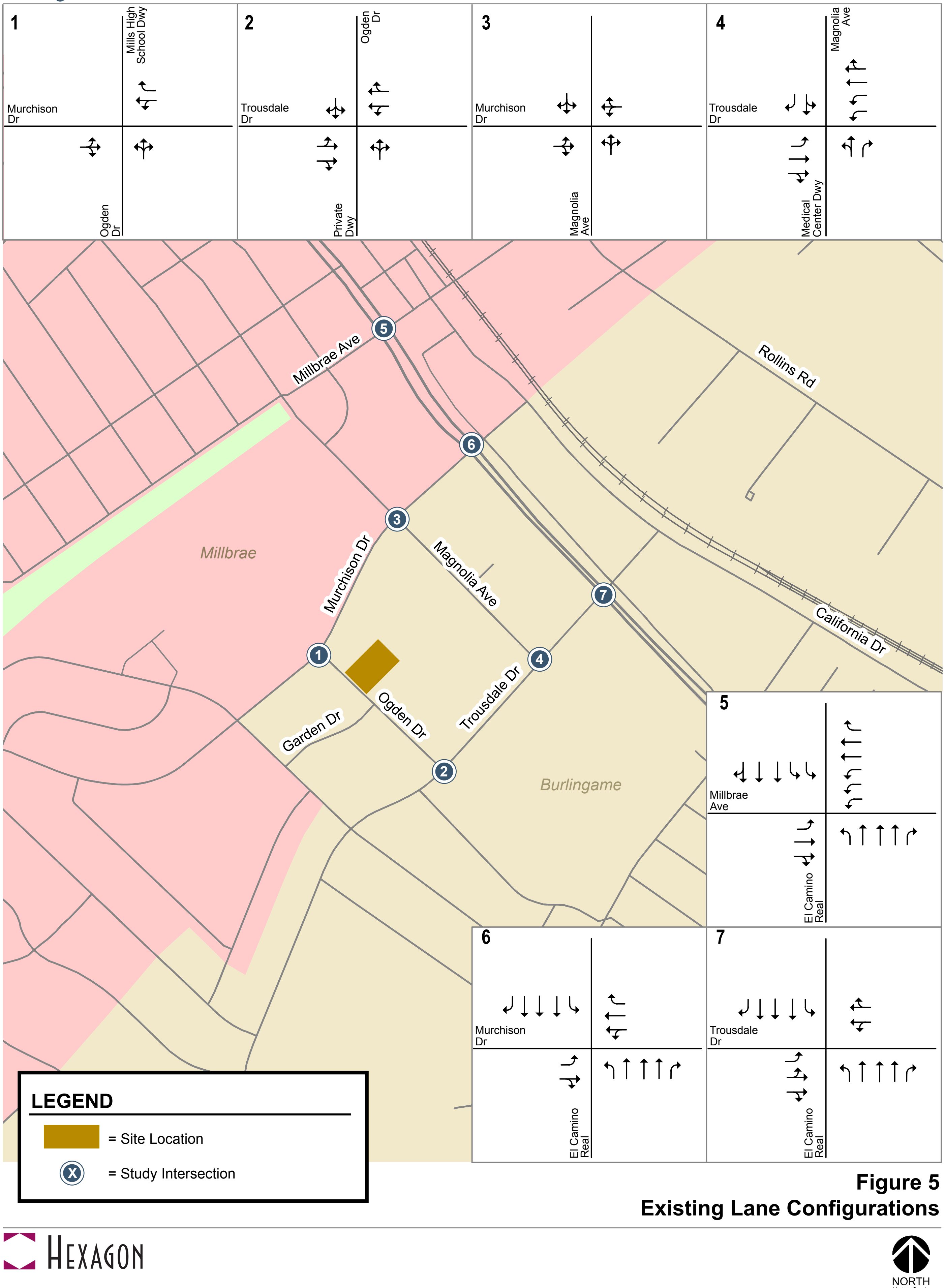


Figure 5
Existing Lane Configurations

HEXAGON

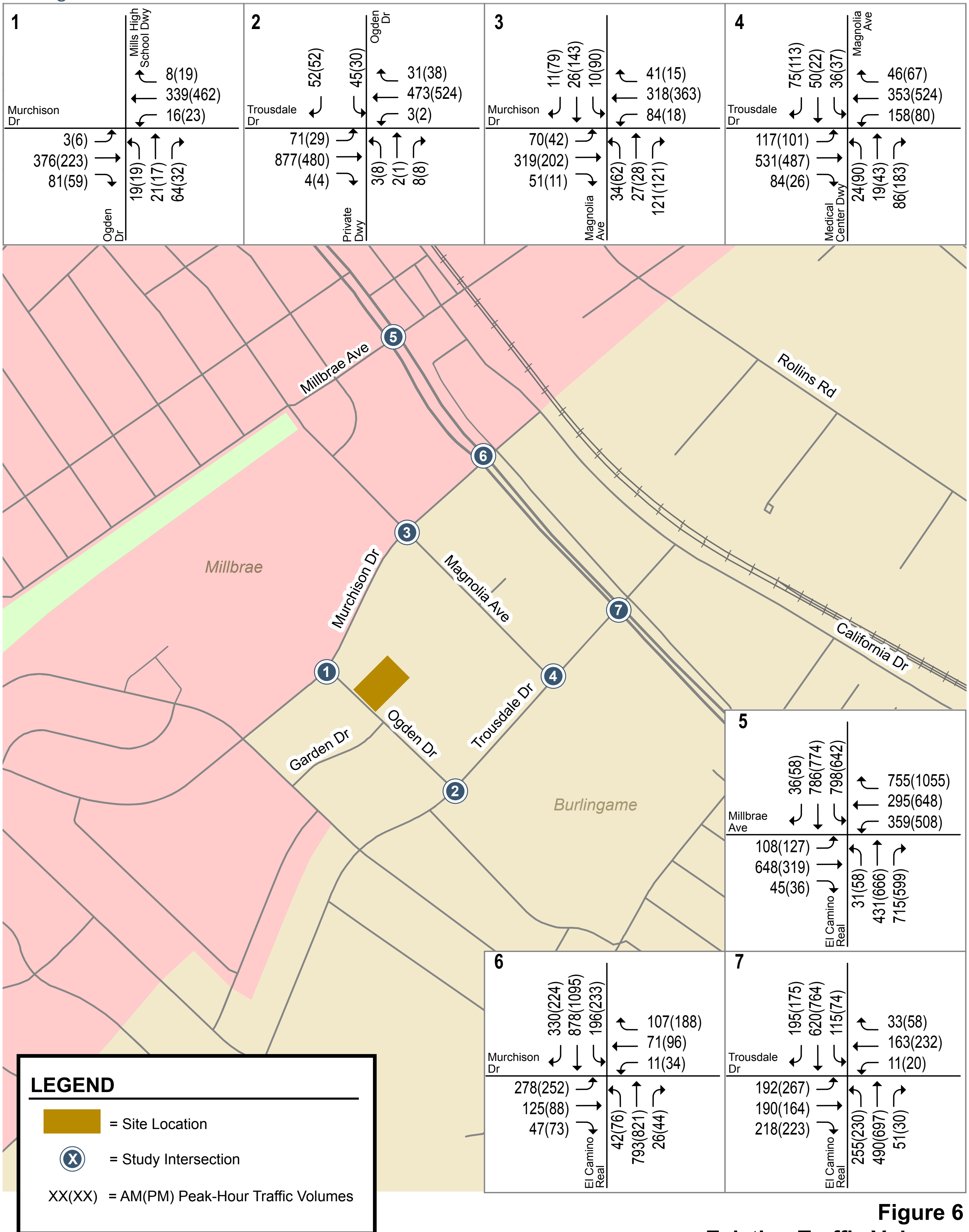


Figure 6
Existing Traffic Volumes

Existing Intersection Levels of Service

The results of the level of service analysis show that all of the study intersections operate at an acceptable level of service during both AM and PM peak hours (see Table 4). The intersection levels of service calculation sheets are included in Appendix B.

Table 4
Existing Intersection Levels of Service

#	Intersection	Control	LOS Standard	Peak Hour	Count Date	Avg. Delay (sec)	LOS
1	Ogden Drive & Murchison Drive[1]	AWSC	None	AM	N/A	13.4	B
				PM	N/A	14.0	B
2	Ogden Drive & Trousdale Drive[2]	AWSC	None	AM	09/20/17	18.9	C
				PM	09/20/17	11.5	B
3	Magnolia Avenue & Murchison Drive[1]	AWSC	None	AM	N/A	16.1	C
				PM	N/A	17.7	C
4	Magnolia Avenue & Trousdale Drive	Signal	D	AM	02/27/20	16.6	B
				PM	02/27/20	46.6	D
5	El Camino Real & Millbrae Avenue	Signal	E	AM	04/15/19	75.4	E
				PM	04/15/19	74.6	E
6	El Camino Real & Murchison Dr[2]	Signal	D	AM	04/05/16	21.2	C
				PM	04/05/16	25.4	C
7	El Camino Real & Trousdale Drive	Signal	D	AM	02/27/20	20.4	C
				PM	02/27/20	23.0	C

Notes:
AWSC = all-way stop control
1. Recent counts were not available. Volumes were extrapolated from nearby intersections.
2. Recent counts were not available. Existing volumes were increased by applying a growth rate of 1% per year.

3. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion/occupation of the proposed project. Traffic volumes for background conditions comprise volumes from existing traffic volumes plus traffic generated by approved but not yet constructed developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes Under Background Conditions

The roadway network under project conditions would be the same as the existing roadway network. Traffic volumes for background conditions include the completion of approved major developments in the vicinity of the project site, such as the 1499 Bayshore Hotel, the Adrian Court Residential Development, the Serra Station Development, and the Gateway at Millbrae Station Development. Trips associated with the approved developments were obtained from the project traffic studies. Since the Serra Station Development and the Gateway at Millbrae Station do not have traffic studies, the estimated number of project trips were assigned to the roadway network based on the trip distribution found in the Millbrae Station Area Specific Plan (MSASP) EIR. Background peak-hour traffic volumes are shown on Figure 7. The approved trips and traffic volumes for all components of traffic are tabulated in Appendix A.

Background Intersection Levels of Service

The results of the intersection level of service analysis (see Table 5) show that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours as a result of approved projects in the area. All other signalized study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under background conditions. The level of service calculation sheets are included in Appendix B.

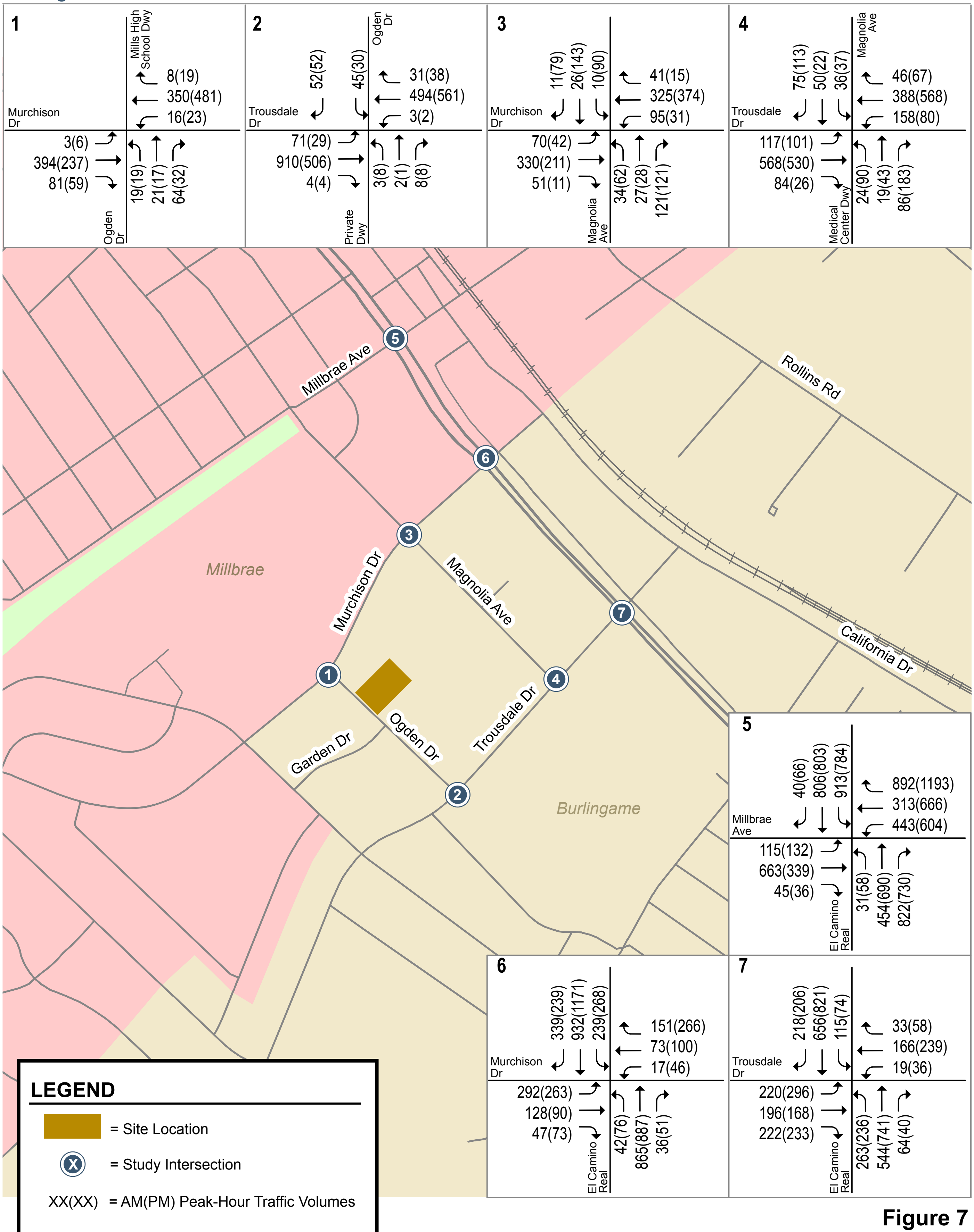


Figure 7
Background Traffic Volumes

NORTH
Not to Scale

Table 5
Background Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Existing Avg. Delay (sec)	Existing LOS	Background Avg. Delay (sec)	Background LOS
1	Ogden Drive & Murchison Drive[1]	None	AM	13.4	B	14.0	B
			PM	14.0	B	14.8	B
2	Ogden Drive & Trousdale Drive	None	AM	18.9	C	20.5	C
			PM	11.5	B	12.0	B
3	Magnolia Avenue & Murchison Drive[1]	None	AM	16.1	C	17.1	C
			PM	17.7	C	19.3	C
4	Magnolia Avenue & Trousdale Drive	D	AM	16.6	B	17.0	B
			PM	46.6	D	48.1	D
5	El Camino Real & Millbrae Avenue	E	AM	75.4	E	**101.8**	**F**
			PM	74.6	E	**92.6**	**F**
6	El Camino Real & Murchison Dr	D	AM	21.2	C	25.3	C
			PM	25.4	C	32.4	C
7	El Camino Real & Trousdale Drive	D	AM	20.4	C	21.3	C
			PM	23.0	C	24.7	C

Notes:
1. Recent counts were not available. Counts were extrapolated from nearby intersections.
Bold indicates a substandard level of service.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated, (2) intersection levels of service under existing plus project conditions and background plus project conditions, and (3) potential impacts of the project traffic on roadway network. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Background plus project conditions predict a realistic traffic condition that would occur as approved developments get built and occupied when the project is complete. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Roadway Network Under Project Conditions

The roadway network under project conditions would be the same as the existing roadway network because the project would not alter the existing intersection lane configurations.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the project site is estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic that can be expected to be generated by many types of land uses. The data are published in *Trip Generation Manual, 10th Edition,* by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a new development is estimated by multiplying the applicable trip generation rates by the size and use of the development. The rates published for Multifamily Housing (Mid-Rise) (Land Use 221) were used to estimate the trips generated by the proposed project. The “Mid-Rise Multifamily Housing” category refers to apartments, townhouses, and condominiums located within the same building that have between three and 10 levels. Most of the proposed residential units would be located on the second to 6th floor. The first floor would have a lobby, trash room, mail room, and community space.

Because the project would replace the existing use on the site, trips associated with the existing use were subtracted from the gross project traffic to derive the net project trips. The existing building is a 26,000 s.f. office. The rates published for General Office Building (Land Use 710) were used to estimate the trips that are generated by the existing building. The "General Office Building" category refers to a general office building with a mix of tenants including professional services, insurance companies, and investment brokers, and tenant services. Since specific uses of the existing office space are unknown, it is reasonable to use this ITE category for the office space.

After applying the existing trip credits, Table 6 shows that the project would generate 400 new daily trips, with 13 net trips (-15 in and 28 out) occurring during the AM peak hour and 23 net trips (27 in and -4 out) occurring during the PM peak hour.

Table 6
Project Trip Generation Estimates

		Daily		AM Peak Hour				PM Peak Hour			
		Trip		Trip	Trips			Trip	Trips		
Land Use	Size	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Land Uses											
Residential[1]	120 du	5.44	653	0.36	11	32	43	0.44	32	21	53
Existing Land Uses											
Office[2]	26,000 s.f.	9.74	253	1.16	26	4	30	1.15	5	25	30
Net Project Trips			400		-15	28	13		27	-4	23

Notes:
du = dwelling units
All trip rates are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Mid-Rise Multifamily Housing (ITE Land Use 221): average trip rates in trips per dwelling unit were used.
2. General Office (ITE Land Use 710): average trip rates in trips per 1,000 s.f. were used.

Trip Distribution and Assignment

The trip distribution patterns for the proposed residential use were estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses (see Figure 8).

The peak-hour trips generated by the project were assigned to the roadway system based on the directions of approach and departure, the roadway network connections, and the locations of project driveways (see Figure 9).

Traffic Volumes Under Project Conditions

Project trips, as represented in the above project trip assignment, were added to existing and background traffic volumes to obtain existing plus project traffic volumes (see Figure 10) and background plus project traffic volumes (see Figure 11).

Figure 8
Project Trip Distribution Pattern

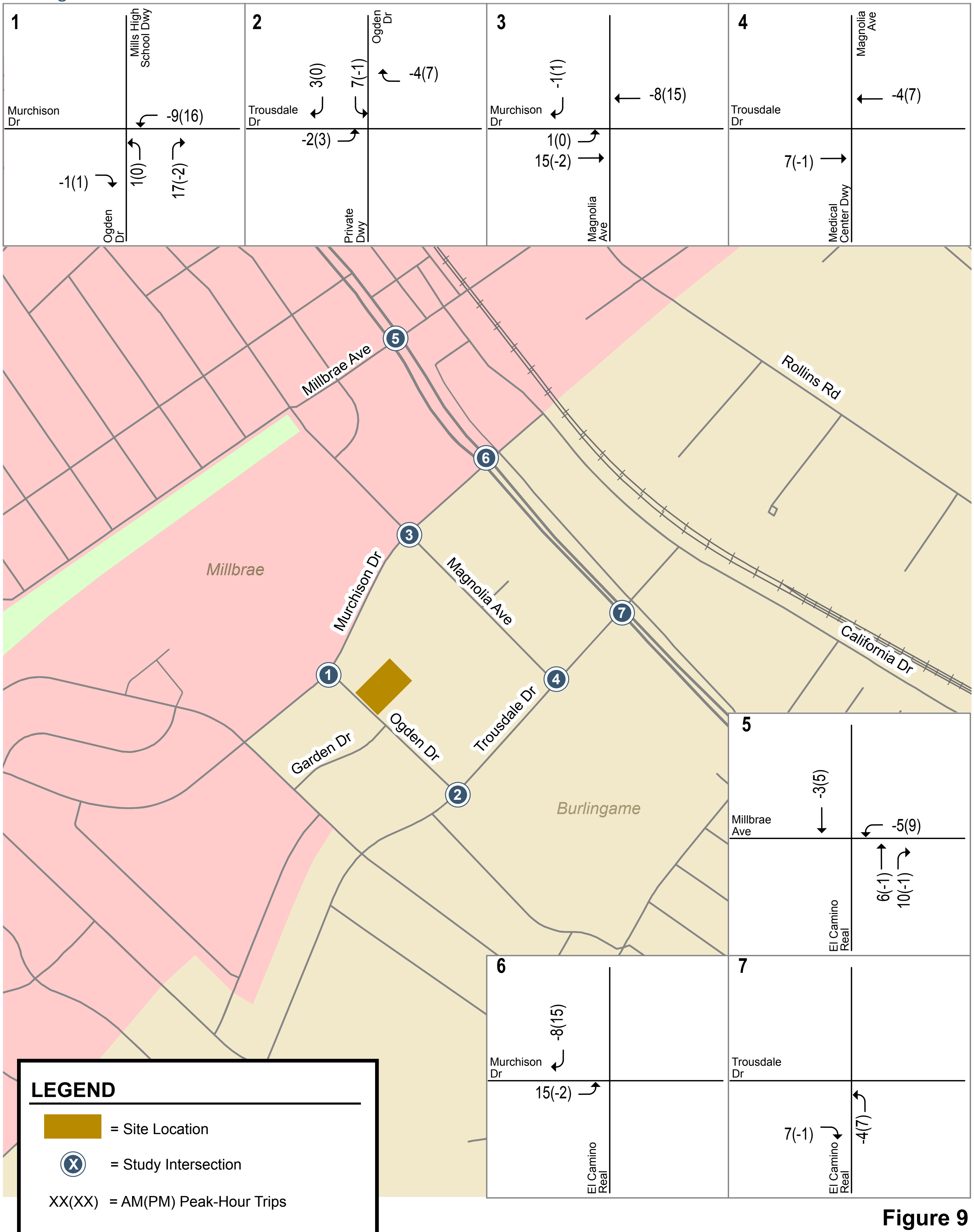


Figure 9
Net Project Trip Assignment

HEXAGON

NORTH
Not to Scale

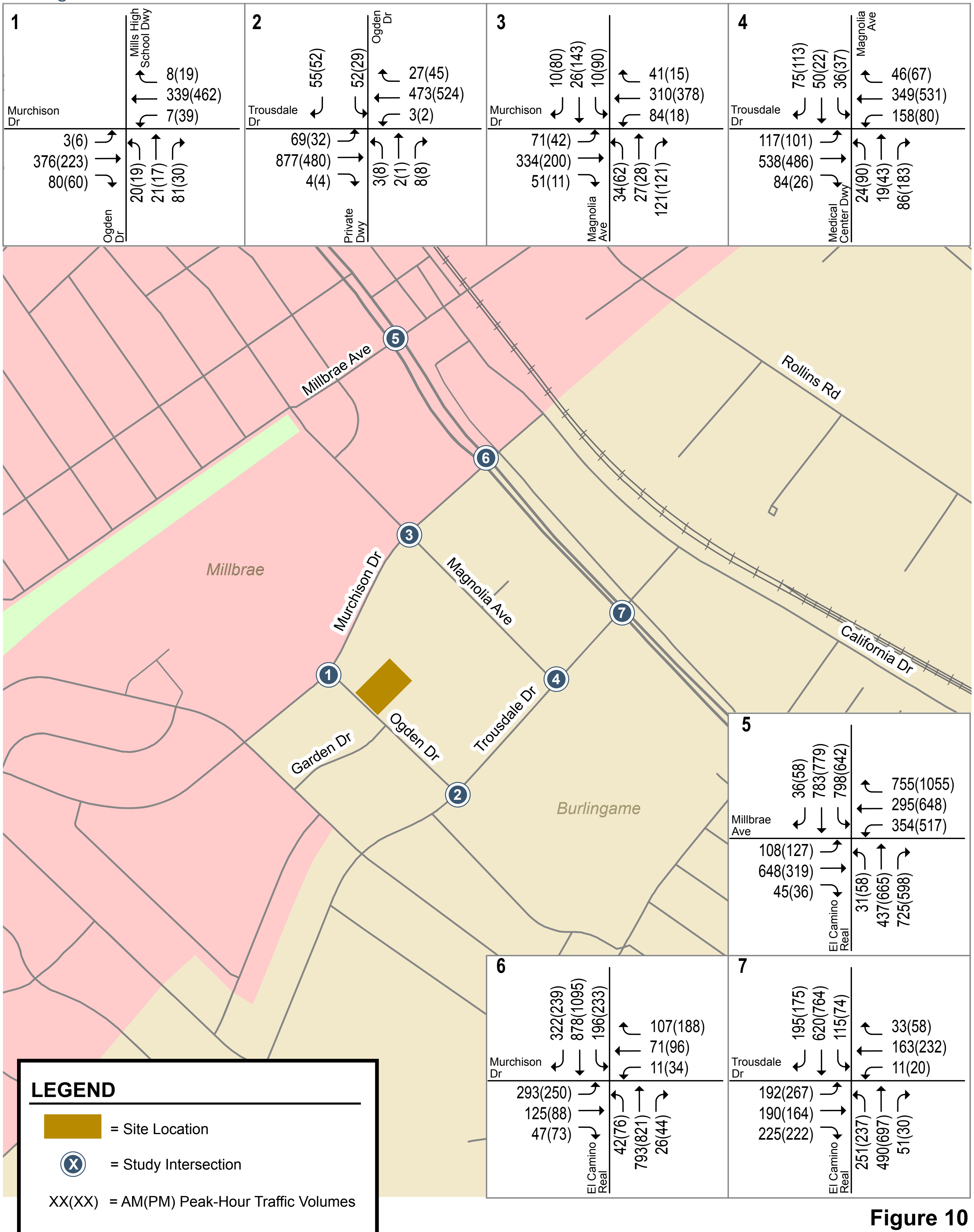


Figure 10
Existing Plus Project Traffic Volumes

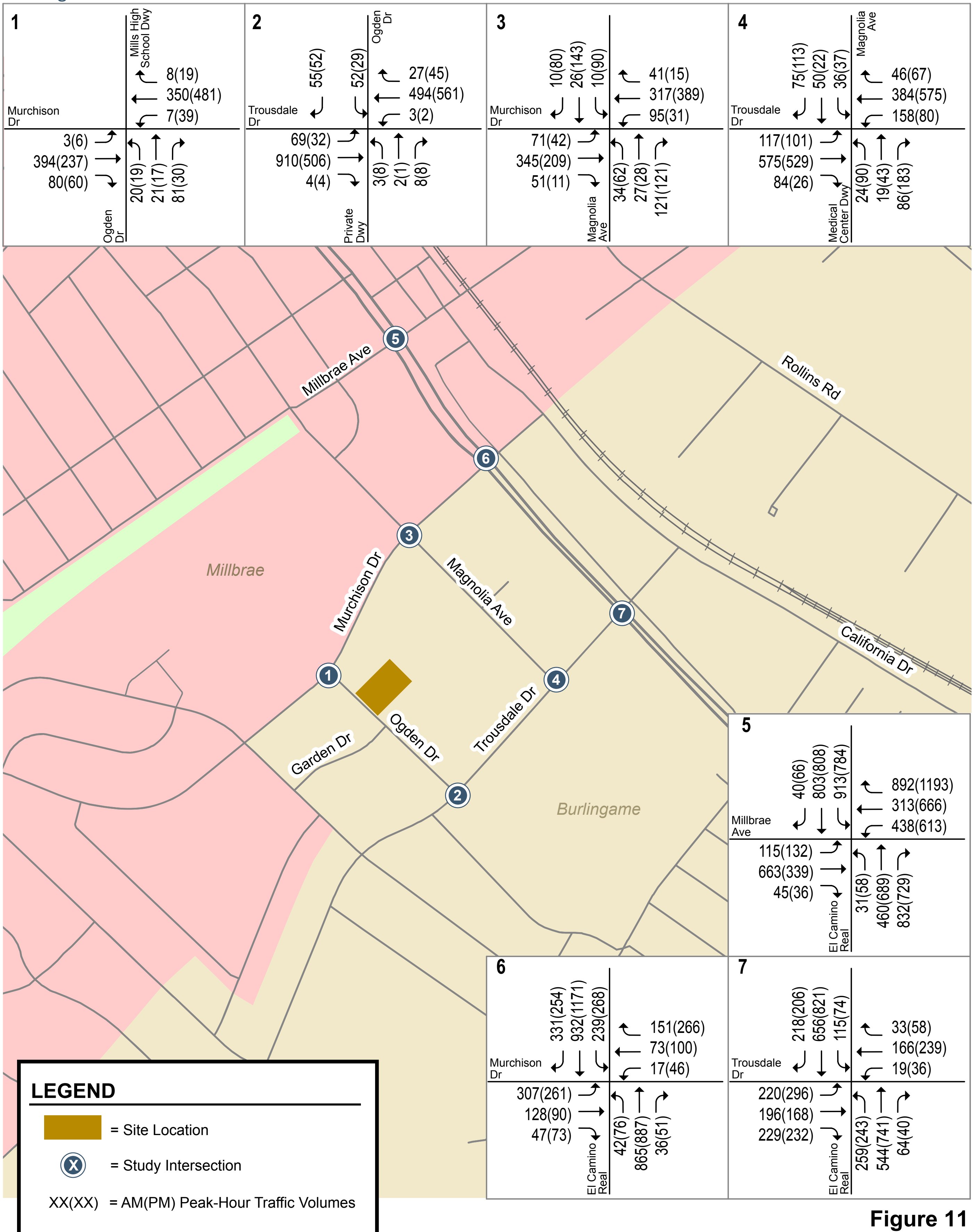


Figure 11
Background Plus Project Traffic Volumes

Existing Plus Project Intersection Levels of Service

The results of the intersection level of service analysis (see Table 7) show that all of the study intersections would continue to operate at an acceptable level of service during both the AM and PM peak hours under existing plus project conditions. The intersection level of service calculation sheets are included in Appendix B.

Table 7
Existing Plus Project Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Existing Conditions: No Project Avg. Delay (sec)	No Project LOS	With Project Avg. Delay (sec)	With Project LOS	With Project Increase in Delay (sec)
1	Ogden Drive & Murchison Drive[1]	None	AM	13.4	B	13.4	B	0.0
			PM	14.0	B	14.7	B	0.7
2	Ogden Drive & Trousdale Drive	None	AM	18.9	C	19.2	C	0.3
			PM	11.5	B	11.6	B	0.1
3	Magnolia Avenue & Murchison Drive[1]	None	AM	16.1	C	16.4	C	0.3
			PM	17.7	C	18.5	C	0.8
4	Magnolia Avenue & Trousdale Drive	D	AM	16.6	B	16.8	B	0.2
			PM	46.6	D	46.9	D	0.3
5	El Camino Real & Millbrae Avenue	E	AM	75.4	E	76.5	E	1.1
			PM	74.6	E	74.2	E	-0.4
6	El Camino Real & Murchison Dr	D	AM	21.2	C	21.7	C	0.5
			PM	25.4	C	25.4	C	0.0
7	El Camino Real & Trousdale Drive	D	AM	20.4	C	20.5	C	0.1
			PM	23.0	C	23.2	C	0.2

Notes:
1. Recent counts were not available. Counts were extrapolated from nearby intersections.
Bold indicates a substandard level of service.

Background Plus Project Intersection Levels of Service

The results of the intersection level of service analysis (see Table 8) show that that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours with and without the project. However, since the project would not increase the average delay by 4 or more seconds at the El Camino Real/Millbrae Avenue intersection, the project is not considered to have a significant impact at these intersections. All other study intersections would continue to operate at acceptable levels of service.

Table 8
Background Plus Project Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Background Conditions: No Project Avg. Delay (sec)	No Project LOS	With Project Avg. Delay (sec)	With Project LOS	With Project Increase in Delay (sec)
1	Ogden Drive & Murchison Drive[1]	None	AM	14.0	B	14.0	B	0.0
			PM	14.8	B	15.6	C	0.8
2	Ogden Drive & Trousdale Drive	None	AM	20.5	C	20.8	C	0.3
			PM	12.0	B	12.1	B	0.1
3	Magnolia Avenue & Murchison Drive[1]	None	AM	17.1	C	17.3	C	0.2
			PM	19.3	C	20.3	C	1.0
4	Magnolia Avenue & Trousdale Drive	D	AM	17.0	B	17.1	B	0.1
			PM	48.1	D	48.4	D	0.3
5	El Camino Real & Millbrae Avenue	E	AM	**101.8**	**F**	**103.2**	**F**	**1.4**
			PM	**92.6**	**F**	**92.6**	**F**	**0.0**
6	El Camino Real & Murchison Dr	D	AM	25.3	C	25.8	C	0.5
			PM	32.4	C	32.3	C	-0.1
7	El Camino Real & Trousdale Drive	D	AM	21.3	C	21.3	C	0.0
			PM	24.7	C	24.9	C	0.2

Notes:
1. Recent counts were not available. Counts were extrapolated from nearby intersections.
Bold indicates a substandard level of service.

5.
Cumulative Conditions

This chapter describes the roadway traffic operations under cumulative conditions and cumulative plus project conditions. Cumulative conditions represent future traffic conditions with expected growth in the area. The expected future traffic volumes were obtained from the City of Burlingame 2040 General Plan forecasts.

Roadway Network and Traffic Volumes Under Cumulative Conditions

The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions.

Cumulative traffic volumes were taken from the 2040 General Plan traffic study and adjusted by comparing to background volumes. For the intersections in which the General Plan 2040 volumes are lower than background volumes, the background volumes were applied to cumulative conditions. For intersections not included in the 2040 General Plan, the cumulative volumes were estimated by using the volumes at the closest intersections. Based on the existing and cumulative volumes at the El Camino Real/Trousdale Drive intersection, the estimation for intersections not included in the 2040 General Plan utilized a growth factor of 1.19 and 1.17 for the AM and PM peak hours, respectively. Figure 12 shows the traffic volumes under cumulative no project conditions. Figure 13 shows the traffic volumes under cumulative plus project conditions.

Cumulative Intersection Levels of Service

The level of service results for the study intersections under cumulative conditions without and with the project are summarized in Table 9. The results show that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours under both no-project and with-project conditions. However, since the project would not increase the average delay by 5 or more seconds, the project is not considered to have a significant impact at this intersection.

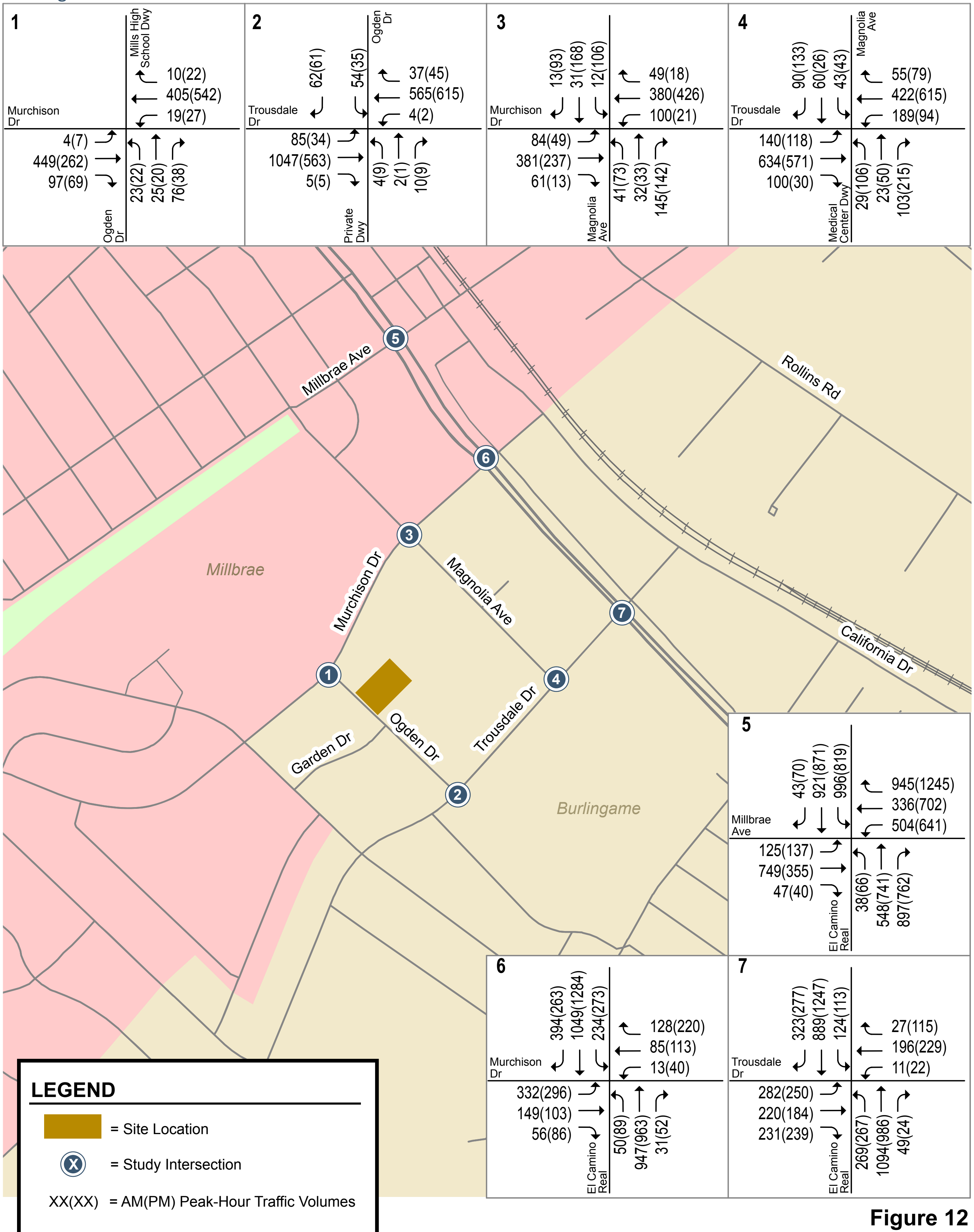


Figure 12
Cumulative No Project Traffic Volumes

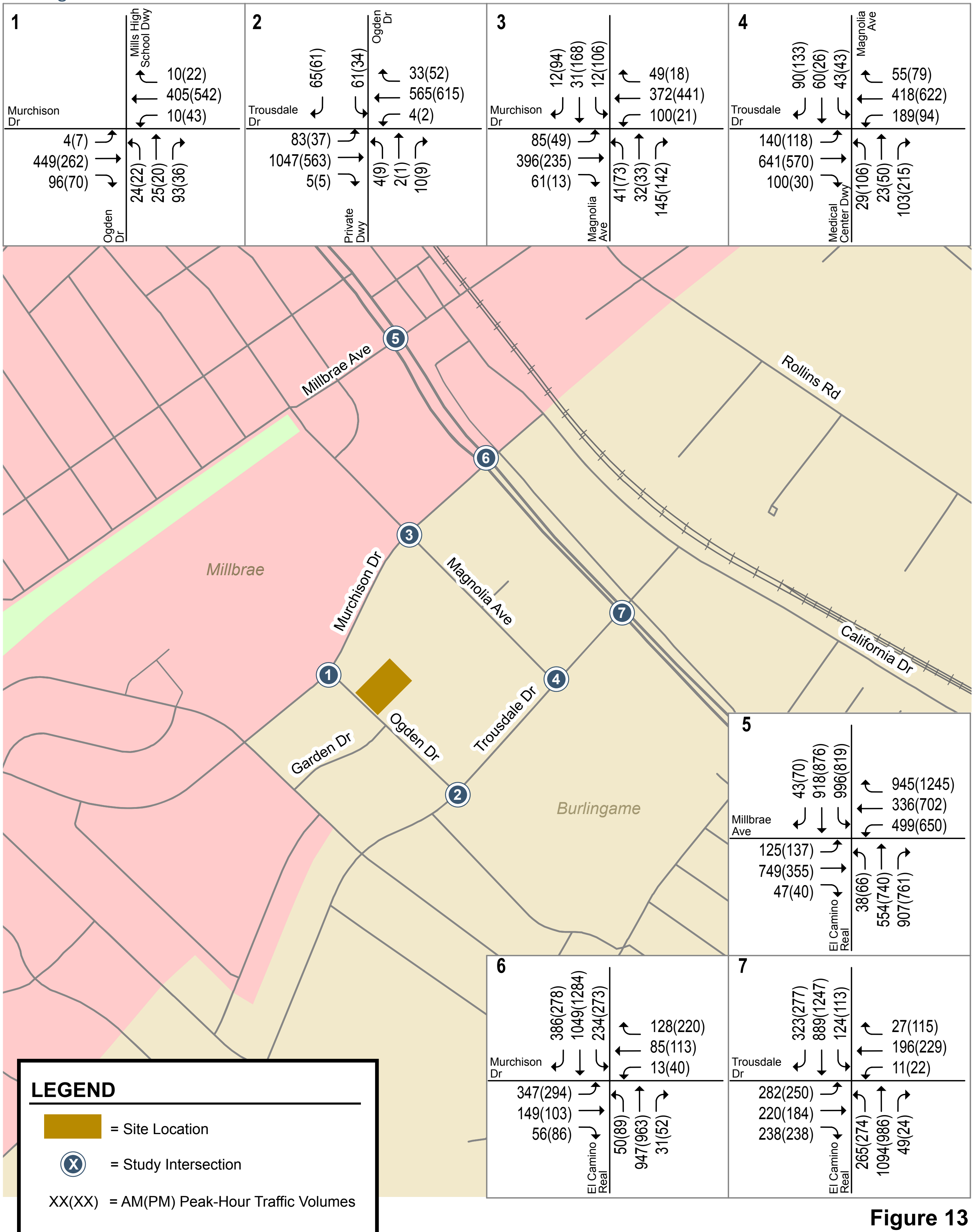


Figure 13
Cumulative Plus Project Traffic Volumes

NORTH
Not to Scale

Table 9
Cumulative plus Project Levels of Service

#	Intersection	LOS Standard	Peak Hour	Cumulative Conditions: No Project Avg. Delay (sec)	No Project LOS		With Project Avg. Delay (sec)	With Project LOS	Increase in Delay (sec)
1	Ogden Drive & Murchison Drive[1,2]	None	AM	18.1	C	0	18.8	C	0.7
			PM	18.8	C	0	20.2	C	1.4
2	Ogden Drive & Trousdale Drive[2]	None	AM	34.9	D	0	35.4	E	0.5
			PM	13.6	B	0	13.7	B	0.1
3	Magnolia Avenue & Murchison Drive[1,2]	None	AM	29.1	D	0	30.0	D	0.9
			PM	36.8	E	0	40.6	E	3.8
4	Magnolia Avenue & Trousdale Drive[2]	D	AM	32.5	C	0	32.8	C	0.3
			PM	79.9	E	0	80.2	F	0.3
5	El Camino Real & Millbrae Avenue[2]	E	AM	**120.2**	**F**	**0**	**121.5**	**F**	**1.3**
			PM	**103.3**	**F**	**0**	**103.6**	**F**	**0.3**
6	El Camino Real & Murchison Dr[2]	D	AM	26.7	C	0	27.3	C	0.6
			PM	32.8	C	0	32.6	C	-0.2
7	El Camino Real & Trousdale Drive	D	AM	24.5	C	0	24.5	C	0.0
			PM	32.5	C	0	32.8	C	0.3

Notes:
1. Recent counts were not available. Volumes were extrapolated from nearby intersections.
2. Cumulative traffic volumes were estimated by applying a growth rate to the existing volumes.
Bold indicates a substandard level of service.

6. Vehicle Miles Traveled

Average daily VMT for the project area was estimated using the MTC's VMT database, which includes the forecasted VMT for each transportation analysis zone (TAZ) in urbanized areas in the Bay Area. The VMT database provides two types of VMT forecasts: the average daily VMT per capita based on location of residence and the average daily VMT per worker based on location of work. Because the project VMT would be generated by residents, the average daily VMT per capita based on location of residence is used to evaluate the project's VMT level by comparing with the City and the County average VMT per capita. The simulated VMT by place of residence for the Year 2020 was used to calculate the average VMT per capita for (a) the TAZ in which the project is located, (b) the City of Burlingame, and (c) San Mateo County.

As stated previously, the City of Burlingame has not adopted any impact thresholds related to VMT, so this comparison is provided for informational purposes only. The TAZ containing the proposed project (TAZ 246) is estimated to have an average VMT per capita of 15.52, which is greater than the average VMT per capita for the City of Burlingame (14.21) and lower than the average VMT per capita for San Mateo County (17.31).

The CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within a half mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT. A high-quality transit corridor is a corridor with fixed route bus service with service intervals that do not exceed 15 minutes during peak commute hours. El Camino Real is considered a high-quality transit corridor as SamTrans Route ECR has a 15-minute headway during peak hours. The project site is also 0.6 mile from the existing Millbrae Station, which is within walking distance.

7.
Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Intersection vehicle queuing
- Traffic operations at unsignalized intersections
- Site access and circulation
- Potential effects to pedestrians, bicycles, and transit facilities
- Parking

The analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the effects of added project traffic.

Intersection Vehicle Queuing

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis for left-turn lanes and stop-controlled approaches at intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled approaches (see Table 10). This analysis provides a basis for estimating future storage requirements at the intersections under existing and background conditions. Vehicle queues were estimated using Synchro software, described in Chapter 1. The following movements were selected for evaluation:

- Northbound movement from Ogden Drive at Murchison Drive
- Westbound left turn and through movements from Murchison Drive at Ogden Drive
- Southbound movement from Ogden Drive at Trousdale Drive
- Eastbound movement from Murchison Drive at Magnolia Avenue
- Westbound movement from Murchison Drive at Magnolia Avenue
- Eastbound left turn movement from Murchison Drive to El Camino Real

The listed movements do not have specific storage lanes; thus, the storage length stated is the length between two intersections. The results show that the project is not expected to create adverse effects on traffic operations along the corresponding streets.

Table 10
Queuing Analysis Summary

Intersection	Ogden Drive & Murchison Drive		Ogden Drive & Trousdale Drive	Magnolia Avenue & Murchison Drive		El Camino Real & Murchison Drive
Control	Unsignalized		Unsignalized	Unsignalized		Signal
Movement	NB	WB LT/ THRU	SB	EB	WB	EB LT
Peak Hour Period	AM	PM	AM	AM	PM	AM
Existing						
Lanes	1	1	1	1	1	1
Volume (vph)	104	485	97	440	396	278
Volume (vphpl)	104	485	97	440	396	278
95th% Queue[1] (veh/ln)	1	5	1	5	5	11
95th% Queue[2] (ft/ln)	25	125	25	125	125	275
Storage[3] (ft/ ln)	850	775	850	775	425	425
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Existing Plus Project						
Lanes	1	1	1	1	1	1
Volume (vph)	122	501	107	456	411	293
Volume (vphpl)	122	501	107	456	411	293
95th% Queue[1] (veh/ln)	1	6	1	5	6	12
95th% Queue[2] (ft/ln)	25	150	25	125	150	300
Storage[3] (ft/ ln)	850	775	850	775	425	425
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Background						
Lanes	1	1	1	1	1	1
Volume (vph)	104	504	97	451	420	292
Volume (vphpl)	104	504	97	451	420	292
95th% Queue[1] (veh/ln)	1	6	1	5	6	12
95th% Queue[2] (ft/ln)	25	150	25	125	150	300
Storage[3] (ft/ ln)	850	775	850	775	425	425
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Background Plus Project						
Lanes	1	1	1	1	1	1
Volume (vph)	122	520	107	467	435	307
Volume (vphpl)	122	520	107	467	435	307
95th% Queue[1] (veh/ln)	1	6	1	5	7	13
95th% Queue[2] (ft/ln)	25	150	25	125	175	325
Storage[3] (ft/ ln)	850	775	850	775	425	425
Adequate (Y/N)	Y	Y	Y	Y	Y	Y

Notes:
NB = northbound; SB = southbound; EB = eastbound; WB = westbound.
LT = left turn movement; RT = right turn movement; THRU = through movement
1. Value taken from Synchro 10 software for unsignalized intersections; value rounded to the nearest whole number. Assumes one vehicle queued per 25 feet for signalized intersections.
2. Value taken from Synchro 10 software for signalized intersections; value rounded to the nearest 25 feet. Assumes 25 feet per one vehicle queued for unsignalized intersections.
3. Distance to the next intersection.

Traffic Operations at Unsignalized Intersections

The study evaluates three unsignalized intersections: Ogden Drive/Murchison Drive, Ogden Drive/Trousdale Drive, and Magnolia Avenue/Murchison Drive. All three intersections are all-way stop controlled.

Based on the level of service analysis results, the Ogden Drive/Murchison Drive intersection would operate at LOS C or better under all study scenarios. The queueing analysis shows no vehicle queueing issues under project scenarios. Therefore, the project traffic would not result in the need for intersection improvement or modification of traffic control at the intersection.

Based on the level of service analysis results, the Ogden Drive/Trousdale Drive and Magnolia Avenue/Murchison Drive intersections would operate at LOS C or better under existing and background conditions without vehicle queueing issues. However, the Ogden Drive/Trousdale Drive intersection would experience some delay with LOS E during the AM peak hour, and the Magnolia Avenue/Murchison Drive intersection would experience some delay with LOS E during the PM peak hour under cumulative conditions. In conjunction with the level of service analysis, a signal warrant analysis was conducted based on the Peak Hour Volume Warrant (Warrant 3) described in the California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD), Part 4, Highway Traffic Signals. The results of the peak-hour signal warrant checks indicate that the AM peak hour volumes at the Ogden Drive/Trousdale Drive intersection and both the AM and PM peak-hour volumes at the Magnolia Avenue/Murchison Drive intersection meet the peak-hour signal warrant under cumulative conditions, both with and without the project traffic (see Table 11). The peak-hour signal warrant sheets are contained in Appendix C.

Based on the estimated peak-hour volumes at the Ogden Drive/Trousdale Drive and the Magnolia Avenue/Murchison Drive intersections, the average delay can be improved by installation of a traffic signal at the intersections, which would improve the both intersections level of service to LOS B during the AM peak hour for Ogden Drive/Trousdale drive and both the AM and PM peak hour for Magnolia Avenue/Murchison Drive. Because the level of service deficiency is estimated to occur under cumulative conditions, the project should be required to contribute a pro-rated share of the cost to install a new traffic signal at the Ogden Drive/Trousdale Drive intersection and the Magnolia Avenue/Murchison Drive intersection as part of the mitigation measures to address the impacts to these intersections. The project should bond to pay for its share of the signals, if warranted within the next 5 years. The project fair share is calculated to be 4.0 percent of the signal costs at the Ogden Drive/Trousdale Drive intersection and 5.9 percent of the signal costs at the Magnolia Avenue/Murchison Drive intersection. To determine the fair share of the project, Hexagon calculated the percentage of project traffic added to the growth of traffic between background and cumulative conditions at each intersection. The percentage was averaged between AM and PM peak hours, as a signal is warranted if the intersection meets the requirements under either peak hour.

It should be noted that due to Covid-19 and regional shelter-in-place orders, new traffic counts were not collected. Existing volumes were estimated by increasing traffic counts from 2016 by one percent per year to 2020 for Ogden Drive/Trousdale Drive, and the existing volumes for Magnolia Avenue/Murchison Drive were estimated using traffic counts from surrounding intersections, as no traffic counts for the intersection were available. Additionally, field observations cannot be conducted to identify whether there are traffic operational issues at the intersections. Therefore, although the intersections meet the peak-hour signal warrant during either or both the AM and PM peak hours, the need for intersection improvement or modification of traffic control at the intersections should be evaluated further with new traffic counts and field observations in the future when volumes return to pre-Covid levels.

Table 11
Signal Warrant Analysis Results

Intersection	Signal Warranted[1]					
	Existing		Background		Cumulative	
	No Project	With Project	No Project	With Project	No Project	With Project
Ogden Drive & Murchison Drive	No	No	No	No	No	No
Ogden Drive & Trousdale Drive	No	No	No	No	Yes (AM)	Yes (AM)
Magnolia Avenue & Murchison Drive	No	No	No	No	Yes (AM/PM)	Yes (AM/PM)

Notes:
1. The signal warrant analysis was conducted based on the Peak Hour Volume Warrant (Warrant 3) described in the California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD), Part 4, Highway Traffic Signals.

Site Access and Circulation

The site access and on-site circulation evaluation is based on the October 4, 2019 site plan prepared by Levy Design Partners. Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, geometric design, sight distance, and operations (e.g., vehicle queuing and delay). On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Site Access

Vehicle access to the parking garage would be provided via a new full-access driveway on Ogden Drive (see Figure 2). The project would close the existing inbound only driveway and convert the existing outbound only driveway into a new full access driveway.

Project Driveway Design

The proposed driveway measures 19 feet in width. The City of Burlingame Zoning Code requires a minimum of either two 12-foot driveways or one 18-foot driveway for parking areas of more than 30 vehicle spaces. Therefore, the proposed driveway meets the City's minimum width requirement for two-way driveways.

The project driveway must provide adequate access and stacking space for vehicles entering the site to avoid backups onto the sidewalks and streets. The driveway would provide approximately 43 feet of stacking space between the face of curb and the gate. Typically, a minimum distance of 50 feet, the equivalent of two vehicles, measured from the face of the curb provides adequate stacking space at driveways. Given the estimated 32 inbound trips in the PM peak hour (see Figure 14) at the driveway, that calculates to about one inbound trip every 2 minutes, the probability of two or more inbound vehicles entering the parking garage at the same time would likely be low. Therefore, the inbound stacking space at the driveway is expected to be adequate.

Sight Distance at Project Driveway

The proposed driveway location was evaluated to determine if the sight distance at the driveway would be adequate. Adequate sight distance reduces the likelihood of a collision at driveways and provides drivers with the ability to locate sufficient gaps in traffic to exit a driveway. Sight distance of a driveway is evaluated based on the stopping sight distance recommended by Caltrain for a given design speed.

Since there is no posted speed limit on Ogden Drive, it was assumed that the speed limit is 25 mph. The Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph). Thus, a driver must be able to see 200 feet in both directions of Ogden Drive to locate a sufficient gap to turn out of the driveway.

The driveway would be located 150 feet south of Murchison Drive. Vehicles turning from the stop controls at Murchison Drive to southbound Ogden Drive are expected to travel with lower speed while making turns. Given that vehicles are more likely to travel at a speed of 10 mph, the recommended stopping sight distance would be 100 feet (based on a design speed of 15 mph). Thus, the sight distance (150 feet) for traffic turning from Murchison Drive is adequate. According to the site plan, the landscape plan shows street trees would be added along the project frontage on Ogden Drive. The type and location of the street trees would be determined by the City at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers exiting the project driveways. On-street parking is present on Ogden Drive along the project frontage and adjacent to the new proposed driveway and could obstruct the vision of exiting drivers from the driveway. Therefore, it is recommended that red curbs be painted next to the project driveway to avoid issues associated with on-street parking obstructing the vision of exiting drivers.

Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveway are shown in Figure 14. The level of service analysis at the driveway shows that that the outbound and left-turn inbound movements of the driveway would operate adequately (LOS A) with short delay under all project scenarios. The project is estimated to generate 10 fewer southbound left-turn trips in the AM peak hour and 20 new southbound left-turn trips in the PM peak hour compared to the existing office building. The vehicle delay would be 7 seconds per vehicle in the AM and PM peak hours for the left-turn movement. The short delay is not expected to affect traffic flow on southbound Ogden Drive. Therefore, no operational issues related to vehicle queueing and/or vehicle delay are expected to occur at the driveway. Some minor on-site vehicle queuing could occur due to a combination of the inherent unpredictability of vehicle arrivals at the driveway and the random occurrence of gaps in traffic along Ogden Drive. However, given the estimated 33 outbound trips in the PM peak hour at the driveway, that calculates to about one outbound trip every 2 minutes, the probability of two or more outbound vehicles exiting the site at the same time would likely be low. The maximum queue is not expected to affect the on-site circulation. Additionally, vehicles turning right into the project site from Ogden Drive may block the travel lane momentarily due to vehicles slowing down to turn into the driveway, but this would not have a significant effect on traffic operations.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. Generally, the proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The site plan (see Figures 2 and 15) shows dead-end aisles in the parking structure. Dead-end aisles are undesirable because drivers may enter the aisle, and upon discovering that there is no available parking, must back out or conduct three-point turns. However, all parking spaces should be assigned to specific residents. Thus, a driver would know if the parking space were available and would not be required to conduct a three-point turn. Therefore, the project provides adequate circulation.

The slope of the parking garage ramp would be approximately 12 percent. Transition slopes should be provided at the two ends of the 12 percent ramp to avoid vehicles from bottoming out. The project would provide 90-degree parking throughout the proposed parking garage. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles between 90-degree parking spaces throughout the parking measure 24 feet wide. Thus, vehicle circulation would be adequate.

Parking Stall Dimensions

Parking spaces are shown to be 18 feet long by 8.5 feet wide for standard parking spaces and 18 feet long by 9 feet wide for accessible parking spaces. According to the City of Burlingame Zoning Code for the North Burlingame Residential Zoning District, all parking stalls may be provided in a single dimension, 8.5 feet in width by 17 feet in length, except for required accessible parking spaces which shall meet the dimensions required in the California Building Code. The project also proposes tandem spaces. However, the City does not have any requirements for tandem spaces. Tandem spaces are shown to also be 18 feet long by 8.5 feet wide for each vehicle space. The proposed parking space dimensions would meet the City requirements.

Passenger Loading

The project does not propose any specific passenger loading area on-site for residents. However, on-street parking along Ogden Drive is permitted. Thus, it is recommended that a loading space be provided along the project frontage. Loading areas would allow for residents to be picked up or dropped off.

Bike and Pedestrian On-site Circulation

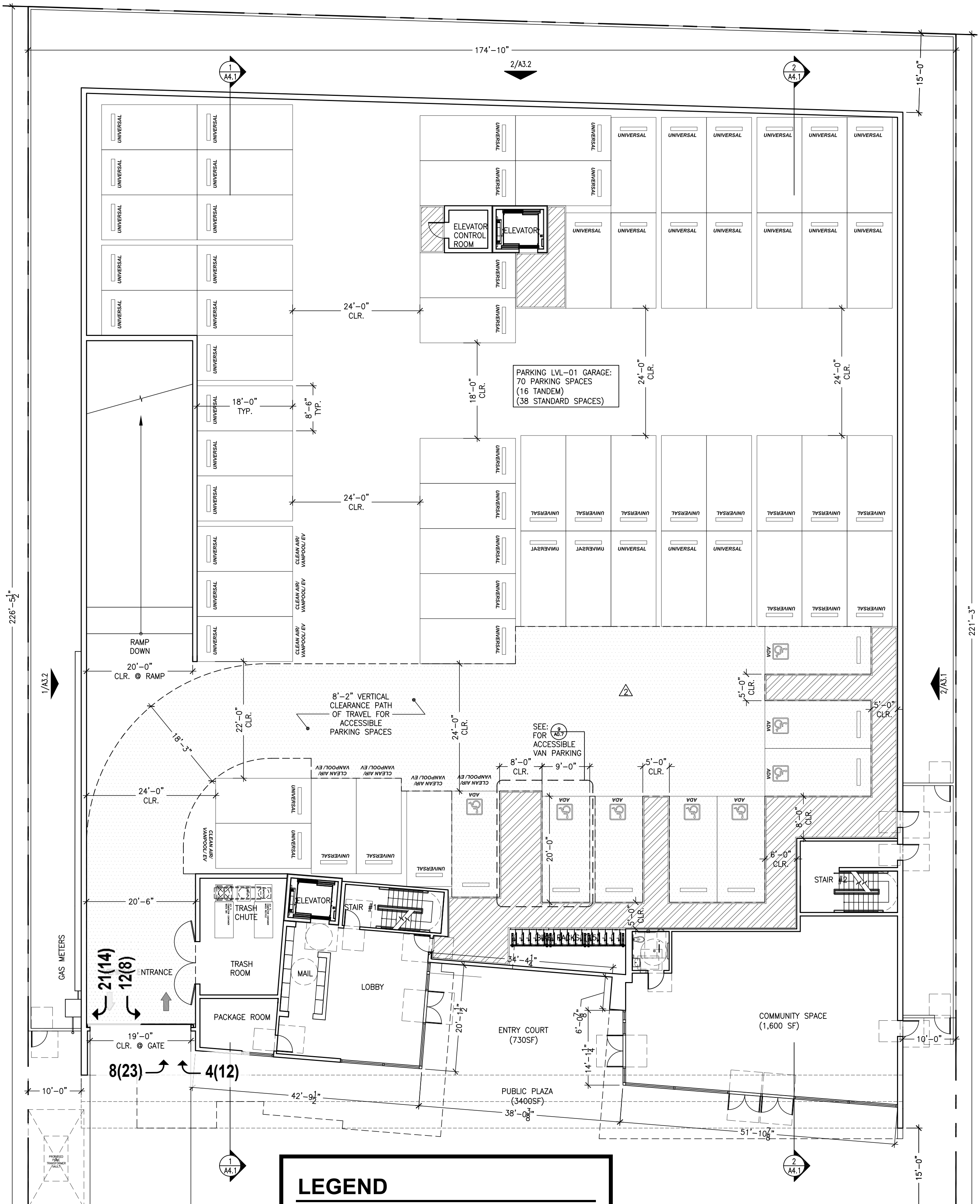
The site plan provides adequate pedestrian circulation throughout the site, as well as between the site and the surrounding pedestrian facilities. In addition to the sidewalks along Ogden Drive, the site plan shows a continuous walkway surrounding the site, which provides pedestrian access to Ogden Drive, the lobby, public plaza, and the community space. The project proposes a bicycle parking room within the underground parking garage that can be accessed through the elevator from the residential lobby or down the garage ramp.

Truck Access and Circulation

The site plan does not show spaces provided for moving trucks. As described above, the project should provide a passenger loading space along the project frontage on Ogden Drive. It is assumed that moving vehicles would utilize this loading space, and new residents would be able to load through the lobby elevator.

Garbage Collection

The site plan shows one trash room on the ground level of the building. Garbage collection activities for the project are not expected to occur on-site due to access limitations. Therefore, the trash bins should be moved to the curb along Ogden Drive on designated garbage collection days. Given that on-street parking is permitted along both streets, signs prohibiting parking during garbage pickup hours should be placed adjacent to the proposed staging areas. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak-hour traffic conditions.



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 14
Gross Project Trips at Driveways

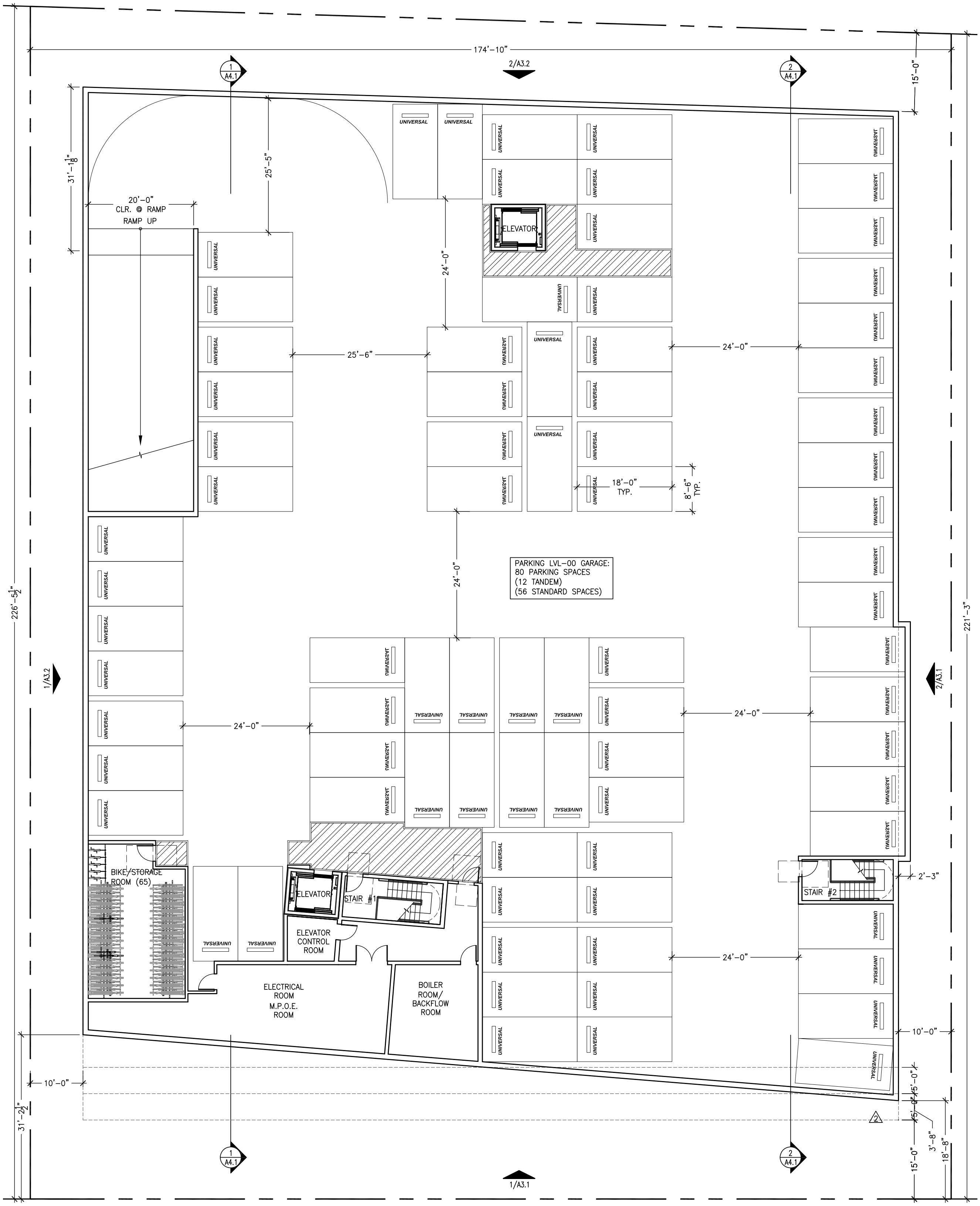


Figure 15
Parking Garage Basement Level

NORTH
Not to Scale

Potential Effects on Pedestrians, Bicycles, and Transit Facilities

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

The project is consistent with many of the General Plan's goals. The project is consistent with Goal M-6 in that the development is near Millbrae Station, is in a designated Residential area, and has a site design that is convenient for pedestrians.

Pedestrian Facilites

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). Within a typical walking distance (a half mile or 10 minutes), continuous pedestrian facilities are present between the site and the surrounding land uses, including bus stops in the area and the nearby Millbrae Station. The project site plan shows sidewalks of approximately 9.5 feet in width along the Ogden Drive and surrounding the site. The project proposes to improve the frontages with outdoor seating, planters, and trees between the sidewalk and the building. The frontage would be set back with landscaping and a pedestrian plaza between the building and the sidewalk.

Bicycle Facilites

The project is near the bike route on Trousdale Drive, which can connect to the bike lane on California Drive and lead to the Millbrae Station. There are some planned additional bicycle facilities in the study area, including a bike route along Millbrae Avenue between Old Bayshore Highway and California Drive.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Services

The project site is well-served by transit, primarily by Caltrain and BART, whose distance is about 0.6-mile from the project site, an approximately 15-minute walk. The project is also 1,560 feet from the bus stop for SamTrans bus route ECR, which provides frequent busses along El Camino Real. Both cycling and walking are feasible to reach the Millbrae Station. Although the project is not close enough to be technically classified as a transit-oriented development, it is expected that many residents' trips would be made by transit. Assuming up to 15% of the total trips are made by transit, that translates to approximately 2-4 new transit riders during the peak hours. Given the number of trains during peak hours, it is expected that trains have sufficient capacity to accommodate any additional riders that result from the project.

The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities. The project's proximity to the Millbrae Station makes it consistent with the City of Burlingame's General Plan Goal M-6, which encourages development that is supportive of transit use.

Parking

According to the City of Burlingame Zoning Code for the North Burlingame (NBMU) Residential District (Section 25.40.050), the project is required to provide 148 vehicle parking spaces (see Table 12).

The project proposes to provide 150 spaces, including 28 tandem spaces for 56 vehicles. The tandem spaces would be assigned to the two-bedroom units, which leaves 94 non-tandem spaces for 76 units (35 studio units, 30 one-bedroom units, and the remaining 11 two-bedroom units that would not be assigned to a tandem space). Using the City's requirements, the project would need to supply 82 standard parking spaces to meet the needs of the remaining units (65 spaces for studio and one-bedroom units and 17 spaces for two-bedroom units). Thus, the project would exceed the City's requirement.

Table 12
Parking Requirement

Land Use	Size	Requirement	Spaces Needed
Studio	35 units	1 spaces per unit	35
1-Bedroom	30 units	1 spaces per unit	30
2-Bedroom	55 units	1.5 spaces per unit	83
		Total:	**148**

The Zoning Code requires residential developments in the NBMU District to provide 0.5 long-term bicycle parking spaces per unit and 0.05 short-term bicycle parking spaces per unit. Therefore, the project is required to provide 60 long-term bicycle parking spaces and 6 short-term bicycle spaces. As proposed, the project would provide 65 long-term bicycle parking spaces in a bicycle room in the underground parking garage, meeting the requirement for long-term bicycle parking. The site plan shows that the project would provide 15 short-term bicycle spaces at the entry plaza.

1868 Ogden Drive Residential Development

Technical Appendices

November 9, 2020

Appendix A

Volume Summary

Existing Volume Adjustment Summary

Study Inter. #	N/S Street	E/W Street	Jurisdiction	Count Date AM	Count Date PM	Count Source	Number of growth years with 1% per year AM	Number of growth years with 1% per year PM
1	Ogden Drive	Murchison Drive	Burlingame	N/A	N/A	N/A	0	0
2	Ogden Drive	Trousdale Drive	Burlingame	09/20/17	09/20/17	TDS	3	3
3	Magnolia Avenue	Murchison Drive	Burlingame	N/A	N/A	N/A	0	0
4	Magnolia Avenue	Trousdale Drive	Burlingame	02/27/20	02/27/20	Burlingame Road Diet (Trousdale)	0	0
5	El Camino Real	Millbrae Avenue	Millbrae	04/15/19	04/15/19	C/CAG	0	0
6	El Camino Real	Murchison Drive	Burlingame	04/05/16	04/05/16	Burlingame Road Diet	4	4
7	El Camino Real	Trousdale Drive	Burlingame	02/27/20	02/27/20	Burlingame Road Diet	0	0

Intersection Number: 1
Intersection Name: Ogden Drive and Murchison Drive
Peak Hour: AM
Count Date: N/A

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	8	339	16	64	21	19	81	376	3	*927*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	4	0	0	0	0	0	7	0	*11*
Gateway at Millbrae Station	0	0	0	0	7	0	0	0	0	0	11	0	*18*
Total Approved Trips	*0*	*0*	*0*	*0*	*11*	*0*	*0*	*0*	*0*	*0*	*18*	*0*	*29*
Background Conditions	0	0	0	8	350	16	64	21	19	81	394	3	*956*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*-9*	*17*	*0*	*1*	*-1*	*0*	*0*	*8*
Existing + Project Conditions	0	0	0	8	339	7	81	21	20	80	376	3	*935*
													0
Background + Project Conditions	0	0	0	8	350	7	81	21	20	80	394	3	*964*
													0
Cumulative No Project Conditions	0	0	0	10	405	19	76	25	23	97	449	4	*1108*
Cumulative + Project Conditions	0	0	0	10	405	10	93	25	24	96	449	4	*1116*
													0

Intersection Number: 2
Intersection Name: Ogden Drive and Trousdale Drive
Peak Hour: AM
Count Date: 09/20/17

Date of Analysis: 06/10/20

					Movements								
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	52	0	45	31	473	3	8	2	3	4	877	71	*1569*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	2	0	0	0	0	0	4	0	*6*
Serra Station Development	0	0	0	0	7	0	0	0	0	0	11	0	*18*
Gateway at Millbrae Station	0	0	0	0	12	0	0	0	0	0	18	0	*30*
Total Approved Trips	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*0*	*0*	*0*	*33*	*0*	*54*
Background Conditions	52	0	45	31	494	3	8	2	3	4	910	71	*1623*
Proposed Project Trips	*3*	*0*	*7*	*-4*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-2*	*4*
Existing + Project Conditions	55	0	52	27	473	3	8	2	3	4	877	69	*1573*
													0
Background + Project Conditions	55	0	52	27	494	3	8	2	3	4	910	69	*1627*
													0
Cumulative No Project Conditions	62	0	54	37	565	4	10	2	4	5	1047	85	*1875*
Cumulative + Project Conditions	65	0	61	33	565	4	10	2	4	5	1047	83	*1879*
													0

Intersection Number: 3
Intersection Name: Magnolia Avenue and Murchison Drive
Peak Hour: AM
Count Date: N/A

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	11	26	10	41	318	84	121	27	34	51	319	70	*1112*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	11	0	0	0	0	0	0	*11*
Gateway at Millbrae Station	0	0	0	0	7	0	0	0	0	0	11	0	*18*
Total Approved Trips	*0*	*0*	*0*	*0*	*7*	*11*	*0*	*0*	*0*	*0*	*11*	*0*	*29*
Background Conditions	11	26	10	41	325	95	121	27	34	51	330	70	*1141*
Proposed Project Trips	*-1*	*0*	*0*	*0*	*-8*	*0*	*0*	*0*	*0*	*0*	*15*	*1*	*7*
Existing + Project Conditions	10	26	10	41	310	84	121	27	34	51	334	71	*1119*
													0
Background + Project Conditions	10	26	10	41	317	95	121	27	34	51	345	71	*1148*
													0
Cumulative No Project Conditions	13	31	12	49	380	100	145	32	41	61	381	84	*1329*
Cumulative + Project Conditions	12	31	12	49	372	100	145	32	41	61	396	85	*1336*
													0

Intersection Number: 4
Intersection Name: Magnolia Avenue and Trousdale Drive
Peak Hour: AM
Count Date: 02/27/20

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	75	50	36	46	353	158	86	19	24	84	531	117	*1579*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	16	0	0	0	0	0	8	0	*24*
Serra Station Development	0	0	0	0	7	0	0	0	0	0	11	0	*18*
Gateway at Millbrae Station	0	0	0	0	12	0	0	0	0	0	18	0	*30*
Total Approved Trips	*0*	*0*	*0*	*0*	*35*	*0*	*0*	*0*	*0*	*0*	*37*	*0*	*72*
Background Conditions	75	50	36	46	388	158	86	19	24	84	568	117	*1651*
Proposed Project Trips	*0*	*0*	*0*	*0*	*-4*	*0*	*0*	*0*	*0*	*0*	*7*	*0*	*3*
Existing + Project Conditions	75	50	36	46	349	158	86	19	24	84	538	117	*1582*
													0
Background + Project Conditions	75	50	36	46	384	158	86	19	24	84	575	117	*1654*
													0
Cumulative No Project Conditions	90	60	43	55	422	189	103	23	29	100	634	140	*1888*
Cumulative + Project Conditions	90	60	43	55	418	189	103	23	29	100	641	140	*1891*
													0

Intersection Number: 5
Intersection Name: El Camino Real and Millbrae Avenue*
Peak Hour: AM
Count Date: 04/15/19

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	36	786	798	755	295	359	715	431	31	45	648	108	*5007*
Approved Project Trips													
1 Adrian Court Residential	0	0	3	7	11	1	1	0	0	0	4	0	*27*
1499 Old Bayshore Hwy Hotel	0	0	8	5	0	4	7	0	0	0	0	0	*24*
1600 Trousdale Dr Assisted Living Facility	0	8	0	0	0	0	0	4	0	0	0	0	*12*
Serra Station Development	4	12	37	80	0	38	37	19	0	0	0	7	*234*
Gateway at Millbrae Station	0	0	67	45	7	41	62	0	0	0	11	0	*233*
Total Approved Trips	*4*	*20*	*115*	*137*	*18*	*84*	*107*	*23*	*0*	*0*	*15*	*7*	530
Background Conditions	40	806	913	892	313	443	822	454	31	45	663	115	*5537*
Proposed Project Trips	*0*	*-3*	*0*	*0*	*0*	*-5*	*10*	*6*	*0*	*0*	*0*	*0*	*8*
Existing + Project Conditions	36	783	798	755	295	354	725	437	31	45	648	108	*5015*
													0
Background + Project Conditions	40	803	913	892	313	438	832	460	31	45	663	115	*5545*
													0
Cumulative No Project Conditions	43	921	996	945	336	504	897	548	38	47	749	125	*6149*
Cumulative + Project Conditions	43	918	996	945	336	499	907	554	38	47	749	125	*6157*
													0

Intersection Number: 6
Intersection Name: El Camino Real and Murchison Drive
Peak Hour: AM
Count Date: 04/05/16

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	330	878	196	107	71	11	26	793	42	47	125	278	*2904*
Approved Project Trips													
1 Adrian Court Residential	0	1	0	0	0	0	0	0	0	0	0	0	*1*
1499 Old Bayshore Hwy Hotel	0	5	0	0	0	0	0	8	0	0	0	0	*13*
1600 Trousdale Dr Assisted Living Facility	0	8	0	0	0	0	0	4	0	0	0	0	*12*
Serra Station Development	2	10	38	37	2	6	10	16	0	0	3	3	*127*
Gateway at Millbrae Station	7	30	5	7	0	0	0	44	0	0	0	11	*104*
Total Approved Trips	*9*	*54*	*43*	*44*	*2*	*6*	*10*	*72*	*0*	*0*	*3*	*14*	257
Background Conditions	339	932	239	151	73	17	36	865	42	47	128	292	*3161*
Proposed Project Trips	*-8*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*15*	*7*
Existing + Project Conditions	322	878	196	107	71	11	26	793	42	47	125	293	*2911*
													0
Background + Project Conditions	331	932	239	151	73	17	36	865	42	47	128	307	*3168*
													0
Cumulative No Project Conditions	394	1049	234	128	85	13	31	947	50	56	149	332	*3468*
Cumulative + Project Conditions	386	1049	234	128	85	13	31	947	50	56	149	347	*3475*
													0

Intersection Number: 7
Intersection Name: El Camino Real and Trousdale Drive
Peak Hour: AM
Count Date: 02/27/20

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	195	620	115	33	163	11	51	490	255	218	190	192	*2533*
Approved Project Trips													
1 Adrian Court Residential	0	1	0	0	0	0	0	0	0	0	0	0	*1*
1499 Old Bayshore Hwy Hotel	0	5	0	0	0	0	0	8	0	0	0	0	*13*
1600 Trousdale Dr Assisted Living Facility	8	0	0	0	0	0	0	0	8	4	0	4	*24*
Serra Station Development	3	12	0	0	3	8	13	20	0	0	6	6	*71*
Gateway at Millbrae Station	12	18	0	0	0	0	0	26	0	0	0	18	*74*
Total Approved Trips	*23*	*36*	*0*	*0*	*3*	*8*	*13*	*54*	*8*	*4*	*6*	*28*	183
Background Conditions	218	656	115	33	166	19	64	544	263	222	196	220	*2716*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-4*	*7*	*0*	*0*	*3*
Existing + Project Conditions	195	620	115	33	163	11	51	490	251	225	190	192	*2536*
													0
Background + Project Conditions	218	656	115	33	166	19	64	544	259	229	196	220	*2719*
													0
Cumulative No Project Conditions	323	889	124	27	196	11	49	1094	269	231	220	282	*3715*
Cumulative + Project Conditions	323	889	124	27	196	11	49	1094	265	238	220	282	*3718*
													0

Intersection Number: 1
Intersection Name: Ogden Drive and Murchison Drive
Peak Hour: PM
Count Date: N/A

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	19	462	23	32	17	19	59	223	6	*860*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	8	0	0	0	0	0	5	0	*13*
Gateway at Millbrae Station	0	0	0	0	11	0	0	0	0	0	9	0	*20*
Total Approved Trips	*0*	*0*	*0*	*0*	*19*	*0*	*0*	*0*	*0*	*0*	*14*	*0*	*33*
Background Conditions	0	0	0	19	481	23	32	17	19	59	237	6	*893*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*16*	*-2*	*0*	*0*	*1*	*0*	*0*	*15*
Existing + Project Conditions	0	0	0	19	462	39	30	17	19	60	223	6	*875*
													0
Background + Project Conditions	0	0	0	19	481	39	30	17	19	60	237	6	*908*
													0
Cumulative No Project Conditions	0	0	0	22	542	27	38	20	22	69	262	7	*1009*
Cumulative + Project Conditions	0	0	0	22	542	43	36	20	22	70	262	7	*1024*
													0

Intersection Number: 2
Intersection Name: Ogden Drive and Trousdale Drive
Peak Hour: PM
Count Date: 09/20/17

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	52	0	30	38	524	2	8	1	8	4	480	29	*1176*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	5	0	0	0	0	0	3	0	*8*
Serra Station Development	0	0	0	0	14	0	0	0	0	0	8	0	*22*
Gateway at Millbrae Station	0	0	0	0	18	0	0	0	0	0	15	0	*33*
Total Approved Trips	*0*	*0*	*0*	*0*	*37*	*0*	*0*	*0*	*0*	*0*	*26*	*0*	*63*
Background Conditions	52	0	30	38	561	2	8	1	8	4	506	29	*1239*
Proposed Project Trips	*0*	*0*	*-1*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*3*	*9*
Existing + Project Conditions	52	0	29	45	524	2	8	1	8	4	480	32	*1185*
													0
Background + Project Conditions	52	0	29	45	561	2	8	1	8	4	506	32	*1248*
													0
Cumulative No Project Conditions	61	0	35	45	615	2	9	1	9	5	563	34	*1379*
Cumulative + Project Conditions	61	0	34	52	615	2	9	1	9	5	563	37	*1388*
													0

Intersection Number: 3
Intersection Name: Magnolia Avenue and Murchison Drive
Peak Hour: PM
Count Date: N/A

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	79	143	90	15	363	18	121	28	62	11	202	42	*1174*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	13	0	0	0	0	0	0	*13*
Gateway at Millbrae Station	0	0	0	0	11	0	0	0	0	0	9	0	*20*
Total Approved Trips	*0*	*0*	*0*	*0*	*11*	*13*	*0*	*0*	*0*	*0*	*9*	*0*	*33*
Background Conditions	79	143	90	15	374	31	121	28	62	11	211	42	*1207*
Proposed Project Trips	*1*	*0*	*0*	*0*	*15*	*0*	*0*	*0*	*0*	*0*	*-2*	*0*	*14*
Existing + Project Conditions	80	143	90	15	378	18	121	28	62	11	200	42	*1188*
													0
Background + Project Conditions	80	143	90	15	389	31	121	28	62	11	209	42	*1221*
													0
Cumulative No Project Conditions	93	168	106	18	426	21	142	33	73	13	237	49	*1379*
Cumulative + Project Conditions	94	168	106	18	441	21	142	33	73	13	235	49	*1393*
													0

Intersection Number: 4
Intersection Name: Magnolia Avenue and Trousdale Drive
Peak Hour: PM
Count Date: 02/27/20

Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	113	22	37	67	524	80	183	43	90	26	487	101	*1773*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	12	0	0	0	0	0	20	0	*32*
Serra Station Development	0	0	0	0	14	0	0	0	0	0	8	0	*22*
Gateway at Millbrae Station	0	0	0	0	18	0	0	0	0	0	15	0	*33*
Total Approved Trips	*0*	*0*	*0*	*0*	*44*	*0*	*0*	*0*	*0*	*0*	*43*	*0*	*87*
Background Conditions	113	22	37	67	568	80	183	43	90	26	530	101	*1860*
Proposed Project Trips	*0*	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*-1*	*0*	*6*
Existing + Project Conditions	113	22	37	67	531	80	183	43	90	26	486	101	*1779*
													0
Background + Project Conditions	113	22	37	67	575	80	183	43	90	26	529	101	*1866*
													0
Cumulative No Project Conditions	133	26	43	79	615	94	215	50	106	30	571	118	*2080*
Cumulative + Project Conditions	133	26	43	79	622	94	215	50	106	30	570	118	*2086*
													0

Intersection Number: 5
Intersection Name: El Camino Real and Millbrae Avenue*
Peak Hour: PM
Count Date: 04/15/19
Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	58	774	642	1055	648	508	599	666	58	36	319	127	*5490*
Approved Project Trips													
1 Adrian Court Residential	0	0	7	5	7	1	1	0	0	0	11	0	*32*
1499 Old Bayshore Hwy Hotel	0	0	7	6	0	6	6	0	0	0	0	0	*25*
1600 Trousdale Dr Assisted Living Facility	0	6	0	0	0	0	0	10	0	0	0	0	*16*
Serra Station Development	8	23	72	60	0	28	72	14	0	0	0	5	*282*
Gateway at Millbrae Station	0	0	56	67	11	61	52	0	0	0	9	0	*256*
Total Approved Trips	*8*	*29*	*142*	*138*	*18*	*96*	*131*	*24*	*0*	*0*	*20*	*5*	*611*
Background Conditions	66	803	784	1193	666	604	730	690	58	36	339	132	*6101*
Proposed Project Trips	*0*	*5*	*0*	*0*	*0*	*9*	*-1*	*-1*	*0*	*0*	*0*	*0*	*12*
Existing + Project Conditions	58	779	642	1055	648	517	598	665	58	36	319	127	*5502*
													0
Background + Project Conditions	66	808	784	1193	666	613	729	689	58	36	339	132	*6113*
													0
Cumulative No Project Conditions	70	871	819	1245	702	641	762	741	66	40	355	137	*6449*
Cumulative + Project Conditions	70	876	819	1245	702	650	761	740	66	40	355	137	*6461*
													0

Intersection Number: 6
Intersection Name: El Camino Real and Murchison Drive
Peak Hour: PM
Count Date: 04/05/16
Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	224	1095	233	188	96	34	44	821	76	73	88	252	*3224*
Approved Project Trips													
1 Adrian Court Residential	0	1	0	0	0	0	0	0	0	0	0	0	*1*
1499 Old Bayshore Hwy Hotel	0	6	0	0	0	0	0	7	0	0	0	0	*13*
1600 Trousdale Dr Assisted Living Facility	0	6	0	0	0	0	0	10	0	0	0	0	*16*
Serra Station Development	4	19	28	72	4	12	7	12	0	0	2	2	*162*
Gateway at Millbrae Station	11	44	7	6	0	0	0	37	0	0	0	9	*114*
Total Approved Trips	*15*	*76*	*35*	*78*	*4*	*12*	*7*	*66*	*0*	*0*	*2*	*11*	*306*
Background Conditions	239	1171	268	266	100	46	51	887	76	73	90	263	*3530*
Proposed Project Trips	*15*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-2*	*13*
Existing + Project Conditions	239	1095	233	188	96	34	44	821	76	73	88	250	*3237*
													0
Background + Project Conditions	254	1171	268	266	100	46	51	887	76	73	90	261	*3543*
													0
Cumulative No Project Conditions	263	1284	273	220	113	40	52	963	89	86	103	296	*3782*
Cumulative + Project Conditions	278	1284	273	220	113	40	52	963	89	86	103	294	*3795*
													0

Intersection Number: 7
Intersection Name: El Camino Real and Trousdale Drive
Peak Hour: PM
Count Date: 02/27/20
Date of Analysis: 06/10/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	175	764	74	58	232	20	30	697	230	223	164	267	*2934*
Approved Project Trips													
1 Adrian Court Residential	0	1	0	0	0	0	0	0	0	0	0	0	*1*
1499 Old Bayshore Hwy Hotel	0	6	0	0	0	0	0	7	0	0	0	0	*13*
1600 Trousdale Dr Assisted Living Facility	6	0	0	0	0	0	0	0	6	10	0	10	*32*
Serra Station Development	7	24	0	0	7	16	10	15	0	0	4	4	*87*
Gateway at Millbrae Station	18	26	0	0	0	0	0	22	0	0	0	15	*81*
Total Approved Trips	*31*	*57*	*0*	*0*	*7*	*16*	*10*	*44*	*6*	*10*	*4*	*29*	*214*
Background Conditions	206	821	74	58	239	36	40	741	236	233	168	296	*3148*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*7*	*-1*	*0*	*0*	*6*
Existing + Project Conditions	175	764	74	58	232	20	30	697	237	222	164	267	*2940*
													0
Background + Project Conditions	206	821	74	58	239	36	40	741	243	232	168	296	*3154*
													0
Cumulative No Project Conditions	277	1247	113	115	229	22	24	986	267	239	184	250	*3953*
Cumulative + Project Conditions	277	1247	113	115	229	22	24	986	274	238	184	250	*3959*
													0

Appendix B

Level of Service Calculations

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	376	81	16	339	8	19	21	64	0	0	0
Future Vol, veh/h	3	376	81	16	339	8	19	21	64	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	376	81	16	339	8	19	21	64	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	14.3	13.3	9.6
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	18%	1%	5%	0%
Vol Thru, %	20%	82%	95%	0%
Vol Right, %	62%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	460	355	8
LT Vol	19	3	16	0
Through Vol	21	376	339	0
RT Vol	64	81	0	8
Lane Flow Rate	104	460	355	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.158	0.594	0.513	0.01
Departure Headway (Hd)	5.46	4.65	5.198	4.47
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	773	689	795
Service Time	3.546	2.704	2.958	2.23
HCM Lane V/C Ratio	0.16	0.595	0.515	0.01
HCM Control Delay	9.6	14.3	13.4	7.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	4	3	0

Intersection	
Intersection Delay, s/veh	18.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	877	4	3	473	31	3	2	8	45	0	52
Future Vol, veh/h	71	877	4	3	473	31	3	2	8	45	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	877	4	3	473	31	3	2	8	45	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	23	13.1	9.8	10.8
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	14%	0%	1%	0%	46%
Vol Thru, %	15%	86%	99%	99%	88%	0%
Vol Right, %	62%	0%	1%	0%	12%	54%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	510	443	240	268	97
LT Vol	3	71	0	3	0	45
Through Vol	2	439	439	237	237	0
RT Vol	8	0	4	0	31	52
Lane Flow Rate	13	510	442	240	268	97
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.024	0.792	0.678	0.403	0.444	0.172
Departure Headway (Hd)	6.616	5.594	5.518	6.058	5.97	6.401
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	541	647	655	594	605	562
Service Time	4.654	3.32	3.243	3.795	3.706	4.432
HCM Lane V/C Ratio	0.024	0.788	0.675	0.404	0.443	0.173
HCM Control Delay	9.8	26.3	19.1	12.8	13.4	10.8
HCM Lane LOS	A	D	C	B	B	B
HCM 95th-tile Q	0.1	7.8	5.3	1.9	2.3	0.6

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	70	319	51	84	318	41	34	27	121	10	26	11
Future Vol, veh/h	70	319	51	84	318	41	34	27	121	10	26	11
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	319	51	84	318	41	34	27	121	10	26	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.2	17.5	11.5	10.2
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	16%	19%	21%
Vol Thru, %	15%	72%	72%	55%
Vol Right, %	66%	12%	9%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	440	443	47
LT Vol	34	70	84	10
Through Vol	27	319	318	26
RT Vol	121	51	41	11
Lane Flow Rate	182	440	443	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.298	0.641	0.647	0.085
Departure Headway (Hd)	5.893	5.245	5.259	6.523
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	608	686	687	546
Service Time	3.956	3.292	3.306	4.607
HCM Lane V/C Ratio	0.299	0.641	0.645	0.086
HCM Control Delay	11.5	17.2	17.5	10.2
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.2	4.6	4.7	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	531	84	158	353	46	24	19	86	36	50	75
Future Volume (veh/h)	117	531	84	158	353	46	24	19	86	36	50	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	117	531	84	158	353	46	24	19	86	36	50	75
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1017	160	229	1046	135	275	153	240	245	174	346
Arrive On Green	0.07	0.33	0.33	0.07	0.33	0.33	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	3064	483	3442	3153	408	580	1006	1583	492	1149	1583
Grp Volume(v), veh/h	117	306	309	158	197	202	43	0	86	86	0	75
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1770	1791	1586	0	1583	1641	0	1583
Q Serve(g_s), s	2.0	4.2	4.2	1.3	2.5	2.6	0.0	0.0	1.5	0.1	0.0	1.2
Cycle Q Clear(g_c), s	2.0	4.2	4.2	1.3	2.5	2.6	0.6	0.0	1.5	1.3	0.0	1.2
Prop In Lane	1.00		0.27	1.00		0.23	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	118	587	590	229	587	594	428	0	240	419	0	346
V/C Ratio(X)	0.99	0.52	0.52	0.69	0.34	0.34	0.10	0.00	0.36	0.21	0.00	0.22
Avail Cap(c_a), veh/h	118	1533	1540	229	1533	1551	2018	0	1952	2113	0	2058
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	8.1	8.1	13.7	7.5	7.6	11.1	0.0	11.4	11.3	0.0	9.6
Incr Delay (d2), s/veh	79.4	0.7	0.7	8.4	0.3	0.3	0.1	0.0	0.9	0.2	0.0	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	3.5	2.2	2.2	0.9	1.3	1.3	0.3	0.0	0.7	0.6	0.0	0.5
LnGrp Delay(d),s/veh	93.4	8.8	8.8	22.1	7.9	7.9	11.2	0.0	12.3	11.6	0.0	9.9
LnGrp LOS	F	A	A	C	A	A	B		B	B		A
Approach Vol, veh/h		732			557			129			161	
Approach Delay, s/veh		22.3			11.9			11.9			10.8	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	14.5		9.1	6.5	14.5		9.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.3	6.2		3.3	4.0	4.6		3.5
Green Ext Time (p_c), s	0.0	3.7		0.7	0.0	2.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	648	45	359	295	755	31	431	715	798	786	36
Future Volume (veh/h)	108	648	45	359	295	755	31	431	715	798	786	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.91	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	108	648	45	359	295	671	31	431	671	798	786	36
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1018	71	714	1142	774	42	1214	590	677	2050	94
Arrive On Green	0.13	0.31	0.31	0.14	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3331	231	5003	3539	1435	1774	5085	1527	3442	4979	227
Grp Volume(v), veh/h	108	344	349	359	295	671	31	431	671	798	534	288
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1435	1774	1695	1527	1721	1695	1816
Q Serve(g_s), s	8.8	25.9	26.0	10.3	9.5	50.0	2.7	10.9	37.0	30.5	17.1	17.2
Cycle Q Clear(g_c), s	8.8	25.9	26.0	10.3	9.5	50.0	2.7	10.9	37.0	30.5	17.1	17.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	223	541	548	714	1142	774	42	1214	590	677	1396	748
V/C Ratio(X)	0.48	0.64	0.64	0.50	0.26	0.87	0.74	0.36	1.14	1.18	0.38	0.38
Avail Cap(c_a), veh/h	223	541	548	888	1142	774	80	1214	590	677	1396	748
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	0.87	0.87	0.87	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	46.4	46.4	61.4	38.8	33.5	75.2	49.1	48.2	62.2	31.8	31.9
Incr Delay (d2), s/veh	1.6	5.6	5.6	0.5	0.5	11.1	17.4	0.6	77.1	95.1	0.8	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	4.4	13.5	13.8	4.8	4.7	27.8	1.5	5.2	37.9	23.4	8.2	8.9
LnGrp Delay(d),s/veh	64.7	52.0	52.0	61.8	39.3	44.5	92.6	49.7	125.3	157.3	32.6	33.4
LnGrp LOS	E	D	D	E	D	D	F	D	F	F	C	C
Approach Vol, veh/h		801			1325			1133			1620	
Approach Delay, s/veh		53.7			48.1			95.7			94.2	
Approach LOS		D			D			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	41.5	26.6	51.9	8.2	68.3	24.0	54.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	7.0	60.5	19.5	50.0				
Max Q Clear Time (g_c+I1), s	32.5	39.0	12.3	28.0	4.7	19.2	10.8	52.0				
Green Ext Time (p_c), s	0.0	0.0	1.2	3.7	0.0	6.4	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			75.4									
HCM 2010 LOS			E									
Notes												

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	125	47	11	71	107	42	793	26	196	878	330
Future Volume (veh/h)	278	125	47	11	71	107	42	793	26	196	878	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	278	125	47	11	71	107	42	793	26	196	878	330
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	268	101	48	329	166	73	1374	428	250	1882	586
Arrive On Green	0.21	0.21	0.21	0.10	0.10	0.10	0.04	0.27	0.27	0.14	0.37	0.37
Sat Flow, veh/h	1774	1291	486	461	3148	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	278	0	172	44	38	107	42	793	26	196	878	330
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.6	0.0	5.5	1.4	1.3	4.2	1.5	8.7	0.8	6.9	8.5	10.8
Cycle Q Clear(g_c), s	9.6	0.0	5.5	1.4	1.3	4.2	1.5	8.7	0.8	6.9	8.5	10.8
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	0	368	192	185	166	73	1374	428	250	1882	586
V/C Ratio(X)	0.76	0.00	0.47	0.23	0.21	0.65	0.58	0.58	0.06	0.79	0.47	0.56
Avail Cap(c_a), veh/h	1080	0	1082	1148	1104	988	697	4349	1354	697	4349	1354
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	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	22.6	26.7	26.6	27.9	30.6	20.5	17.6	26.9	15.6	16.3
Incr Delay (d2), s/veh	3.2	0.0	0.9	0.6	0.5	4.2	7.1	0.4	0.1	5.4	0.2	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	5.0	0.0	2.8	0.8	0.7	2.0	0.9	4.1	0.4	3.8	4.0	4.8
LnGrp Delay(d),s/veh	27.4	0.0	23.5	27.3	27.1	32.1	37.7	20.9	17.6	32.3	15.7	17.1
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		450			189			861			1404	
Approach Delay, s/veh		25.9			30.0			21.6			18.4	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.6	22.0		17.9	7.2	28.5		11.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	8.9	10.7		11.6	3.5	12.8		6.2
Green Ext Time (p_c), s	0.5	6.8		1.9	0.1	9.3		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	190	218	11	163	33	255	490	51	115	620	195
Future Volume (veh/h)	192	190	218	11	163	33	255	490	51	115	620	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	192	190	218	11	163	33	255	490	51	115	620	195
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	416	437	372	24	365	77	355	1702	530	192	1234	679
Arrive On Green	0.23	0.23	0.23	0.10	0.13	0.10	0.20	0.33	0.33	0.11	0.24	0.22
Sat Flow, veh/h	1774	1863	1583	186	2830	595	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	192	190	218	109	0	98	255	490	51	115	620	195
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1853	0	1758	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	5.8	5.4	7.6	3.4	0.0	3.2	8.3	4.4	1.4	3.8	6.5	5.0
Cycle Q Clear(g_c), s	5.8	5.4	7.6	3.4	0.0	3.2	8.3	4.4	1.4	3.8	6.5	5.0
Prop In Lane	1.00		1.00	0.10		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	437	372	239	0	227	355	1702	530	192	1234	679
V/C Ratio(X)	0.46	0.43	0.59	0.46	0.00	0.43	0.72	0.29	0.10	0.60	0.50	0.29
Avail Cap(c_a), veh/h	1228	1290	1096	1194	0	1132	1228	4503	1402	657	2866	1187
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	1.00	1.00
Uniform Delay (d), s/veh	20.4	20.3	21.1	25.1	0.0	25.2	23.2	15.2	14.2	26.4	20.3	11.5
Incr Delay (d2), s/veh	0.8	0.7	1.5	1.4	0.0	1.3	2.7	0.1	0.1	3.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.8	3.5	1.8	0.0	1.6	4.3	2.1	0.6	2.0	3.1	3.0
LnGrp Delay(d),s/veh	21.2	20.9	22.6	26.5	0.0	26.5	25.9	15.3	14.3	29.4	20.6	11.8
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		600			207			796			930	
Approach Delay, s/veh		21.6			26.5			18.6			19.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.7	23.8		17.6	15.4	18.1		11.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	53.5		41.5	41.5	33.5		38.5
Max Q Clear Time (g_c+I1), s	5.8	6.4		9.6	10.3	8.5		5.4
Green Ext Time (p_c), s	0.2	3.8		3.5	0.7	5.0		1.3

Intersection Summary		
HCM 2010 Ctrl Delay		20.4
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	223	59	23	462	19	19	17	32	0	0	0
Future Vol, veh/h	6	223	59	23	462	19	19	17	32	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	223	59	23	462	19	19	17	32	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.5	16.7	9.2
HCM LOS	B	C	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	28%	2%	5%	0%
Vol Thru, %	25%	77%	95%	0%
Vol Right, %	47%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	288	485	19
LT Vol	19	6	23	0
Through Vol	17	223	462	0
RT Vol	32	59	0	19
Lane Flow Rate	68	288	485	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.104	0.373	0.668	0.022
Departure Headway (Hd)	5.507	4.668	4.959	4.231
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	769	728	844
Service Time	3.567	2.706	2.693	1.966
HCM Lane V/C Ratio	0.105	0.375	0.666	0.023
HCM Control Delay	9.2	10.5	17.1	7.1
HCM Lane LOS	A	B	C	A
HCM 95th-tile Q	0.3	1.7	5.1	0.1

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	480	4	2	524	38	8	1	8	30	0	52
Future Vol, veh/h	29	480	4	2	524	38	8	1	8	30	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	480	4	2	524	38	8	1	8	30	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.6	11.8	9.4	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	11%	0%	1%	0%	37%
Vol Thru, %	6%	89%	98%	99%	87%	0%
Vol Right, %	47%	0%	2%	0%	13%	63%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	269	244	264	300	82
LT Vol	8	29	0	2	0	30
Through Vol	1	240	240	262	262	0
RT Vol	8	0	4	0	38	52
Lane Flow Rate	17	269	244	264	300	82
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.029	0.405	0.363	0.391	0.436	0.131
Departure Headway (Hd)	6.172	5.423	5.357	5.328	5.235	5.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	584	659	666	671	681	615
Service Time	4.172	3.204	3.138	3.107	3.013	3.867
HCM Lane V/C Ratio	0.029	0.408	0.366	0.393	0.441	0.133
HCM Control Delay	9.4	11.9	11.2	11.5	12.1	9.7
HCM Lane LOS	A	B	B	B	B	A
HCM 95th-tile Q	0.1	2	1.7	1.9	2.2	0.4

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	42	202	11	18	363	15	62	28	121	90	143	79
Future Vol, veh/h	42	202	11	18	363	15	62	28	121	90	143	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	202	11	18	363	15	62	28	121	90	143	79
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	21.8	13.6	17.3
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	16%	5%	29%
Vol Thru, %	13%	79%	92%	46%
Vol Right, %	57%	4%	4%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	255	396	312
LT Vol	62	42	18	90
Through Vol	28	202	363	143
RT Vol	121	11	15	79
Lane Flow Rate	211	255	396	312
Geometry Grp	1	1	1	1
Degree of Util (X)	0.381	0.464	0.684	0.557
Departure Headway (Hd)	6.503	6.546	6.217	6.423
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	551	548	578	558
Service Time	4.585	4.623	4.283	4.493
HCM Lane V/C Ratio	0.383	0.465	0.685	0.559
HCM Control Delay	13.6	15.2	21.8	17.3
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	1.8	2.4	5.3	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	487	26	80	524	67	90	43	183	37	22	113
Future Volume (veh/h)	101	487	26	80	524	67	90	43	183	37	22	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	101	487	26	80	524	67	90	43	183	37	22	113
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	783	42	111	724	92	119	39	826	112	46	826
Arrive On Green	0.03	0.23	0.23	0.03	0.23	0.23	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3418	182	3442	3159	403	43	75	1583	34	89	1583
Grp Volume(v), veh/h	101	252	261	80	293	298	133	0	183	59	0	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1721	1770	1792	118	0	1583	122	0	1583
Q Serve(g_s), s	2.0	7.9	8.0	1.4	9.5	9.6	1.5	0.0	3.9	1.3	0.0	2.3
Cycle Q Clear(g_c), s	2.0	7.9	8.0	1.4	9.5	9.6	32.4	0.0	3.9	32.4	0.0	2.3
Prop In Lane	1.00		0.10	1.00		0.22	0.68		1.00	0.63		1.00
Lane Grp Cap(c), veh/h	57	405	419	111	405	410	159	0	826	158	0	826
V/C Ratio(X)	1.77	0.62	0.62	0.72	0.72	0.73	0.84	0.00	0.22	0.37	0.00	0.14
Avail Cap(c_a), veh/h	57	741	766	111	741	750	263	0	943	258	0	943
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	21.5	21.5	29.8	22.1	22.1	24.0	0.0	8.0	14.9	0.0	7.7
Incr Delay (d2), s/veh	407.3	1.6	1.5	20.5	2.4	2.5	11.5	0.0	0.1	1.5	0.0	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	7.4	4.0	4.2	1.0	4.9	5.0	2.8	0.0	1.7	0.6	0.0	1.0
LnGrp Delay(d),s/veh	437.4	23.1	23.1	50.2	24.6	24.6	35.5	0.0	8.2	16.3	0.0	7.7
LnGrp LOS	F	C	C	D	C	C	D		A	B		A
Approach Vol, veh/h		614			671			316			172	
Approach Delay, s/veh		91.2			27.6			19.7			10.7	
Approach LOS		F			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	19.0		38.1	6.5	19.0		38.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.4	10.0		34.4	4.0	11.6		34.4
Green Ext Time (p_c), s	0.0	2.8		0.2	0.0	3.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	46.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	319	36	508	648	1055	58	666	599	642	774	58
Future Volume (veh/h)	127	319	36	508	648	1055	58	666	599	642	774	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.97	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	127	319	36	508	648	971	58	666	555	642	774	58
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	858	95	698	1062	755	74	1355	629	712	2080	155
Arrive On Green	0.11	0.27	0.27	0.14	0.30	0.30	0.04	0.27	0.27	0.21	0.43	0.43
Sat Flow, veh/h	1774	3166	352	5003	3539	1423	1774	5085	1531	3442	4819	359
Grp Volume(v), veh/h	127	176	179	508	648	971	58	666	555	642	543	289
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1423	1774	1695	1531	1721	1695	1788
Q Serve(g_s), s	10.6	12.5	12.9	15.1	24.3	46.5	5.0	17.1	41.3	28.2	16.8	17.0
Cycle Q Clear(g_c), s	10.6	12.5	12.9	15.1	24.3	46.5	5.0	17.1	41.3	28.2	16.8	17.0
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	196	480	474	698	1062	755	74	1355	629	712	1463	772
V/C Ratio(X)	0.65	0.37	0.38	0.73	0.61	1.29	0.78	0.49	0.88	0.90	0.37	0.37
Avail Cap(c_a), veh/h	196	480	474	698	1062	755	121	1355	629	899	1463	772
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	0.62	0.62	0.62	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.1	45.7	45.9	63.9	46.5	39.2	73.6	48.0	42.9	59.9	29.8	29.9
Incr Delay (d2), s/veh	7.3	2.2	2.3	2.4	1.6	135.1	12.6	1.0	13.0	10.3	0.7	1.4
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	5.6	6.4	6.5	7.1	12.1	60.5	2.7	8.1	24.3	14.4	8.0	8.6
LnGrp Delay(d),s/veh	73.3	47.9	48.2	66.2	48.1	174.3	86.2	49.0	55.8	70.3	30.5	31.2
LnGrp LOS	E	D	D	E	D	F	F	D	E	E	C	C
Approach Vol, veh/h		482			2127			1279			1474	
Approach Delay, s/veh		54.7			110.1			53.6			48.0	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	45.8	26.1	46.5	11.0	71.4	21.6	51.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	40.5	37.0	17.5	42.0	10.6	66.9	15.7	43.8
Max Q Clear Time (g_c+I1), s	30.2	43.3	17.1	14.9	7.0	19.0	12.6	48.5
Green Ext Time (p_c), s	1.9	0.0	0.1	2.2	0.0	6.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.6
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	88	73	34	96	188	76	821	44	233	1095	224
Future Volume (veh/h)	252	88	73	34	96	188	76	821	44	233	1095	224
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	252	88	73	34	96	188	76	821	44	233	1095	224
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	174	145	138	417	245	99	1314	409	286	1850	576
Arrive On Green	0.18	0.18	0.18	0.15	0.15	0.15	0.06	0.26	0.26	0.16	0.36	0.36
Sat Flow, veh/h	1774	943	782	892	2696	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	252	0	161	69	61	188	76	821	44	233	1095	224
Grp Sat Flow(s),veh/h/ln	1774	0	1725	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.1	0.0	6.3	2.5	2.2	8.5	3.2	10.7	1.6	9.5	13.1	7.8
Cycle Q Clear(g_c), s	10.1	0.0	6.3	2.5	2.2	8.5	3.2	10.7	1.6	9.5	13.1	7.8
Prop In Lane	1.00		0.45	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	0	319	282	274	245	99	1314	409	286	1850	576
V/C Ratio(X)	0.77	0.00	0.50	0.25	0.22	0.77	0.77	0.62	0.11	0.81	0.59	0.39
Avail Cap(c_a), veh/h	937	0	911	571	556	497	368	2821	878	889	4317	1344
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	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	27.4	27.8	27.7	30.3	34.8	24.5	21.2	30.3	19.3	17.6
Incr Delay (d2), s/veh	3.8	0.0	1.2	0.5	0.4	5.0	11.7	0.5	0.1	5.6	0.3	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	5.2	0.0	3.1	1.3	1.1	4.1	1.9	5.0	0.7	5.1	6.1	3.5
LnGrp Delay(d),s/veh	32.8	0.0	28.6	28.2	28.1	35.3	46.5	25.0	21.3	35.9	19.6	18.1
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		413			318			941			1552	
Approach Delay, s/veh		31.2			32.4			26.6			21.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.6	23.8		18.3	8.7	31.7		16.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	11.5	12.7		12.1	5.2	15.1		10.5
Green Ext Time (p_c), s	0.7	6.7		1.7	0.1	11.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	164	223	20	232	58	230	697	30	74	764	175
Future Volume (veh/h)	267	164	223	20	232	58	230	697	30	74	764	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	218	233	223	20	232	58	230	697	16	74	764	175
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	428	364	36	424	111	316	1882	586	132	1353	785
Arrive On Green	0.23	0.23	0.23	0.14	0.16	0.14	0.18	0.37	0.37	0.07	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	225	2671	696	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	218	233	223	165	0	145	230	697	16	74	764	175
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1740	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	7.8	7.9	9.1	5.9	0.0	5.5	8.8	7.2	0.5	2.9	9.3	4.5
Cycle Q Clear(g_c), s	7.8	7.9	9.1	5.9	0.0	5.5	8.8	7.2	0.5	2.9	9.3	4.5
Prop In Lane	1.00		1.00	0.12		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	428	364	294	0	276	316	1882	586	132	1353	785
V/C Ratio(X)	0.53	0.54	0.61	0.56	0.00	0.52	0.73	0.37	0.03	0.56	0.56	0.22
Avail Cap(c_a), veh/h	1061	1114	947	1030	0	968	938	4386	1366	395	2830	1245
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	1.00	1.00
Uniform Delay (d), s/veh	24.3	24.4	24.8	28.0	0.0	28.0	27.9	16.5	14.4	32.1	22.8	10.3
Incr Delay (d2), s/veh	1.1	1.1	1.7	1.7	0.0	1.5	3.2	0.1	0.0	3.7	0.4	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	3.9	4.2	4.1	3.2	0.0	2.8	4.6	3.4	0.2	1.6	4.4	2.9
LnGrp Delay(d),s/veh	25.4	25.4	26.5	29.7	0.0	29.6	31.1	16.7	14.4	35.8	23.2	10.4
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		674			310			943			1013	
Approach Delay, s/veh		25.8			29.6			20.1			21.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	29.6		19.5	15.8	22.1		14.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	60.5		41.5	36.5	38.5		38.5
Max Q Clear Time (g_c+I1), s	4.9	9.2		11.1	10.8	11.3		7.9
Green Ext Time (p_c), s	0.1	5.5		3.9	0.6	6.3		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	376	80	7	339	8	20	21	81	0	0	0
Future Vol, veh/h	3	376	80	7	339	8	20	21	81	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	376	80	7	339	8	20	21	81	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	14.6	13.2	9.7
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	16%	1%	2%	0%
Vol Thru, %	17%	82%	98%	0%
Vol Right, %	66%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	459	346	8
LT Vol	20	3	7	0
Through Vol	21	376	339	0
RT Vol	81	80	0	8
Lane Flow Rate	122	459	346	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.184	0.598	0.504	0.01
Departure Headway (Hd)	5.415	4.694	5.242	4.526
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	655	762	682	784
Service Time	3.506	2.755	3.011	2.295
HCM Lane V/C Ratio	0.186	0.602	0.507	0.01
HCM Control Delay	9.7	14.6	13.3	7.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.7	4	2.9	0

Intersection	
Intersection Delay, s/veh	19.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	877	4	3	473	27	3	2	8	52	0	55
Future Vol, veh/h	69	877	4	3	473	27	3	2	8	52	0	55
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	877	4	3	473	27	3	2	8	52	0	55
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	23.3	13.3	9.9	11
HCM LOS	C	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	14%	0%	1%	0%	49%
Vol Thru, %	15%	86%	99%	99%	90%	0%
Vol Right, %	62%	0%	1%	0%	10%	51%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	508	443	240	264	107
LT Vol	3	69	0	3	0	52
Through Vol	2	439	439	237	237	0
RT Vol	8	0	4	0	27	55
Lane Flow Rate	13	508	442	240	264	107
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.024	0.794	0.683	0.406	0.441	0.191
Departure Headway (Hd)	6.655	5.633	5.558	6.102	6.023	6.42
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	645	650	589	598	560
Service Time	4.698	3.362	3.287	3.842	3.763	4.452
HCM Lane V/C Ratio	0.024	0.788	0.68	0.407	0.441	0.191
HCM Control Delay	9.9	26.6	19.5	13	13.5	11
HCM Lane LOS	A	D	C	B	B	B
HCM 95th-tile Q	0.1	7.8	5.3	2	2.2	0.7

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	334	51	84	310	41	34	27	121	10	26	10
Future Vol, veh/h	71	334	51	84	310	41	34	27	121	10	26	10
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	334	51	84	310	41	34	27	121	10	26	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.1	17.2	11.5	10.3
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	16%	19%	22%
Vol Thru, %	15%	73%	71%	57%
Vol Right, %	66%	11%	9%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	456	435	46
LT Vol	34	71	84	10
Through Vol	27	334	310	26
RT Vol	121	51	41	10
Lane Flow Rate	182	456	435	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.299	0.663	0.638	0.084
Departure Headway (Hd)	5.91	5.237	5.28	6.558
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	606	689	683	542
Service Time	3.975	3.285	3.328	4.644
HCM Lane V/C Ratio	0.3	0.662	0.637	0.085
HCM Control Delay	11.5	18.1	17.2	10.3
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.3	5	4.6	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	538	84	158	349	46	24	19	86	36	50	75
Future Volume (veh/h)	117	538	84	158	349	46	24	19	86	36	50	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	117	538	84	158	349	46	24	19	86	36	50	75
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1025	160	229	1051	138	274	152	240	244	174	240
Arrive On Green	0.07	0.33	0.33	0.07	0.33	0.33	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	3070	478	3442	3148	412	580	1006	1583	492	1149	1583
Grp Volume(v), veh/h	117	309	313	158	195	200	43	0	86	86	0	75
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1770	1790	1586	0	1583	1641	0	1583
Q Serve(g_s), s	2.0	4.2	4.3	1.4	2.5	2.5	0.0	0.0	1.5	0.1	0.0	1.3
Cycle Q Clear(g_c), s	2.0	4.2	4.3	1.4	2.5	2.5	0.6	0.0	1.5	1.3	0.0	1.3
Prop In Lane	1.00		0.27	1.00		0.23	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	118	591	594	229	591	598	426	0	240	418	0	240
V/C Ratio(X)	0.99	0.52	0.53	0.69	0.33	0.33	0.10	0.00	0.36	0.21	0.00	0.31
Avail Cap(c_a), veh/h	118	1528	1535	229	1528	1545	2011	0	1945	2106	0	1945
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	8.1	8.1	13.8	7.5	7.5	11.1	0.0	11.5	11.4	0.0	11.4
Incr Delay (d2), s/veh	80.7	0.7	0.7	8.6	0.3	0.3	0.1	0.0	0.9	0.2	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.2	2.2	0.9	1.2	1.3	0.3	0.0	0.7	0.6	0.0	0.6
LnGrp Delay(d),s/veh	94.7	8.8	8.8	22.3	7.8	7.8	11.2	0.0	12.4	11.6	0.0	12.1
LnGrp LOS	F	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h		739			553			129			161	
Approach Delay, s/veh		22.4			12.0			12.0			11.8	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	14.6		9.1	6.5	14.6		9.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.4	6.3		3.3	4.0	4.5		3.5
Green Ext Time (p_c), s	0.0	3.8		0.7	0.0	2.3		0.5

Intersection Summary		
HCM 2010 Ctrl Delay		16.8
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	648	45	354	295	755	31	437	725	798	783	36
Future Volume (veh/h)	108	648	45	354	295	755	31	437	725	798	783	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.91	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	108	648	45	354	295	671	31	437	681	798	783	36
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1022	71	709	1142	774	42	1214	589	677	2049	94
Arrive On Green	0.13	0.31	0.31	0.14	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3331	231	5003	3539	1435	1774	5085	1527	3442	4978	228
Grp Volume(v), veh/h	108	344	349	354	295	671	31	437	681	798	532	287
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1435	1774	1695	1527	1721	1695	1815
Q Serve(g_s), s	8.8	25.9	26.0	10.1	9.5	50.0	2.7	11.1	37.0	30.5	17.0	17.1
Cycle Q Clear(g_c), s	8.8	25.9	26.0	10.1	9.5	50.0	2.7	11.1	37.0	30.5	17.0	17.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	223	543	550	709	1142	774	42	1214	589	677	1396	747
V/C Ratio(X)	0.48	0.63	0.64	0.50	0.26	0.87	0.74	0.36	1.16	1.18	0.38	0.38
Avail Cap(c_a), veh/h	223	543	550	888	1142	774	80	1214	589	677	1396	747
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	0.87	0.87	0.87	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	46.2	46.3	61.4	38.8	33.5	75.2	49.1	48.3	62.2	31.8	31.8
Incr Delay (d2), s/veh	1.6	5.5	5.5	0.5	0.5	11.1	17.3	0.6	84.9	95.1	0.8	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	4.4	13.5	13.7	4.7	4.7	27.8	1.5	5.3	39.1	23.4	8.1	8.9
LnGrp Delay(d),s/veh	64.7	51.8	51.8	61.9	39.3	44.5	92.4	49.8	133.2	157.3	32.6	33.3
LnGrp LOS	E	D	D	E	D	D	F	D	F	F	C	C
Approach Vol, veh/h		801			1320			1149			1617	
Approach Delay, s/veh		53.5			48.0			100.3			94.3	
Approach LOS		D			D			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	41.5	26.5	52.0	8.2	68.3	24.0	54.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	7.0	60.5	19.5	50.0				
Max Q Clear Time (g_c+I1), s	32.5	39.0	12.1	28.0	4.7	19.1	10.8	52.0				
Green Ext Time (p_c), s	0.0	0.0	1.2	3.7	0.0	6.4	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			76.5									
HCM 2010 LOS			E									
Notes												

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	125	47	11	71	107	42	793	26	196	878	322
Future Volume (veh/h)	293	125	47	11	71	107	42	793	26	196	878	322
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	293	125	47	11	71	107	42	793	26	196	878	322
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	277	104	48	328	165	72	1364	425	249	1871	582
Arrive On Green	0.21	0.21	0.21	0.10	0.10	0.10	0.04	0.27	0.27	0.14	0.37	0.37
Sat Flow, veh/h	1774	1291	486	461	3148	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	293	0	172	44	38	107	42	793	26	196	878	322
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.3	0.0	5.6	1.4	1.3	4.3	1.5	8.9	0.8	7.1	8.7	10.7
Cycle Q Clear(g_c), s	10.3	0.0	5.6	1.4	1.3	4.3	1.5	8.9	0.8	7.1	8.7	10.7
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	0	382	191	184	165	72	1364	425	249	1871	582
V/C Ratio(X)	0.77	0.00	0.45	0.23	0.21	0.65	0.58	0.58	0.06	0.79	0.47	0.55
Avail Cap(c_a), veh/h	1061	0	1063	1128	1085	971	685	4274	1331	685	4274	1331
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	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	22.5	27.2	27.1	28.4	31.1	20.9	18.0	27.4	15.9	16.6
Incr Delay (d2), s/veh	3.3	0.0	0.8	0.6	0.6	4.3	7.2	0.4	0.1	5.5	0.2	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	5.3	0.0	2.8	0.8	0.7	2.1	0.9	4.2	0.4	3.8	4.1	4.8
LnGrp Delay(d),s/veh	27.7	0.0	23.4	27.8	27.6	32.7	38.4	21.3	18.0	32.9	16.1	17.4
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		465			189			861			1396	
Approach Delay, s/veh		26.1			30.5			22.1			18.8	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.8	22.2		18.7	7.2	28.8		11.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5				
Max Q Clear Time (g_c+I1), s	9.1	10.9		12.3	3.5	12.7		6.3				
Green Ext Time (p_c), s	0.5	6.8		1.9	0.1	9.3		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	190	225	11	163	33	251	490	51	115	620	195
Future Volume (veh/h)	192	190	225	11	163	33	251	490	51	115	620	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	192	190	225	11	163	33	251	490	51	115	620	195
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	445	378	24	364	77	351	1686	525	192	1231	686
Arrive On Green	0.24	0.24	0.24	0.10	0.13	0.10	0.20	0.33	0.33	0.11	0.24	0.22
Sat Flow, veh/h	1774	1863	1583	186	2830	595	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	192	190	225	109	0	98	251	490	51	115	620	195
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1853	0	1758	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	5.8	5.4	7.9	3.4	0.0	3.2	8.2	4.4	1.4	3.9	6.6	5.0
Cycle Q Clear(g_c), s	5.8	5.4	7.9	3.4	0.0	3.2	8.2	4.4	1.4	3.9	6.6	5.0
Prop In Lane	1.00		1.00	0.10		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	445	378	239	0	226	351	1686	525	192	1231	686
V/C Ratio(X)	0.45	0.43	0.59	0.46	0.00	0.43	0.72	0.29	0.10	0.60	0.50	0.28
Avail Cap(c_a), veh/h	1223	1284	1091	1188	0	1127	1223	4483	1396	654	2853	1191
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	1.00	1.00
Uniform Delay (d), s/veh	20.3	20.1	21.1	25.2	0.0	25.3	23.4	15.4	14.4	26.5	20.4	11.4
Incr Delay (d2), s/veh	0.8	0.6	1.5	1.4	0.0	1.3	2.7	0.1	0.1	3.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.8	3.6	1.8	0.0	1.6	4.3	2.1	0.6	2.0	3.1	3.0
LnGrp Delay(d),s/veh	21.0	20.8	22.5	26.6	0.0	26.6	26.1	15.5	14.5	29.5	20.7	11.7
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		607			207			792			930	
Approach Delay, s/veh		21.5			26.6			18.8			19.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	23.7		17.9	15.3	18.1		11.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	53.5		41.5	41.5	33.5		38.5
Max Q Clear Time (g_c+I1), s	5.9	6.4		9.9	10.2	8.6		5.4
Green Ext Time (p_c), s	0.2	3.8		3.5	0.7	5.0		1.3

Intersection Summary		
HCM 2010 Ctrl Delay		20.5
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	223	60	39	462	19	19	17	30	0	0	0
Future Vol, veh/h	6	223	60	39	462	19	19	17	30	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	223	60	39	462	19	19	17	30	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.5	17.8	9.3
HCM LOS	B	C	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	29%	2%	8%	0%
Vol Thru, %	26%	77%	92%	0%
Vol Right, %	45%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	289	501	19
LT Vol	19	6	39	0
Through Vol	17	223	462	0
RT Vol	30	60	0	19
Lane Flow Rate	66	289	501	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.102	0.376	0.692	0.022
Departure Headway (Hd)	5.558	4.681	4.97	4.227
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	766	726	845
Service Time	3.623	2.72	2.706	1.963
HCM Lane V/C Ratio	0.103	0.377	0.69	0.022
HCM Control Delay	9.3	10.5	18.2	7.1
HCM Lane LOS	A	B	C	A
HCM 95th-tile Q	0.3	1.8	5.6	0.1

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	480	4	2	524	45	8	1	8	29	0	52
Future Vol, veh/h	32	480	4	2	524	45	8	1	8	29	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	480	4	2	524	45	8	1	8	29	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.6	11.9	9.4	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	12%	0%	1%	0%	36%
Vol Thru, %	6%	88%	98%	99%	85%	0%
Vol Right, %	47%	0%	2%	0%	15%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	272	244	264	307	81
LT Vol	8	32	0	2	0	29
Through Vol	1	240	240	262	262	0
RT Vol	8	0	4	0	45	52
Lane Flow Rate	17	272	244	264	307	81
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.029	0.41	0.363	0.391	0.445	0.13
Departure Headway (Hd)	6.185	5.432	5.361	5.33	5.223	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	658	666	671	685	614
Service Time	4.185	3.214	3.143	3.108	3.001	3.874
HCM Lane V/C Ratio	0.029	0.413	0.366	0.393	0.448	0.132
HCM Control Delay	9.4	12	11.2	11.5	12.2	9.7
HCM Lane LOS	A	B	B	B	B	A
HCM 95th-tile Q	0.1	2	1.7	1.9	2.3	0.4

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	200	11	18	378	15	62	28	121	90	143	80
Future Vol, veh/h	42	200	11	18	378	15	62	28	121	90	143	80
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	200	11	18	378	15	62	28	121	90	143	80
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.3	23.4	13.8	17.7
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	17%	4%	29%
Vol Thru, %	13%	79%	92%	46%
Vol Right, %	57%	4%	4%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	253	411	313
LT Vol	62	42	18	90
Through Vol	28	200	378	143
RT Vol	121	11	15	80
Lane Flow Rate	211	253	411	313
Geometry Grp	1	1	1	1
Degree of Util (X)	0.385	0.464	0.712	0.563
Departure Headway (Hd)	6.57	6.605	6.236	6.479
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	544	541	575	554
Service Time	4.655	4.686	4.304	4.554
HCM Lane V/C Ratio	0.388	0.468	0.715	0.565
HCM Control Delay	13.8	15.3	23.4	17.7
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	1.8	2.4	5.8	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	486	26	80	531	67	90	43	183	37	22	113
Future Volume (veh/h)	101	486	26	80	531	67	90	43	183	37	22	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	101	486	26	80	531	67	90	43	183	37	22	113
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	789	42	110	731	92	119	39	825	111	46	825
Arrive On Green	0.03	0.23	0.23	0.03	0.23	0.23	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3418	182	3442	3164	398	42	75	1583	34	88	1583
Grp Volume(v), veh/h	101	251	261	80	296	302	133	0	183	59	0	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1721	1770	1793	117	0	1583	122	0	1583
Q Serve(g_s), s	2.0	7.9	8.0	1.4	9.7	9.7	1.4	0.0	3.9	1.3	0.0	2.3
Cycle Q Clear(g_c), s	2.0	7.9	8.0	1.4	9.7	9.7	32.5	0.0	3.9	32.5	0.0	2.3
Prop In Lane	1.00		0.10	1.00		0.22	0.68		1.00	0.63		1.00
Lane Grp Cap(c), veh/h	57	409	423	110	409	414	158	0	825	157	0	825
V/C Ratio(X)	1.78	0.61	0.62	0.73	0.73	0.73	0.84	0.00	0.22	0.38	0.00	0.14
Avail Cap(c_a), veh/h	57	737	763	110	737	747	258	0	939	254	0	939
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	21.5	21.5	29.9	22.2	22.2	24.2	0.0	8.1	15.0	0.0	7.7
Incr Delay (d2), s/veh	411.1	1.5	1.5	21.0	2.5	2.5	12.5	0.0	0.1	1.5	0.0	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	7.5	4.0	4.2	1.0	5.0	5.1	2.8	0.0	1.7	0.6	0.0	1.0
LnGrp Delay(d),s/veh	441.3	23.0	23.0	50.9	24.6	24.7	36.7	0.0	8.2	16.4	0.0	7.8
LnGrp LOS	F	C	C	D	C	C	D		A	B		A
Approach Vol, veh/h		613			678			316			172	
Approach Delay, s/veh		91.9			27.8			20.2			10.8	
Approach LOS		F			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	19.1		38.2	6.5	19.1		38.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.4	10.0		34.5	4.0	11.7		34.5
Green Ext Time (p_c), s	0.0	2.8		0.1	0.0	3.2		0.3

Intersection Summary			
HCM 2010 Ctrl Delay			46.9
HCM 2010 LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	319	36	517	648	1055	58	665	598	642	779	58
Future Volume (veh/h)	127	319	36	517	648	1055	58	665	598	642	779	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.97	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	127	319	36	517	648	971	58	665	554	642	779	58
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	858	95	698	1067	757	74	1355	629	712	2081	154
Arrive On Green	0.11	0.27	0.27	0.14	0.30	0.30	0.04	0.27	0.27	0.21	0.43	0.43
Sat Flow, veh/h	1774	3166	352	5003	3539	1424	1774	5085	1531	3442	4822	357
Grp Volume(v), veh/h	127	176	179	517	648	971	58	665	554	642	547	290
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1424	1774	1695	1531	1721	1695	1789
Q Serve(g_s), s	10.6	12.5	12.9	15.4	24.3	46.7	5.0	17.1	41.3	28.2	16.9	17.1
Cycle Q Clear(g_c), s	10.6	12.5	12.9	15.4	24.3	46.7	5.0	17.1	41.3	28.2	16.9	17.1
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	193	480	474	698	1067	757	74	1355	629	712	1463	772
V/C Ratio(X)	0.66	0.37	0.38	0.74	0.61	1.28	0.78	0.49	0.88	0.90	0.37	0.38
Avail Cap(c_a), veh/h	193	480	474	698	1067	757	121	1355	629	899	1463	772
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	0.62	0.62	0.62	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	45.7	45.9	64.0	46.3	39.1	73.6	48.0	42.8	59.9	29.8	29.9
Incr Delay (d2), s/veh	7.8	2.2	2.3	2.6	1.6	133.5	12.6	1.0	12.8	10.3	0.7	1.4
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	5.6	6.4	6.5	7.3	12.1	60.3	2.7	8.1	24.3	14.4	8.0	8.7
LnGrp Delay(d),s/veh	74.1	47.9	48.2	66.6	47.9	172.6	86.2	48.9	55.7	70.3	30.6	31.3
LnGrp LOS	E	D	D	E	D	F	F	D	E	E	C	C
Approach Vol, veh/h		482			2136			1277			1479	
Approach Delay, s/veh		54.9			109.1			53.5			47.9	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	45.8	26.1	46.5	11.0	71.4	21.4	51.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	40.5	37.0	17.5	42.0	10.6	66.9	15.7	43.8
Max Q Clear Time (g_c+I1), s	30.2	43.3	17.4	14.9	7.0	19.1	12.6	48.7
Green Ext Time (p_c), s	1.9	0.0	0.0	2.2	0.0	6.7	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		74.2
HCM 2010 LOS		E

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	88	73	34	96	188	76	821	44	233	1095	239
Future Volume (veh/h)	250	88	73	34	96	188	76	821	44	233	1095	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	250	88	73	34	96	188	76	821	44	233	1095	239
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	173	144	138	418	245	99	1316	410	286	1852	577
Arrive On Green	0.18	0.18	0.18	0.15	0.15	0.15	0.06	0.26	0.26	0.16	0.36	0.36
Sat Flow, veh/h	1774	943	782	892	2696	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	250	0	161	69	61	188	76	821	44	233	1095	239
Grp Sat Flow(s),veh/h/ln	1774	0	1725	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.0	0.0	6.3	2.5	2.2	8.5	3.2	10.6	1.6	9.5	13.0	8.4
Cycle Q Clear(g_c), s	10.0	0.0	6.3	2.5	2.2	8.5	3.2	10.6	1.6	9.5	13.0	8.4
Prop In Lane	1.00		0.45	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	0	317	282	274	245	99	1316	410	286	1852	577
V/C Ratio(X)	0.77	0.00	0.51	0.25	0.22	0.77	0.77	0.62	0.11	0.81	0.59	0.41
Avail Cap(c_a), veh/h	939	0	913	573	557	499	369	2828	881	892	4328	1347
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	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	27.4	27.7	27.6	30.2	34.7	24.4	21.1	30.2	19.2	17.8
Incr Delay (d2), s/veh	3.8	0.0	1.3	0.4	0.4	5.0	11.7	0.5	0.1	5.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	3.1	1.3	1.1	4.0	1.9	5.0	0.7	5.0	6.1	3.7
LnGrp Delay(d),s/veh	32.7	0.0	28.7	28.1	28.0	35.2	46.4	24.9	21.2	35.8	19.5	18.2
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		411			318			941			1567	
Approach Delay, s/veh		31.1			32.3			26.5			21.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.5	23.8		18.2	8.7	31.7		16.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	11.5	12.6		12.0	5.2	15.0		10.5
Green Ext Time (p_c), s	0.7	6.7		1.7	0.1	11.8		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	164	222	20	232	58	237	697	30	74	764	175
Future Volume (veh/h)	267	164	222	20	232	58	237	697	30	74	764	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	218	233	222	20	232	58	237	697	16	74	764	175
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	405	426	362	36	423	110	323	1897	591	132	1348	782
Arrive On Green	0.23	0.23	0.23	0.14	0.16	0.14	0.18	0.37	0.37	0.07	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	225	2671	696	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	218	233	222	165	0	145	237	697	16	74	764	175
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1740	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	7.8	8.0	9.1	6.0	0.0	5.6	9.1	7.2	0.5	2.9	9.4	4.6
Cycle Q Clear(g_c), s	7.8	8.0	9.1	6.0	0.0	5.6	9.1	7.2	0.5	2.9	9.4	4.6
Prop In Lane	1.00		1.00	0.12		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	426	362	293	0	276	323	1897	591	132	1348	782
V/C Ratio(X)	0.54	0.55	0.61	0.56	0.00	0.53	0.73	0.37	0.03	0.56	0.57	0.22
Avail Cap(c_a), veh/h	1054	1106	941	1023	0	961	931	4355	1356	392	2810	1237
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	1.00	1.00
Uniform Delay (d), s/veh	24.6	24.6	25.1	28.2	0.0	28.3	27.9	16.5	14.4	32.4	23.0	10.4
Incr Delay (d2), s/veh	1.1	1.1	1.7	1.7	0.0	1.6	3.2	0.1	0.0	3.7	0.4	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	3.9	4.2	4.1	3.2	0.0	2.8	4.8	3.4	0.2	1.6	4.4	2.9
LnGrp Delay(d),s/veh	25.7	25.7	26.7	29.9	0.0	29.8	31.2	16.6	14.4	36.1	23.4	10.6
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		673			310			950			1013	
Approach Delay, s/veh		26.0			29.9			20.2			22.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	30.0		19.5	16.2	22.2		14.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	60.5		41.5	36.5	38.5		38.5
Max Q Clear Time (g_c+I1), s	4.9	9.2		11.1	11.1	11.4		8.0
Green Ext Time (p_c), s	0.1	5.5		3.9	0.7	6.3		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	394	81	16	350	8	19	21	64	0	0	0
Future Vol, veh/h	3	394	81	16	350	8	19	21	64	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	394	81	16	350	8	19	21	64	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	15.1	13.7	9.7
HCM LOS	C	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	18%	1%	4%	0%
Vol Thru, %	20%	82%	96%	0%
Vol Right, %	62%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	478	366	8
LT Vol	19	3	16	0
Through Vol	21	394	350	0
RT Vol	64	81	0	8
Lane Flow Rate	104	478	366	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.16	0.62	0.53	0.01
Departure Headway (Hd)	5.522	4.67	5.215	4.487
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	770	688	791
Service Time	3.614	2.728	2.98	2.251
HCM Lane V/C Ratio	0.162	0.621	0.532	0.01
HCM Control Delay	9.7	15.1	13.8	7.3
HCM Lane LOS	A	C	B	A
HCM 95th-tile Q	0.6	4.4	3.1	0

Intersection	
Intersection Delay, s/veh	20.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	910	4	3	494	31	3	2	8	45	0	52
Future Vol, veh/h	71	910	4	3	494	31	3	2	8	45	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	910	4	3	494	31	3	2	8	45	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	25.2	13.7	9.9	10.9
HCM LOS	D	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	13%	0%	1%	0%	46%
Vol Thru, %	15%	87%	99%	99%	89%	0%
Vol Right, %	62%	0%	1%	0%	11%	54%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	526	459	250	278	97
LT Vol	3	71	0	3	0	45
Through Vol	2	455	455	247	247	0
RT Vol	8	0	4	0	31	52
Lane Flow Rate	13	526	459	250	278	97
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.024	0.823	0.709	0.425	0.466	0.174
Departure Headway (Hd)	6.683	5.632	5.558	6.118	6.033	6.459
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	536	642	652	588	598	556
Service Time	4.724	3.358	3.284	3.856	3.771	4.489
HCM Lane V/C Ratio	0.024	0.819	0.704	0.425	0.465	0.174
HCM Control Delay	9.9	29.2	20.7	13.3	14	10.9
HCM Lane LOS	A	D	C	B	B	B
HCM 95th-tile Q	0.1	8.6	5.8	2.1	2.5	0.6

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	330	51	95	325	41	34	27	121	10	26	11
Future Vol, veh/h	70	330	51	95	325	41	34	27	121	10	26	11
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	330	51	95	325	41	34	27	121	10	26	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.2	18.8	11.6	10.3
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	16%	21%	21%
Vol Thru, %	15%	73%	70%	55%
Vol Right, %	66%	11%	9%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	451	461	47
LT Vol	34	70	95	10
Through Vol	27	330	325	26
RT Vol	121	51	41	11
Lane Flow Rate	182	451	461	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.302	0.662	0.678	0.086
Departure Headway (Hd)	5.971	5.286	5.295	6.618
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	599	681	682	537
Service Time	4.04	3.336	3.345	4.709
HCM Lane V/C Ratio	0.304	0.662	0.676	0.088
HCM Control Delay	11.6	18.2	18.8	10.3
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.3	5	5.3	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	568	84	158	388	46	24	19	86	36	50	75
Future Volume (veh/h)	117	568	84	158	388	46	24	19	86	36	50	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	117	568	84	158	388	46	24	19	86	36	50	75
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	1063	157	225	1096	129	270	150	237	241	172	237
Arrive On Green	0.07	0.34	0.34	0.07	0.34	0.34	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	3095	457	3442	3190	376	581	1005	1583	493	1148	1583
Grp Volume(v), veh/h	117	324	328	158	214	220	43	0	86	86	0	75
Grp Sat Flow(s),veh/h/ln	1774	1770	1782	1721	1770	1796	1585	0	1583	1640	0	1583
Q Serve(g_s), s	2.0	4.5	4.5	1.4	2.8	2.8	0.0	0.0	1.5	0.1	0.0	1.3
Cycle Q Clear(g_c), s	2.0	4.5	4.5	1.4	2.8	2.8	0.6	0.0	1.5	1.3	0.0	1.3
Prop In Lane	1.00		0.26	1.00		0.21	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	116	608	612	225	608	617	421	0	237	412	0	237
V/C Ratio(X)	1.01	0.53	0.54	0.70	0.35	0.36	0.10	0.00	0.36	0.21	0.00	0.32
Avail Cap(c_a), veh/h	116	1505	1515	225	1505	1528	1980	0	1916	2074	0	1916
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	8.1	8.1	14.0	7.5	7.5	11.3	0.0	11.7	11.6	0.0	11.6
Incr Delay (d2), s/veh	85.8	0.7	0.7	9.4	0.3	0.3	0.1	0.0	0.9	0.2	0.0	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	3.7	2.3	2.3	0.9	1.4	1.4	0.3	0.0	0.7	0.7	0.0	0.6
LnGrp Delay(d),s/veh	100.1	8.8	8.8	23.4	7.8	7.9	11.4	0.0	12.6	11.8	0.0	12.4
LnGrp LOS	F	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h		769			592			129			161	
Approach Delay, s/veh		22.7			12.0			12.2			12.1	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	15.0		9.1	6.5	15.0		9.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.4	6.5		3.3	4.0	4.8		3.5
Green Ext Time (p_c), s	0.0	4.0		0.7	0.0	2.5		0.5

Intersection Summary		
HCM 2010 Ctrl Delay		17.0
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	663	45	443	313	892	31	454	822	913	806	40
Future Volume (veh/h)	115	663	45	443	313	892	31	454	822	913	806	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	115	663	45	443	313	808	31	454	778	913	806	40
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	959	65	804	1123	766	42	1214	619	677	2041	101
Arrive On Green	0.13	0.29	0.29	0.16	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3335	226	5003	3539	1432	1774	5085	1527	3442	4957	245
Grp Volume(v), veh/h	115	351	357	443	313	808	31	454	778	913	550	296
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1432	1774	1695	1527	1721	1695	1812
Q Serve(g_s), s	9.3	27.4	27.4	12.6	10.3	49.2	2.7	11.6	37.0	30.5	17.7	17.8
Cycle Q Clear(g_c), s	9.3	27.4	27.4	12.6	10.3	49.2	2.7	11.6	37.0	30.5	17.7	17.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	232	509	515	804	1123	766	42	1214	619	677	1396	746
V/C Ratio(X)	0.49	0.69	0.69	0.55	0.28	1.05	0.74	0.37	1.26	1.35	0.39	0.40
Avail Cap(c_a), veh/h	232	509	515	888	1123	766	80	1214	619	677	1396	746
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	0.87	0.87	0.87	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	49.1	49.1	59.9	39.6	38.6	75.2	49.3	46.8	62.2	32.0	32.0
Incr Delay (d2), s/veh	1.6	7.5	7.5	0.5	0.5	45.7	16.4	0.6	125.1	166.4	0.8	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	4.7	14.4	14.6	5.9	5.1	42.4	1.5	5.5	48.0	30.1	8.4	9.2
LnGrp Delay(d),s/veh	64.2	56.6	56.6	60.4	40.1	84.3	91.5	50.0	171.9	228.6	32.9	33.6
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	C
Approach Vol, veh/h		823			1564			1263			1759	
Approach Delay, s/veh		57.6			68.7			126.1			134.6	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	29.4	49.1	8.2	68.3	24.8	53.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	7.0	60.5	20.3	49.2
Max Q Clear Time (g_c+I1), s	32.5	39.0	14.6	29.4	4.7	19.8	11.3	51.2
Green Ext Time (p_c), s	0.0	0.0	1.4	3.6	0.0	6.6	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.8
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	128	47	17	73	151	42	865	36	239	932	339
Future Volume (veh/h)	292	128	47	17	73	151	42	865	36	239	932	339
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	292	128	47	17	73	151	42	865	36	239	932	339
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	269	99	84	382	205	68	1381	430	288	2011	626
Arrive On Green	0.21	0.21	0.21	0.13	0.13	0.13	0.04	0.27	0.27	0.16	0.40	0.40
Sat Flow, veh/h	1774	1301	478	647	2953	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	292	0	175	48	42	151	42	865	36	239	932	339
Grp Sat Flow(s),veh/h/ln	1774	0	1778	1830	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.2	0.0	6.8	1.8	1.7	7.2	1.8	11.7	1.3	10.2	10.6	12.9
Cycle Q Clear(g_c), s	12.2	0.0	6.8	1.8	1.7	7.2	1.8	11.7	1.3	10.2	10.6	12.9
Prop In Lane	1.00		0.27	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	0	367	237	229	205	68	1381	430	288	2011	626
V/C Ratio(X)	0.80	0.00	0.48	0.20	0.18	0.74	0.62	0.63	0.08	0.83	0.46	0.54
Avail Cap(c_a), veh/h	896	0	898	948	916	820	578	3609	1124	578	3609	1124
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	1.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	27.3	30.4	30.4	32.8	37.0	25.0	21.2	31.7	17.5	18.2
Incr Delay (d2), s/veh	4.0	0.0	1.0	0.4	0.4	5.1	8.8	0.5	0.1	6.1	0.2	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	6.4	0.0	3.4	0.9	0.8	3.4	1.1	5.5	0.6	5.5	4.9	5.7
LnGrp Delay(d),s/veh	33.5	0.0	28.3	30.8	30.7	37.8	45.9	25.5	21.3	37.8	17.7	18.9
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		467			241			943			1510	
Approach Delay, s/veh		31.5			35.2			26.2			21.1	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.2	25.7		20.7	7.5	35.4		14.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5				
Max Q Clear Time (g_c+I1), s	12.2	13.7		14.2	3.8	14.9		9.2				
Green Ext Time (p_c), s	0.6	7.6		1.9	0.1	10.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			25.3									
HCM 2010 LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	196	222	19	166	33	263	544	64	115	656	218
Future Volume (veh/h)	220	196	222	19	166	33	263	544	64	115	656	218
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	213	206	222	19	166	33	263	544	64	115	656	218
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	438	373	40	358	74	359	1746	543	190	1259	692
Arrive On Green	0.24	0.24	0.24	0.11	0.13	0.11	0.20	0.34	0.34	0.11	0.25	0.22
Sat Flow, veh/h	1774	1863	1583	305	2740	566	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	213	206	222	115	0	103	263	544	64	115	656	218
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1848	0	1763	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	6.8	6.2	8.1	3.8	0.0	3.5	9.1	5.1	1.8	4.0	7.3	5.9
Cycle Q Clear(g_c), s	6.8	6.2	8.1	3.8	0.0	3.5	9.1	5.1	1.8	4.0	7.3	5.9
Prop In Lane	1.00		1.00	0.16		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	438	373	241	0	230	359	1746	543	190	1259	692
V/C Ratio(X)	0.51	0.47	0.60	0.48	0.00	0.45	0.73	0.31	0.12	0.61	0.52	0.32
Avail Cap(c_a), veh/h	1169	1227	1043	1132	0	1081	1169	4286	1334	625	2727	1149
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	1.00	1.00
Uniform Delay (d), s/veh	21.7	21.5	22.2	26.4	0.0	26.4	24.4	15.8	14.7	27.8	21.2	12.0
Incr Delay (d2), s/veh	1.0	0.8	1.5	1.5	0.0	1.4	2.9	0.1	0.1	3.1	0.3	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	3.4	3.3	3.7	2.0	0.0	1.8	4.7	2.4	0.8	2.1	3.4	3.6
LnGrp Delay(d),s/veh	22.7	22.2	23.7	27.9	0.0	27.8	27.2	15.9	14.8	30.9	21.5	12.3
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		641			218			871			989	
Approach Delay, s/veh		22.9			27.8			19.2			20.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	25.4		18.4	16.2	19.2		11.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	53.5		41.5	41.5	33.5		38.5
Max Q Clear Time (g_c+I1), s	6.0	7.1		10.1	11.1	9.3		5.8
Green Ext Time (p_c), s	0.2	4.3		3.7	0.8	5.4		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	237	59	23	481	19	19	17	32	0	0	0
Future Vol, veh/h	6	237	59	23	481	19	19	17	32	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	237	59	23	481	19	19	17	32	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.8	17.9	9.3
HCM LOS	B	C	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	28%	2%	5%	0%
Vol Thru, %	25%	78%	95%	0%
Vol Right, %	47%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	302	504	19
LT Vol	19	6	23	0
Through Vol	17	237	481	0
RT Vol	32	59	0	19
Lane Flow Rate	68	302	504	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.105	0.394	0.696	0.022
Departure Headway (Hd)	5.577	4.698	4.971	4.244
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	639	764	726	841
Service Time	3.645	2.738	2.707	1.981
HCM Lane V/C Ratio	0.106	0.395	0.694	0.023
HCM Control Delay	9.3	10.8	18.3	7.1
HCM Lane LOS	A	B	C	A
HCM 95th-tile Q	0.4	1.9	5.7	0.1

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	29	506	4	2	561	38	8	1	8	30	0	52
Future Vol, veh/h	29	506	4	2	561	38	8	1	8	30	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	506	4	2	561	38	8	1	8	30	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	12	12.4	9.5	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	10%	0%	1%	0%	37%
Vol Thru, %	6%	90%	98%	99%	88%	0%
Vol Right, %	47%	0%	2%	0%	12%	63%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	282	257	283	319	82
LT Vol	8	29	0	2	0	30
Through Vol	1	253	253	281	281	0
RT Vol	8	0	4	0	38	52
Lane Flow Rate	17	282	257	282	318	82
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.03	0.429	0.386	0.421	0.467	0.136
Departure Headway (Hd)	6.28	5.471	5.408	5.366	5.278	5.964
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	573	651	658	664	675	604
Service Time	4.286	3.265	3.203	3.158	3.07	3.966
HCM Lane V/C Ratio	0.03	0.433	0.391	0.425	0.471	0.136
HCM Control Delay	9.5	12.4	11.6	12.1	12.7	9.9
HCM Lane LOS	A	B	B	B	B	A
HCM 95th-tile Q	0.1	2.2	1.8	2.1	2.5	0.5

Intersection	
Intersection Delay, s/veh	19.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	211	11	31	374	15	62	28	121	90	143	79
Future Vol, veh/h	42	211	11	31	374	15	62	28	121	90	143	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	211	11	31	374	15	62	28	121	90	143	79
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16	25	14	18.1
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	16%	7%	29%
Vol Thru, %	13%	80%	89%	46%
Vol Right, %	57%	4%	4%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	264	420	312
LT Vol	62	42	31	90
Through Vol	28	211	374	143
RT Vol	121	11	15	79
Lane Flow Rate	211	264	420	312
Geometry Grp	1	1	1	1
Degree of Util (X)	0.391	0.489	0.735	0.57
Departure Headway (Hd)	6.675	6.663	6.3	6.578
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	536	539	571	546
Service Time	4.768	4.749	4.374	4.658
HCM Lane V/C Ratio	0.394	0.49	0.736	0.571
HCM Control Delay	14	16	25	18.1
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	1.8	2.7	6.2	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	530	26	80	568	67	90	43	183	37	22	113
Future Volume (veh/h)	101	530	26	80	568	67	90	43	183	37	22	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	101	530	26	80	568	67	90	43	183	37	22	113
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	825	40	107	766	90	114	37	820	108	44	820
Arrive On Green	0.03	0.24	0.24	0.03	0.24	0.24	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3434	168	3442	3191	375	39	72	1583	32	86	1583
Grp Volume(v), veh/h	101	273	283	80	314	321	133	0	183	59	0	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1833	1721	1770	1796	111	0	1583	118	0	1583
Q Serve(g_s), s	2.0	8.9	8.9	1.5	10.5	10.6	1.4	0.0	4.0	1.3	0.0	2.4
Cycle Q Clear(g_c), s	2.0	8.9	8.9	1.5	10.5	10.6	33.2	0.0	4.0	33.2	0.0	2.4
Prop In Lane	1.00		0.09	1.00		0.21	0.68		1.00	0.63		1.00
Lane Grp Cap(c), veh/h	55	425	440	107	425	431	152	0	820	153	0	820
V/C Ratio(X)	1.82	0.64	0.64	0.74	0.74	0.74	0.88	0.00	0.22	0.39	0.00	0.14
Avail Cap(c_a), veh/h	55	718	744	107	718	729	236	0	915	233	0	915
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.0	21.9	21.9	30.8	22.5	22.5	25.0	0.0	8.4	15.4	0.0	8.0
Incr Delay (d2), s/veh	432.1	1.6	1.6	24.1	2.5	2.6	19.7	0.0	0.1	1.6	0.0	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	7.6	4.5	4.7	1.1	5.5	5.6	3.2	0.0	1.8	0.6	0.0	1.0
LnGrp Delay(d),s/veh	463.1	23.5	23.5	54.9	25.0	25.1	44.7	0.0	8.6	17.0	0.0	8.1
LnGrp LOS	F	C	C	D	C	C	D		A	B		A
Approach Vol, veh/h		657			715			316			172	
Approach Delay, s/veh		91.0			28.4			23.8			11.1	
Approach LOS		F			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	20.1		38.8	6.5	20.1		38.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.5	10.9		35.2	4.0	12.6		35.2
Green Ext Time (p_c), s	0.0	3.0		0.1	0.0	3.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	339	36	604	666	1193	58	690	730	784	803	66
Future Volume (veh/h)	132	339	36	604	666	1193	58	690	730	784	803	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	132	339	36	604	666	1109	58	690	686	784	803	66
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	864	91	666	1099	825	74	1214	575	830	2094	171
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.04	0.24	0.24	0.24	0.44	0.44
Sat Flow, veh/h	1774	3189	335	5003	3539	1429	1774	5085	1527	3442	4781	391
Grp Volume(v), veh/h	132	186	189	604	666	1109	58	690	686	784	568	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1668	1770	1429	1774	1695	1527	1721	1695	1782
Q Serve(g_s), s	11.3	13.3	13.6	18.4	24.8	48.1	5.0	18.5	37.0	34.7	17.5	17.7
Cycle Q Clear(g_c), s	11.3	13.3	13.6	18.4	24.8	48.1	5.0	18.5	37.0	34.7	17.5	17.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	166	480	475	666	1099	825	74	1214	575	830	1485	781
V/C Ratio(X)	0.80	0.39	0.40	0.91	0.61	1.34	0.78	0.57	1.19	0.94	0.38	0.39
Avail Cap(c_a), veh/h	203	480	475	666	1099	825	121	1214	575	855	1485	781
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	0.62	0.62	0.62	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	46.0	46.2	66.2	45.4	35.8	73.6	52.0	48.9	57.8	29.4	29.4
Incr Delay (d2), s/veh	16.3	2.4	2.5	11.0	1.5	159.7	11.5	1.3	98.2	18.5	0.7	1.4
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	6.3	6.8	6.9	9.2	12.4	71.8	2.7	8.8	40.4	18.7	8.4	9.0
LnGrp Delay(d),s/veh	85.1	48.4	48.6	77.2	46.9	195.5	85.1	53.3	147.1	76.3	30.1	30.9
LnGrp LOS	F	D	D	E	D	F	F	D	F	E	C	C
Approach Vol, veh/h		507			2379			1434			1653	
Approach Delay, s/veh		58.0			123.9			99.5			52.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.9	41.5	25.1	46.5	11.0	72.4	19.0	52.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	10.6	64.9	17.7	43.8
Max Q Clear Time (g_c+I1), s	36.7	39.0	20.4	15.6	7.0	19.7	13.3	50.1
Green Ext Time (p_c), s	0.7	0.0	0.0	2.3	0.0	7.0	0.1	0.0

Intersection Summary

HCM 2010 Ctrl Delay	92.6
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	90	73	46	100	266	76	887	51	268	1171	239
Future Volume (veh/h)	263	90	73	46	100	266	76	887	51	268	1171	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	263	90	73	46	100	266	76	887	51	268	1171	239
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	174	141	112	588	308	99	1292	402	312	1904	593
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.06	0.25	0.25	0.18	0.37	0.37
Sat Flow, veh/h	1774	953	773	578	3026	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	263	0	163	146	0	266	76	887	51	268	1171	239
Grp Sat Flow(s),veh/h/ln	1774	0	1726	1834	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	13.3	0.0	8.0	6.5	0.0	15.2	3.9	14.7	2.3	13.7	17.5	10.4
Cycle Q Clear(g_c), s	13.3	0.0	8.0	6.5	0.0	15.2	3.9	14.7	2.3	13.7	17.5	10.4
Prop In Lane	1.00		0.45	0.32		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	0	315	357	344	308	99	1292	402	312	1904	593
V/C Ratio(X)	0.81	0.00	0.52	0.41	0.00	0.86	0.77	0.69	0.13	0.86	0.61	0.40
Avail Cap(c_a), veh/h	751	0	731	462	446	399	295	2262	704	713	3461	1078
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	36.6	0.0	34.4	32.9	0.0	36.4	43.5	31.4	26.8	37.3	23.7	21.5
Incr Delay (d2), s/veh	4.9	0.0	1.3	0.8	0.0	14.4	11.8	0.7	0.1	6.8	0.3	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	6.9	0.0	3.9	3.4	0.0	7.8	2.2	7.0	1.0	7.3	8.2	4.6
LnGrp Delay(d),s/veh	41.5	0.0	35.7	33.6	0.0	50.8	55.3	32.1	27.0	44.1	24.0	21.9
LnGrp LOS	D		D	C		D	E	C	C	D	C	C
Approach Vol, veh/h		426			412			1014			1678	
Approach Delay, s/veh		39.3			44.7			33.6			26.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.9	28.2		21.5	9.7	39.4		22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	15.7	16.7		15.3	5.9	19.5		17.2
Green Ext Time (p_c), s	0.8	7.0		1.8	0.1	12.7		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	168	233	36	239	58	236	741	40	74	821	206
Future Volume (veh/h)	296	168	233	36	239	58	236	741	40	74	821	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	257	233	36	239	58	236	741	26	74	821	206
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	432	367	61	415	105	317	1928	600	129	1391	801
Arrive On Green	0.23	0.23	0.23	0.14	0.16	0.14	0.18	0.38	0.38	0.07	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	375	2567	650	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	232	257	233	177	0	156	236	741	26	74	821	206
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1844	0	1748	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.0	9.6	10.3	6.9	0.0	6.4	9.8	8.2	0.8	3.1	10.9	5.8
Cycle Q Clear(g_c), s	9.0	9.6	10.3	6.9	0.0	6.4	9.8	8.2	0.8	3.1	10.9	5.8
Prop In Lane	1.00		1.00	0.20		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	432	367	298	0	283	317	1928	600	129	1391	801
V/C Ratio(X)	0.56	0.59	0.63	0.59	0.00	0.55	0.75	0.38	0.04	0.57	0.59	0.26
Avail Cap(c_a), veh/h	980	1029	875	924	0	876	866	4116	1282	365	2679	1201
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	1.00	1.00
Uniform Delay (d), s/veh	26.4	26.6	26.9	30.4	0.0	30.3	30.3	17.6	15.3	34.9	24.5	10.9
Incr Delay (d2), s/veh	1.2	1.3	1.8	1.9	0.0	1.7	3.5	0.1	0.0	3.9	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	4.5	5.1	4.7	3.7	0.0	3.2	5.1	3.9	0.4	1.7	5.1	3.7
LnGrp Delay(d),s/veh	27.6	27.9	28.7	32.3	0.0	32.0	33.8	17.7	15.3	38.9	24.9	11.1
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		722			333			1003			1101	
Approach Delay, s/veh		28.1			32.1			21.4			23.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	32.5		21.1	16.9	24.3		15.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	61.5		41.5	36.5	39.5		37.5
Max Q Clear Time (g_c+I1), s	5.1	10.2		12.3	11.8	12.9		8.9
Green Ext Time (p_c), s	0.1	6.0		4.3	0.7	6.9		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	394	80	7	350	8	20	21	81	0	0	0
Future Vol, veh/h	3	394	80	7	350	8	20	21	81	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	394	80	7	350	8	20	21	81	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	15.4	13.6	9.8
HCM LOS	C	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	16%	1%	2%	0%
Vol Thru, %	17%	83%	98%	0%
Vol Right, %	66%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	477	357	8
LT Vol	20	3	7	0
Through Vol	21	394	350	0
RT Vol	81	80	0	8
Lane Flow Rate	122	477	357	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.186	0.625	0.522	0.01
Departure Headway (Hd)	5.479	4.716	5.263	4.547
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	648	758	682	780
Service Time	3.576	2.78	3.034	2.318
HCM Lane V/C Ratio	0.188	0.629	0.523	0.01
HCM Control Delay	9.8	15.4	13.7	7.4
HCM Lane LOS	A	C	B	A
HCM 95th-tile Q	0.7	4.4	3	0

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	910	4	3	494	27	3	2	8	52	0	55
Future Vol, veh/h	69	910	4	3	494	27	3	2	8	52	0	55
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	910	4	3	494	27	3	2	8	52	0	55
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	25.7	13.8	9.9	11.1
HCM LOS	D	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	13%	0%	1%	0%	49%
Vol Thru, %	15%	87%	99%	99%	90%	0%
Vol Right, %	62%	0%	1%	0%	10%	51%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	524	459	250	274	107
LT Vol	3	69	0	3	0	52
Through Vol	2	455	455	247	247	0
RT Vol	8	0	4	0	27	55
Lane Flow Rate	13	524	459	250	274	107
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.024	0.826	0.714	0.428	0.463	0.193
Departure Headway (Hd)	6.724	5.672	5.6	6.162	6.086	6.479
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	532	639	647	585	592	554
Service Time	4.768	3.4	3.328	3.904	3.828	4.51
HCM Lane V/C Ratio	0.024	0.82	0.709	0.427	0.463	0.193
HCM Control Delay	9.9	29.7	21.1	13.5	14	11.1
HCM Lane LOS	A	D	C	B	B	B
HCM 95th-tile Q	0.1	8.7	5.9	2.1	2.4	0.7

Intersection	
Intersection Delay, s/veh	17.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	71	345	51	95	317	41	34	27	121	10	26	10
Future Vol, veh/h	71	345	51	95	317	41	34	27	121	10	26	10
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	345	51	95	317	41	34	27	121	10	26	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.1	18.5	11.7	10.4
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	15%	21%	22%
Vol Thru, %	15%	74%	70%	57%
Vol Right, %	66%	11%	9%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	467	453	46
LT Vol	34	71	95	10
Through Vol	27	345	317	26
RT Vol	121	51	41	10
Lane Flow Rate	182	467	453	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.303	0.685	0.669	0.085
Departure Headway (Hd)	5.99	5.277	5.315	6.653
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	597	682	679	534
Service Time	4.061	3.328	3.368	4.747
HCM Lane V/C Ratio	0.305	0.685	0.667	0.086
HCM Control Delay	11.7	19.1	18.5	10.4
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.3	5.4	5.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	575	84	158	384	46	24	19	86	36	50	75
Future Volume (veh/h)	117	575	84	158	384	46	24	19	86	36	50	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	117	575	84	158	384	46	24	19	86	36	50	75
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	1072	156	224	1101	131	269	150	236	240	171	236
Arrive On Green	0.07	0.35	0.35	0.07	0.35	0.35	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	3101	452	3442	3186	379	581	1005	1583	493	1147	1583
Grp Volume(v), veh/h	117	328	331	158	212	218	43	0	86	86	0	75
Grp Sat Flow(s),veh/h/ln	1774	1770	1783	1721	1770	1796	1585	0	1583	1640	0	1583
Q Serve(g_s), s	2.0	4.6	4.6	1.4	2.7	2.8	0.0	0.0	1.5	0.2	0.0	1.3
Cycle Q Clear(g_c), s	2.0	4.6	4.6	1.4	2.7	2.8	0.6	0.0	1.5	1.3	0.0	1.3
Prop In Lane	1.00		0.25	1.00		0.21	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	116	612	616	224	612	621	419	0	236	411	0	236
V/C Ratio(X)	1.01	0.54	0.54	0.70	0.35	0.35	0.10	0.00	0.36	0.21	0.00	0.32
Avail Cap(c_a), veh/h	116	1499	1511	224	1499	1522	1973	0	1909	2067	0	1909
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	8.1	8.1	14.1	7.5	7.5	11.4	0.0	11.7	11.6	0.0	11.7
Incr Delay (d2), s/veh	86.9	0.7	0.7	9.6	0.3	0.3	0.1	0.0	0.9	0.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.1	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	3.7	2.3	2.3	0.9	1.4	1.4	0.3	0.0	0.7	0.7	0.0	0.6
LnGrp Delay(d),s/veh	101.3	8.8	8.8	23.6	7.8	7.8	11.5	0.0	12.7	11.9	0.0	12.4
LnGrp LOS	F	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h		776			588			129			161	
Approach Delay, s/veh		22.7			12.1			12.3			12.1	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	15.1		9.1	6.5	15.1		9.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.4	6.6		3.3	4.0	4.8		3.5
Green Ext Time (p_c), s	0.0	4.0		0.7	0.0	2.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	663	45	438	313	892	31	460	832	913	803	40
Future Volume (veh/h)	115	663	45	438	313	892	31	460	832	913	803	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.90	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	115	663	45	438	313	808	31	460	788	913	803	40
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	963	65	799	1123	766	42	1214	617	677	2040	101
Arrive On Green	0.13	0.29	0.29	0.16	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3335	226	5003	3539	1432	1774	5085	1527	3442	4956	246
Grp Volume(v), veh/h	115	351	357	438	313	808	31	460	788	913	548	295
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1432	1774	1695	1527	1721	1695	1812
Q Serve(g_s), s	9.3	27.3	27.4	12.5	10.3	49.2	2.7	11.7	37.0	30.5	17.6	17.7
Cycle Q Clear(g_c), s	9.3	27.3	27.4	12.5	10.3	49.2	2.7	11.7	37.0	30.5	17.6	17.7
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	232	511	517	799	1123	766	42	1214	617	677	1396	746
V/C Ratio(X)	0.49	0.69	0.69	0.55	0.28	1.05	0.74	0.38	1.28	1.35	0.39	0.39
Avail Cap(c_a), veh/h	232	511	517	888	1123	766	80	1214	617	677	1396	746
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	0.87	0.87	0.87	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	48.9	49.0	60.0	39.6	38.6	75.2	49.4	46.9	62.2	32.0	32.0
Incr Delay (d2), s/veh	1.6	7.4	7.4	0.5	0.5	45.7	16.2	0.6	133.3	166.4	0.8	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	4.7	14.4	14.6	5.8	5.1	42.4	1.5	5.6	49.3	30.1	8.4	9.2
LnGrp Delay(d),s/veh	64.2	56.3	56.3	60.5	40.1	84.3	91.4	50.0	180.2	228.6	32.8	33.6
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	C
Approach Vol, veh/h		823			1559			1279			1756	
Approach Delay, s/veh		57.4			68.8			131.2			134.7	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	29.3	49.2	8.2	68.3	24.8	53.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	7.0	60.5	20.3	49.2
Max Q Clear Time (g_c+I1), s	32.5	39.0	14.5	29.4	4.7	19.7	11.3	51.2
Green Ext Time (p_c), s	0.0	0.0	1.4	3.6	0.0	6.6	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.2
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	307	128	47	17	73	151	42	865	36	239	932	331
Future Volume (veh/h)	307	128	47	17	73	151	42	865	36	239	932	331
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	307	128	47	17	73	151	42	865	36	239	932	331
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	279	102	83	381	204	67	1371	427	287	2000	623
Arrive On Green	0.21	0.21	0.21	0.13	0.13	0.13	0.04	0.27	0.27	0.16	0.39	0.39
Sat Flow, veh/h	1774	1301	478	647	2953	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	307	0	175	48	42	151	42	865	36	239	932	331
Grp Sat Flow(s),veh/h/ln	1774	0	1778	1830	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	13.1	0.0	6.8	1.9	1.7	7.3	1.9	11.9	1.4	10.4	10.9	12.8
Cycle Q Clear(g_c), s	13.1	0.0	6.8	1.9	1.7	7.3	1.9	11.9	1.4	10.4	10.9	12.8
Prop In Lane	1.00		0.27	0.35		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	0	381	236	228	204	67	1371	427	287	2000	623
V/C Ratio(X)	0.81	0.00	0.46	0.20	0.18	0.74	0.62	0.63	0.08	0.83	0.47	0.53
Avail Cap(c_a), veh/h	879	0	881	929	899	804	567	3538	1102	567	3538	1102
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	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	27.3	31.1	31.0	33.5	37.8	25.6	21.8	32.4	18.0	18.6
Incr Delay (d2), s/veh	4.1	0.0	0.9	0.4	0.4	5.2	9.1	0.5	0.1	6.2	0.2	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	6.8	0.0	3.4	1.0	0.9	3.5	1.1	5.7	0.6	5.6	5.1	5.6
LnGrp Delay(d),s/veh	33.9	0.0	28.2	31.5	31.4	38.6	46.9	26.1	21.9	38.6	18.1	19.3
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		482			241			943			1502	
Approach Delay, s/veh		31.8			36.0			26.9			21.7	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.4	26.0		21.6	7.5	35.9		14.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	12.4	13.9		15.1	3.9	14.8		9.3
Green Ext Time (p_c), s	0.6	7.6		2.0	0.1	9.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	196	229	19	166	33	259	544	64	115	656	218
Future Volume (veh/h)	220	196	229	19	166	33	259	544	64	115	656	218
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	215	203	229	19	166	33	259	544	64	115	656	218
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	446	379	40	357	74	355	1730	539	190	1257	698
Arrive On Green	0.24	0.24	0.24	0.11	0.13	0.11	0.20	0.34	0.34	0.11	0.25	0.22
Sat Flow, veh/h	1774	1863	1583	305	2740	566	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	215	203	229	115	0	103	259	544	64	115	656	218
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1848	0	1763	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	6.9	6.1	8.4	3.8	0.0	3.5	9.0	5.2	1.8	4.1	7.3	5.9
Cycle Q Clear(g_c), s	6.9	6.1	8.4	3.8	0.0	3.5	9.0	5.2	1.8	4.1	7.3	5.9
Prop In Lane	1.00		1.00	0.16		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	425	446	379	241	0	230	355	1730	539	190	1257	698
V/C Ratio(X)	0.51	0.46	0.60	0.48	0.00	0.45	0.73	0.31	0.12	0.61	0.52	0.31
Avail Cap(c_a), veh/h	1164	1222	1039	1128	0	1076	1164	4268	1329	623	2716	1152
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	1.00	1.00
Uniform Delay (d), s/veh	21.6	21.3	22.2	26.5	0.0	26.5	24.5	16.0	14.9	27.9	21.3	11.9
Incr Delay (d2), s/veh	0.9	0.7	1.6	1.5	0.0	1.4	2.9	0.1	0.1	3.1	0.3	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	3.5	3.2	3.9	2.0	0.0	1.8	4.7	2.4	0.8	2.1	3.4	3.6
LnGrp Delay(d),s/veh	22.5	22.0	23.7	28.0	0.0	27.9	27.4	16.1	15.0	31.0	21.7	12.1
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		647			218			867			989	
Approach Delay, s/veh		22.8			28.0			19.4			20.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	25.3		18.7	16.1	19.2		11.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	53.5		41.5	41.5	33.5		38.5
Max Q Clear Time (g_c+I1), s	6.1	7.2		10.4	11.0	9.3		5.8
Green Ext Time (p_c), s	0.2	4.3		3.8	0.8	5.4		1.4

Intersection Summary			
HCM 2010 Ctrl Delay			21.3
HCM 2010 LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	237	60	39	481	19	19	17	30	0	0	0
Future Vol, veh/h	6	237	60	39	481	19	19	17	30	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	237	60	39	481	19	19	17	30	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.8	19.1	9.4
HCM LOS	B	C	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	29%	2%	7%	0%
Vol Thru, %	26%	78%	93%	0%
Vol Right, %	45%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	303	520	19
LT Vol	19	6	39	0
Through Vol	17	237	481	0
RT Vol	30	60	0	19
Lane Flow Rate	66	303	520	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.103	0.397	0.72	0.022
Departure Headway (Hd)	5.632	4.712	4.982	4.241
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	632	764	723	842
Service Time	3.7	2.752	2.72	1.978
HCM Lane V/C Ratio	0.104	0.397	0.719	0.023
HCM Control Delay	9.4	10.8	19.5	7.1
HCM Lane LOS	A	B	C	A
HCM 95th-tile Q	0.3	1.9	6.2	0.1

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	506	4	2	561	45	8	1	8	29	0	52
Future Vol, veh/h	32	506	4	2	561	45	8	1	8	29	0	52
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	506	4	2	561	45	8	1	8	29	0	52
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	12.1	12.5	9.5	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	11%	0%	1%	0%	36%
Vol Thru, %	6%	89%	98%	99%	86%	0%
Vol Right, %	47%	0%	2%	0%	14%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	285	257	283	326	81
LT Vol	8	32	0	2	0	29
Through Vol	1	253	253	281	281	0
RT Vol	8	0	4	0	45	52
Lane Flow Rate	17	285	257	282	326	81
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.03	0.434	0.386	0.421	0.476	0.134
Departure Headway (Hd)	6.292	5.477	5.41	5.366	5.265	5.971
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	572	650	658	664	677	604
Service Time	4.296	3.273	3.205	3.157	3.056	3.972
HCM Lane V/C Ratio	0.03	0.438	0.391	0.425	0.482	0.134
HCM Control Delay	9.5	12.5	11.6	12.1	12.8	9.9
HCM Lane LOS	A	B	B	B	B	A
HCM 95th-tile Q	0.1	2.2	1.8	2.1	2.6	0.5

Intersection	
Intersection Delay, s/veh	20.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	209	11	31	389	15	62	28	121	90	143	80
Future Vol, veh/h	42	209	11	31	389	15	62	28	121	90	143	80
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	209	11	31	389	15	62	28	121	90	143	80
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.2	27.1	14.2	18.5
HCM LOS	C	D	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	16%	7%	29%
Vol Thru, %	13%	80%	89%	46%
Vol Right, %	57%	4%	3%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	262	435	313
LT Vol	62	42	31	90
Through Vol	28	209	389	143
RT Vol	121	11	15	80
Lane Flow Rate	211	262	435	313
Geometry Grp	1	1	1	1
Degree of Util (X)	0.395	0.489	0.764	0.577
Departure Headway (Hd)	6.742	6.723	6.319	6.634
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	530	532	570	541
Service Time	4.842	4.817	4.397	4.721
HCM Lane V/C Ratio	0.398	0.492	0.763	0.579
HCM Control Delay	14.2	16.2	27.1	18.5
HCM Lane LOS	B	C	D	C
HCM 95th-tile Q	1.9	2.7	6.9	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	529	26	80	575	67	90	43	183	37	22	113
Future Volume (veh/h)	101	529	26	80	575	67	90	43	183	37	22	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	101	529	26	80	575	67	90	43	183	37	22	113
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	830	41	107	773	90	114	37	819	107	44	819
Arrive On Green	0.03	0.24	0.24	0.03	0.24	0.24	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3434	169	3442	3195	371	38	72	1583	32	85	1583
Grp Volume(v), veh/h	101	272	283	80	318	324	133	0	183	59	0	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1833	1721	1770	1797	110	0	1583	117	0	1583
Q Serve(g_s), s	2.0	8.9	8.9	1.5	10.7	10.7	1.4	0.0	4.1	1.3	0.0	2.4
Cycle Q Clear(g_c), s	2.0	8.9	8.9	1.5	10.7	10.7	33.3	0.0	4.1	33.3	0.0	2.4
Prop In Lane	1.00		0.09	1.00		0.21	0.68		1.00	0.63		1.00
Lane Grp Cap(c), veh/h	55	428	443	107	428	435	151	0	819	152	0	819
V/C Ratio(X)	1.83	0.64	0.64	0.75	0.74	0.75	0.88	0.00	0.22	0.39	0.00	0.14
Avail Cap(c_a), veh/h	55	715	741	107	715	726	232	0	911	229	0	911
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	21.9	21.9	30.9	22.5	22.6	25.2	0.0	8.5	15.5	0.0	8.1
Incr Delay (d2), s/veh	435.9	1.6	1.5	24.8	2.6	2.6	21.1	0.0	0.1	1.6	0.0	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	7.6	4.5	4.7	1.1	5.5	5.6	3.2	0.0	1.8	0.6	0.0	1.1
LnGrp Delay(d),s/veh	467.0	23.4	23.4	55.7	25.1	25.1	46.3	0.0	8.6	17.1	0.0	8.1
LnGrp LOS	F	C	C	E	C	C	D		A	B		A
Approach Vol, veh/h		656			722			316			172	
Approach Delay, s/veh		91.7			28.5			24.5			11.2	
Approach LOS		F			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	20.3		38.9	6.5	20.3		38.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.5	10.9		35.3	4.0	12.7		35.3
Green Ext Time (p_c), s	0.0	3.0		0.1	0.0	3.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	339	36	613	666	1193	58	689	729	784	808	66
Future Volume (veh/h)	132	339	36	613	666	1193	58	689	729	784	808	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	132	339	36	613	666	1109	58	689	685	784	808	66
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	864	91	666	1099	825	74	1214	575	830	2096	170
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.04	0.24	0.24	0.24	0.44	0.44
Sat Flow, veh/h	1774	3189	335	5003	3539	1429	1774	5085	1527	3442	4784	389
Grp Volume(v), veh/h	132	186	189	613	666	1109	58	689	685	784	571	303
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1668	1770	1429	1774	1695	1527	1721	1695	1782
Q Serve(g_s), s	11.3	13.3	13.6	18.8	24.8	48.1	5.0	18.5	37.0	34.7	17.7	17.8
Cycle Q Clear(g_c), s	11.3	13.3	13.6	18.8	24.8	48.1	5.0	18.5	37.0	34.7	17.7	17.8
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	166	480	475	666	1099	825	74	1214	575	830	1485	781
V/C Ratio(X)	0.80	0.39	0.40	0.92	0.61	1.34	0.78	0.57	1.19	0.94	0.38	0.39
Avail Cap(c_a), veh/h	203	480	475	666	1099	825	121	1214	575	855	1485	781
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	0.62	0.62	0.62	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	46.0	46.2	66.4	45.4	35.8	73.6	52.0	48.9	57.8	29.4	29.5
Incr Delay (d2), s/veh	16.3	2.4	2.5	12.5	1.5	159.7	11.5	1.3	97.5	18.5	0.8	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	6.3	6.8	6.9	9.5	12.4	71.8	2.7	8.8	40.2	18.7	8.4	9.1
LnGrp Delay(d),s/veh	85.1	48.4	48.6	78.9	46.9	195.5	85.1	53.3	146.4	76.3	30.2	30.9
LnGrp LOS	F	D	D	E	D	F	F	D	F	E	C	C
Approach Vol, veh/h		507			2388			1432			1658	
Approach Delay, s/veh		58.0			124.1			99.1			52.1	
Approach LOS		E			F			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.9	41.5	25.1	46.5	11.0	72.4	19.0	52.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	10.6	64.9	17.7	43.8				
Max Q Clear Time (g_c+I1), s	36.7	39.0	20.8	15.6	7.0	19.8	13.3	50.1				
Green Ext Time (p_c), s	0.7	0.0	0.0	2.3	0.0	7.0	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			92.6									
HCM 2010 LOS			F									
Notes												

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	261	90	73	46	100	266	76	887	51	268	1171	254
Future Volume (veh/h)	261	90	73	46	100	266	76	887	51	268	1171	254
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	261	90	73	46	100	266	76	887	51	268	1171	254
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	173	140	112	589	308	99	1293	403	312	1906	593
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.06	0.25	0.25	0.18	0.37	0.37
Sat Flow, veh/h	1774	953	773	578	3026	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	261	0	163	146	0	266	76	887	51	268	1171	254
Grp Sat Flow(s),veh/h/ln	1774	0	1726	1834	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	13.1	0.0	7.9	6.5	0.0	15.1	3.9	14.7	2.3	13.6	17.4	11.1
Cycle Q Clear(g_c), s	13.1	0.0	7.9	6.5	0.0	15.1	3.9	14.7	2.3	13.6	17.4	11.1
Prop In Lane	1.00		0.45	0.32		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	0	313	357	344	308	99	1293	403	312	1906	593
V/C Ratio(X)	0.81	0.00	0.52	0.41	0.00	0.86	0.77	0.69	0.13	0.86	0.61	0.43
Avail Cap(c_a), veh/h	753	0	733	463	447	400	296	2269	706	715	3472	1081
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	36.5	0.0	34.4	32.8	0.0	36.3	43.3	31.3	26.7	37.2	23.6	21.7
Incr Delay (d2), s/veh	4.9	0.0	1.3	0.8	0.0	14.3	11.8	0.7	0.1	6.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	3.9	3.4	0.0	7.8	2.2	6.9	1.0	7.3	8.2	4.9
LnGrp Delay(d),s/veh	41.4	0.0	35.7	33.5	0.0	50.5	55.1	32.0	26.9	44.0	23.9	22.1
LnGrp LOS	D		D	C		D	E	C	C	D	C	C
Approach Vol, veh/h		424			412			1014			1693	
Approach Delay, s/veh		39.2			44.5			33.5			26.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.9	28.2		21.4	9.7	39.4		22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	15.6	16.7		15.1	5.9	19.4		17.1
Green Ext Time (p_c), s	0.8	7.0		1.7	0.1	12.8		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	168	232	36	239	58	243	741	40	74	821	206
Future Volume (veh/h)	296	168	232	36	239	58	243	741	40	74	821	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	258	232	36	239	58	243	741	26	74	821	206
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	410	430	366	61	414	105	323	1943	605	129	1386	797
Arrive On Green	0.23	0.23	0.23	0.14	0.16	0.14	0.18	0.38	0.38	0.07	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	375	2567	650	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	232	258	232	177	0	156	243	741	26	74	821	206
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1844	0	1748	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.1	9.7	10.4	7.0	0.0	6.5	10.2	8.3	0.8	3.2	11.0	5.8
Cycle Q Clear(g_c), s	9.1	9.7	10.4	7.0	0.0	6.5	10.2	8.3	0.8	3.2	11.0	5.8
Prop In Lane	1.00		1.00	0.20		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	430	366	297	0	282	323	1943	605	129	1386	797
V/C Ratio(X)	0.57	0.60	0.63	0.59	0.00	0.55	0.75	0.38	0.04	0.57	0.59	0.26
Avail Cap(c_a), veh/h	973	1021	868	917	0	869	860	4085	1272	362	2659	1193
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	1.00	1.00
Uniform Delay (d), s/veh	26.7	26.9	27.2	30.7	0.0	30.6	30.4	17.5	15.2	35.2	24.7	11.1
Incr Delay (d2), s/veh	1.2	1.3	1.8	1.9	0.0	1.7	3.5	0.1	0.0	4.0	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	4.6	5.1	4.7	3.7	0.0	3.3	5.3	3.9	0.4	1.7	5.1	3.8
LnGrp Delay(d),s/veh	27.9	28.3	29.0	32.6	0.0	32.3	33.9	17.6	15.2	39.2	25.1	11.3
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		722			333			1010			1101	
Approach Delay, s/veh		28.4			32.4			21.5			23.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	33.0		21.1	17.3	24.4		15.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	14.5	61.5		41.5	36.5	39.5		37.5				
Max Q Clear Time (g_c+I1), s	5.2	10.3		12.4	12.2	13.0		9.0				
Green Ext Time (p_c), s	0.1	6.0		4.2	0.7	6.9		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			24.9									
HCM 2010 LOS			C									
Notes												

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	18.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	449	97	19	405	10	23	25	76	0	0	0
Future Vol, veh/h	4	449	97	19	405	10	23	25	76	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	449	97	19	405	10	23	25	76	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	20.4	17.3	10.5
HCM LOS	C	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	19%	1%	4%	0%
Vol Thru, %	20%	82%	96%	0%
Vol Right, %	61%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	550	424	10
LT Vol	23	4	19	0
Through Vol	25	449	405	0
RT Vol	76	97	0	10
Lane Flow Rate	124	550	424	10
Geometry Grp	2	5	7	7
Degree of Util (X)	0.205	0.737	0.644	0.013
Departure Headway (Hd)	5.95	4.928	5.47	4.74
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	605	737	666	760
Service Time	3.967	2.928	3.17	2.44
HCM Lane V/C Ratio	0.205	0.746	0.637	0.013
HCM Control Delay	10.5	20.4	17.5	7.5
HCM Lane LOS	B	C	C	A
HCM 95th-tile Q	0.8	6.6	4.7	0

Intersection	
Intersection Delay, s/veh	34.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	1047	5	4	565	37	4	2	10	54	0	62
Future Vol, veh/h	85	1047	5	4	565	37	4	2	10	54	0	62
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	1047	5	4	565	37	4	2	10	54	0	62
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	47.3	16.7	10.3	11.5
HCM LOS	E	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	25%	14%	0%	1%	0%	47%
Vol Thru, %	12%	86%	99%	99%	88%	0%
Vol Right, %	62%	0%	1%	0%	12%	53%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	609	529	287	320	116
LT Vol	4	85	0	4	0	54
Through Vol	2	524	524	283	283	0
RT Vol	10	0	5	0	37	62
Lane Flow Rate	16	608	528	286	320	116
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.031	0.996	0.854	0.517	0.568	0.215
Departure Headway (Hd)	7.013	5.892	5.814	6.491	6.401	6.684
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	615	624	553	562	538
Service Time	5.057	3.632	3.555	4.251	4.162	4.716
HCM Lane V/C Ratio	0.031	0.989	0.846	0.517	0.569	0.216
HCM Control Delay	10.3	59.3	33.4	16.1	17.3	11.5
HCM Lane LOS	B	F	D	C	C	B
HCM 95th-tile Q	0.1	14.9	9.5	2.9	3.5	0.8

Intersection	
Intersection Delay, s/veh	29.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	381	61	100	380	49	41	32	145	12	31	13
Future Vol, veh/h	84	381	61	100	380	49	41	32	145	12	31	13
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	381	61	100	380	49	41	32	145	12	31	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	32.4	34	14	11.6
HCM LOS	D	D	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	16%	19%	21%
Vol Thru, %	15%	72%	72%	55%
Vol Right, %	67%	12%	9%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	526	529	56
LT Vol	41	84	100	12
Through Vol	32	381	380	31
RT Vol	145	61	49	13
Lane Flow Rate	218	526	529	56
Geometry Grp	1	1	1	1
Degree of Util (X)	0.4	0.844	0.857	0.117
Departure Headway (Hd)	6.601	5.774	5.829	7.492
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	543	626	624	476
Service Time	4.663	3.823	3.829	5.577
HCM Lane V/C Ratio	0.401	0.84	0.848	0.118
HCM Control Delay	14	32.4	34	11.6
HCM Lane LOS	B	D	D	B
HCM 95th-tile Q	1.9	9.2	9.6	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	634	100	189	422	55	29	23	103	43	60	90
Future Volume (veh/h)	140	634	100	189	422	55	29	23	103	43	60	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	140	634	100	189	422	55	29	23	103	43	60	90
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1082	170	198	1113	144	220	126	318	194	193	318
Arrive On Green	0.06	0.35	0.35	0.06	0.35	0.35	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3065	483	3442	3152	408	291	629	1583	235	959	1583
Grp Volume(v), veh/h	140	366	368	189	236	241	52	0	103	103	0	90
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1770	1791	919	0	1583	1193	0	1583
Q Serve(g_s), s	2.0	5.9	5.9	1.9	3.5	3.5	0.1	0.0	1.9	0.1	0.0	1.7
Cycle Q Clear(g_c), s	2.0	5.9	5.9	1.9	3.5	3.5	4.6	0.0	1.9	4.6	0.0	1.7
Prop In Lane	1.00		0.27	1.00		0.23	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	102	625	628	198	625	632	346	0	318	387	0	318
V/C Ratio(X)	1.37	0.59	0.59	0.95	0.38	0.38	0.15	0.00	0.32	0.27	0.00	0.28
Avail Cap(c_a), veh/h	102	1323	1329	198	1323	1339	1597	0	1685	1726	0	1685
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	9.2	9.2	16.3	8.4	8.4	11.5	0.0	11.9	11.8	0.0	11.8
Incr Delay (d2), s/veh	217.6	0.9	0.9	51.0	0.4	0.4	0.2	0.0	0.6	0.4	0.0	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	7.1	3.0	3.0	2.3	1.7	1.7	0.4	0.0	0.9	0.9	0.0	0.8
LnGrp Delay(d),s/veh	233.9	10.0	10.0	67.3	8.8	8.8	11.7	0.0	12.5	12.2	0.0	12.2
LnGrp LOS	F	B	B	E	A	A	B		B	B		B
Approach Vol, veh/h		874			666			155			193	
Approach Delay, s/veh		45.9			25.4			12.2			12.2	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	16.8		11.6	6.5	16.8		11.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.9	7.9		6.6	4.0	5.5		6.6
Green Ext Time (p_c), s	0.0	4.5		0.9	0.0	2.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	749	47	504	336	945	38	548	897	996	921	43
Future Volume (veh/h)	125	749	47	504	336	945	38	548	897	996	921	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	125	749	47	504	336	861	38	548	853	996	921	43
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	926	58	862	1105	758	49	1214	637	677	2028	95
Arrive On Green	0.14	0.28	0.28	0.17	0.31	0.31	0.03	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3354	210	5003	3539	1430	1774	5085	1527	3442	4973	232
Grp Volume(v), veh/h	125	395	401	504	336	861	38	548	853	996	627	337
Grp Sat Flow(s),veh/h/ln	1774	1770	1795	1668	1770	1430	1774	1695	1527	1721	1695	1815
Q Serve(g_s), s	10.1	32.2	32.3	14.4	11.2	48.4	3.3	14.3	37.0	30.5	20.8	20.9
Cycle Q Clear(g_c), s	10.1	32.2	32.3	14.4	11.2	48.4	3.3	14.3	37.0	30.5	20.8	20.9
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	241	488	495	862	1105	758	49	1214	637	677	1383	740
V/C Ratio(X)	0.52	0.81	0.81	0.58	0.30	1.14	0.78	0.45	1.34	1.47	0.45	0.45
Avail Cap(c_a), veh/h	241	488	495	888	1105	758	102	1214	637	677	1383	740
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	0.87	0.87	0.87	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	52.3	52.3	59.0	40.5	39.0	74.9	50.3	45.9	62.2	33.3	33.4
Incr Delay (d2), s/veh	1.9	13.5	13.4	0.8	0.6	75.2	16.4	0.8	159.6	219.8	1.1	2.0
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	5.1	17.6	17.9	6.7	5.6	48.1	1.8	6.8	55.6	35.2	10.0	10.9
LnGrp Delay(d),s/veh	64.2	65.8	65.7	59.8	41.1	114.2	91.3	51.2	205.5	282.1	34.4	35.4
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	D
Approach Vol, veh/h		921			1701			1439			1960	
Approach Delay, s/veh		65.5			83.6			143.7			160.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	31.2	47.3	8.8	67.7	25.6	52.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	8.9	58.6	21.1	48.4
Max Q Clear Time (g_c+I1), s	32.5	39.0	16.4	34.3	5.3	22.9	12.1	50.4
Green Ext Time (p_c), s	0.0	0.0	1.5	3.0	0.0	7.7	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	120.2
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	149	56	13	85	128	50	947	31	234	1049	394
Future Volume (veh/h)	332	149	56	13	85	128	50	947	31	234	1049	394
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	332	149	56	13	85	128	50	947	31	234	1049	394
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	405	295	111	51	356	179	73	1460	455	279	2053	639
Arrive On Green	0.23	0.23	0.23	0.11	0.11	0.11	0.04	0.29	0.29	0.16	0.40	0.40
Sat Flow, veh/h	1774	1292	485	456	3153	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	332	0	205	52	46	128	50	947	31	234	1049	394
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	14.9	0.0	8.4	2.2	2.0	6.6	2.3	13.7	1.2	10.7	13.0	16.6
Cycle Q Clear(g_c), s	14.9	0.0	8.4	2.2	2.0	6.6	2.3	13.7	1.2	10.7	13.0	16.6
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	0	405	208	200	179	73	1460	455	279	2053	639
V/C Ratio(X)	0.82	0.00	0.51	0.25	0.23	0.72	0.69	0.65	0.07	0.84	0.51	0.62
Avail Cap(c_a), veh/h	835	0	836	888	854	764	539	3362	1047	539	3362	1047
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	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	28.3	34.0	33.9	35.9	39.7	26.2	21.8	34.3	18.8	19.9
Incr Delay (d2), s/veh	4.2	0.0	1.0	0.6	0.6	5.3	10.9	0.5	0.1	6.6	0.2	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	7.8	0.0	4.3	1.1	1.0	3.1	1.4	6.5	0.5	5.8	6.1	7.4
LnGrp Delay(d),s/veh	34.9	0.0	29.2	34.6	34.5	41.2	50.6	26.7	21.8	40.9	19.0	20.8
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	C
Approach Vol, veh/h		537			226			1028			1677	
Approach Delay, s/veh		32.8			38.3			27.7			22.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.7	28.6		23.7	7.9	38.4		14.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	12.7	15.7		16.9	4.3	18.6		8.6
Green Ext Time (p_c), s	0.5	8.4		2.2	0.1	11.6		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	220	231	11	196	27	269	1094	49	124	889	323
Future Volume (veh/h)	282	220	231	11	196	27	269	1094	49	124	889	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	273	231	11	196	27	269	1094	49	124	889	323
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	442	362	21	378	54	349	1953	608	191	1500	776
Arrive On Green	0.23	0.23	0.23	0.11	0.12	0.11	0.20	0.38	0.38	0.11	0.29	0.28
Sat Flow, veh/h	1774	1899	1553	165	3039	436	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	244	268	236	123	0	111	269	1094	49	124	889	323
Grp Sat Flow(s),veh/h/ln	1774	1863	1589	1854	0	1786	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.7	10.2	10.6	5.0	0.0	4.6	11.4	13.4	1.6	5.3	11.9	10.4
Cycle Q Clear(g_c), s	9.7	10.2	10.6	5.0	0.0	4.6	11.4	13.4	1.6	5.3	11.9	10.4
Prop In Lane	1.00		0.98	0.09		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	434	370	230	0	222	349	1953	608	191	1500	776
V/C Ratio(X)	0.59	0.62	0.64	0.54	0.00	0.50	0.77	0.56	0.08	0.65	0.59	0.42
Avail Cap(c_a), veh/h	916	962	820	899	0	866	894	3874	1206	469	2658	1136
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	1.00	1.00
Uniform Delay (d), s/veh	27.1	27.3	27.4	32.7	0.0	32.6	30.2	19.2	15.5	34.0	23.9	13.0
Incr Delay (d2), s/veh	1.3	1.4	1.8	1.9	0.0	1.7	3.6	0.3	0.1	3.7	0.4	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	5.5	4.9	2.7	0.0	2.4	6.0	6.3	0.7	2.8	5.6	6.4
LnGrp Delay(d),s/veh	28.4	28.7	29.3	34.6	0.0	34.4	33.8	19.4	15.6	37.7	24.3	13.3
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		748			234			1412			1336	
Approach Delay, s/veh		28.8			34.5			22.0			22.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	33.5		21.5	18.6	26.4		12.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	59.0		39.5	38.5	40.0		37.0
Max Q Clear Time (g_c+I1), s	7.3	15.4		12.6	13.4	13.9		7.0
Green Ext Time (p_c), s	0.2	9.9		4.3	0.8	8.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	262	69	27	542	22	22	20	38	0	0	0
Future Vol, veh/h	7	262	69	27	542	22	22	20	38	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	262	69	27	542	22	22	20	38	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.8	24.1	9.8
HCM LOS	B	C	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	28%	2%	5%	0%
Vol Thru, %	25%	78%	95%	0%
Vol Right, %	47%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	338	569	22
LT Vol	22	7	27	0
Through Vol	20	262	542	0
RT Vol	38	69	0	22
Lane Flow Rate	80	338	569	22
Geometry Grp	2	5	7	7
Degree of Util (X)	0.129	0.453	0.798	0.026
Departure Headway (Hd)	5.805	4.82	5.049	4.32
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	612	744	717	824
Service Time	3.893	2.876	2.8	2.072
HCM Lane V/C Ratio	0.131	0.454	0.794	0.027
HCM Control Delay	9.8	11.8	24.8	7.2
HCM Lane LOS	A	B	C	A
HCM 95th-tile Q	0.4	2.4	8.1	0.1

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Traffic Vol, veh/h	34	563	5	2	615	45	9	1	9	35	0	61
Future Vol, veh/h	34	563	5	2	615	45	9	1	9	35	0	61
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	563	5	2	615	45	9	1	9	35	0	61
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13.6	14.1	9.8	10.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	11%	0%	1%	0%	36%
Vol Thru, %	5%	89%	98%	99%	87%	0%
Vol Right, %	47%	0%	2%	0%	13%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	316	287	310	353	96
LT Vol	9	34	0	2	0	35
Through Vol	1	282	282	308	308	0
RT Vol	9	0	5	0	45	61
Lane Flow Rate	19	316	286	310	352	96
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.035	0.502	0.451	0.483	0.541	0.164
Departure Headway (Hd)	6.545	5.731	5.664	5.621	5.528	6.167
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	547	631	636	644	652	582
Service Time	4.584	3.457	3.39	3.346	3.253	4.199
HCM Lane V/C Ratio	0.035	0.501	0.45	0.481	0.54	0.165
HCM Control Delay	9.8	14.1	13	13.5	14.6	10.4
HCM Lane LOS	A	B	B	B	B	B
HCM 95th-tile Q	0.1	2.8	2.3	2.6	3.3	0.6

Intersection	
Intersection Delay, s/veh	36.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	237	13	21	426	18	73	33	142	106	168	93
Future Vol, veh/h	49	237	13	21	426	18	73	33	142	106	168	93
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	237	13	21	426	18	73	33	142	106	168	93
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	24.9	56.4	20.2	32.9
HCM LOS	C	F	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	16%	5%	29%
Vol Thru, %	13%	79%	92%	46%
Vol Right, %	57%	4%	4%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	248	299	465	367
LT Vol	73	49	21	106
Through Vol	33	237	426	168
RT Vol	142	13	18	93
Lane Flow Rate	248	299	465	367
Geometry Grp	1	1	1	1
Degree of Util (X)	0.546	0.656	0.949	0.779
Departure Headway (Hd)	7.931	7.893	7.35	7.646
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	454	457	493	473
Service Time	6.014	5.971	5.417	5.716
HCM Lane V/C Ratio	0.546	0.654	0.943	0.776
HCM Control Delay	20.2	24.9	56.4	32.9
HCM Lane LOS	C	C	F	D
HCM 95th-tile Q	3.2	4.6	11.7	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	571	30	94	615	79	106	50	215	43	26	133
Future Volume (veh/h)	118	571	30	94	615	79	106	50	215	43	26	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	118	571	30	94	615	79	106	50	215	43	26	133
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	872	46	98	804	103	90	27	831	87	34	831
Arrive On Green	0.03	0.25	0.25	0.03	0.25	0.25	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3421	180	3442	3156	405	8	51	1583	7	65	1583
Grp Volume(v), veh/h	118	295	306	94	344	350	156	0	215	69	0	133
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1721	1770	1791	59	0	1583	72	0	1583
Q Serve(g_s), s	2.0	10.5	10.5	1.9	12.7	12.7	0.3	0.0	5.2	0.3	0.0	3.1
Cycle Q Clear(g_c), s	2.0	10.5	10.5	1.9	12.7	12.7	36.9	0.0	5.2	36.9	0.0	3.1
Prop In Lane	1.00		0.10	1.00		0.23	0.68		1.00	0.62		1.00
Lane Grp Cap(c), veh/h	50	451	466	98	451	456	117	0	831	121	0	831
V/C Ratio(X)	2.34	0.65	0.66	0.96	0.76	0.77	1.33	0.00	0.26	0.57	0.00	0.16
Avail Cap(c_a), veh/h	50	655	677	98	655	663	119	0	833	123	0	833
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	23.4	23.4	34.1	24.2	24.3	27.4	0.0	9.2	18.3	0.0	8.7
Incr Delay (d2), s/veh	658.9	1.6	1.6	77.7	3.2	3.3	196.9	0.0	0.2	6.0	0.0	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	10.2	5.3	5.5	2.0	6.5	6.6	8.6	0.0	2.3	1.5	0.0	1.3
LnGrp Delay(d),s/veh	693.1	25.0	25.0	111.8	27.5	27.5	224.3	0.0	9.3	24.3	0.0	8.8
LnGrp LOS	F	C	C	F	C	C	F		A	C		A
Approach Vol, veh/h		719			788			371			202	
Approach Delay, s/veh		134.7			37.5			99.7			14.1	
Approach LOS		F			D			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	22.5		41.4	6.5	22.5		41.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.9	12.5		38.9	4.0	14.7		38.9
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	3.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	355	40	641	702	1245	66	741	762	819	871	70
Future Volume (veh/h)	137	355	40	641	702	1245	66	741	762	819	871	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	355	40	641	702	1161	66	741	718	819	871	70
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	858	95	631	1087	831	84	1214	564	854	2106	169
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.05	0.24	0.24	0.25	0.44	0.44
Sat Flow, veh/h	1774	3166	352	5003	3539	1427	1774	5085	1527	3442	4790	384
Grp Volume(v), veh/h	137	197	198	641	702	1161	66	741	718	819	615	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1427	1774	1695	1527	1721	1695	1784
Q Serve(g_s), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.3	19.4
Cycle Q Clear(g_c), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.3	19.4
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	160	480	474	631	1087	831	84	1214	564	854	1491	784
V/C Ratio(X)	0.86	0.41	0.42	1.02	0.65	1.40	0.79	0.61	1.27	0.96	0.41	0.42
Avail Cap(c_a), veh/h	207	480	474	631	1087	831	141	1214	564	855	1491	784
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	0.62	0.62	0.62	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	46.3	46.5	67.7	46.4	35.6	73.1	52.6	49.5	57.5	29.7	29.8
Incr Delay (d2), s/veh	23.4	2.6	2.7	32.0	1.8	183.2	10.3	1.5	131.6	21.4	0.8	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	6.8	7.2	7.4	10.9	13.2	77.6	3.0	9.6	44.8	19.8	9.2	9.9
LnGrp Delay(d),s/veh	93.0	48.9	49.2	99.8	48.2	218.8	83.4	54.1	181.1	79.0	30.6	31.4
LnGrp LOS	F	D	D	F	D	F	F	D	F	E	C	C
Approach Vol, veh/h		532			2504			1525			1760	
Approach Delay, s/veh		60.4			140.5			115.2			53.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.9	41.5	24.1	46.5	11.8	72.6	18.4	52.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	12.3	63.2	18.1	43.4
Max Q Clear Time (g_c+I1), s	38.4	39.0	21.6	16.5	7.7	21.4	13.8	49.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	7.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.3
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	103	86	40	113	220	89	963	52	273	1284	263
Future Volume (veh/h)	296	103	86	40	113	220	89	963	52	273	1284	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	296	103	86	40	113	220	89	963	52	273	1284	263
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	189	158	148	447	263	115	1367	426	316	1943	605
Arrive On Green	0.20	0.20	0.20	0.17	0.17	0.17	0.06	0.27	0.27	0.18	0.38	0.38
Sat Flow, veh/h	1774	940	785	892	2695	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	296	0	189	81	72	220	89	963	52	273	1284	263
Grp Sat Flow(s),veh/h/ln	1774	0	1724	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	15.5	0.0	9.5	3.8	3.4	13.0	4.8	16.5	2.4	14.5	20.2	11.9
Cycle Q Clear(g_c), s	15.5	0.0	9.5	3.8	3.4	13.0	4.8	16.5	2.4	14.5	20.2	11.9
Prop In Lane	1.00		0.46	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	0	347	302	294	263	115	1367	426	316	1943	605
V/C Ratio(X)	0.83	0.00	0.54	0.27	0.24	0.84	0.78	0.70	0.12	0.86	0.66	0.43
Avail Cap(c_a), veh/h	724	0	703	441	429	384	284	2179	679	687	3335	1038
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	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	34.7	35.3	35.1	39.1	44.6	31.9	26.8	38.7	24.7	22.2
Incr Delay (d2), s/veh	4.9	0.0	1.3	0.5	0.4	10.2	10.6	0.7	0.1	7.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	4.6	1.9	1.7	6.4	2.7	7.8	1.1	7.7	9.5	5.3
LnGrp Delay(d),s/veh	42.0	0.0	36.0	35.7	35.5	49.3	55.2	32.6	26.9	45.7	25.1	22.7
LnGrp LOS	D		D	D	D	D	E	C	C	D	C	C
Approach Vol, veh/h		485			373			1104			1820	
Approach Delay, s/veh		39.7			43.7			34.2			27.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.7	30.5		24.0	10.8	41.5		20.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	16.5	18.5		17.5	6.8	22.2		15.0
Green Ext Time (p_c), s	0.8	7.5		2.0	0.1	14.4		1.0

Intersection Summary		
HCM 2010 Ctrl Delay		32.8
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	184	239	22	229	115	267	986	24	113	1247	277
Future Volume (veh/h)	250	184	239	22	229	115	267	986	24	113	1247	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	224	220	239	22	229	115	267	986	10	113	1247	277
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	385	328	32	337	176	325	2210	688	165	1751	873
Arrive On Green	0.21	0.21	0.21	0.14	0.16	0.14	0.18	0.43	0.43	0.09	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	206	2172	1136	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	224	220	239	198	0	168	267	986	10	113	1247	277
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1662	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.4	11.5	15.3	11.0	0.0	10.4	15.7	14.7	0.4	6.7	23.1	10.3
Cycle Q Clear(g_c), s	12.4	11.5	15.3	11.0	0.0	10.4	15.7	14.7	0.4	6.7	23.1	10.3
Prop In Lane	1.00		1.00	0.11		0.68	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	385	328	287	0	258	325	2210	688	165	1751	873
V/C Ratio(X)	0.61	0.57	0.73	0.69	0.00	0.65	0.82	0.45	0.01	0.69	0.71	0.32
Avail Cap(c_a), veh/h	630	662	562	658	0	590	556	3040	946	314	2346	1058
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	1.00	1.00
Uniform Delay (d), s/veh	39.0	38.7	40.2	43.4	0.0	43.6	42.6	21.5	17.4	47.6	30.9	13.2
Incr Delay (d2), s/veh	1.6	1.3	3.1	2.9	0.0	2.8	5.2	0.1	0.0	5.0	0.7	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	6.3	6.1	7.0	5.8	0.0	4.9	8.2	6.9	0.2	3.5	10.8	6.6
LnGrp Delay(d),s/veh	40.7	40.0	43.3	46.3	0.0	46.3	47.8	21.6	17.4	52.7	31.5	13.4
LnGrp LOS	D	D	D	D		D	D	C	B	D	C	B
Approach Vol, veh/h		683			366			1263			1637	
Approach Delay, s/veh		41.4			46.3			27.1			29.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	50.1		25.4	22.8	40.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.7	63.3		37.0	32.5	48.5		37.0
Max Q Clear Time (g_c+I1), s	8.7	16.7		17.3	17.7	25.1		13.0
Green Ext Time (p_c), s	0.2	8.5		3.6	0.7	10.7		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	449	96	10	405	10	24	25	93	0	0	0
Future Vol, veh/h	4	449	96	10	405	10	24	25	93	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	449	96	10	405	10	24	25	93	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	22	17.3	10.8
HCM LOS	C	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	17%	1%	2%	0%
Vol Thru, %	18%	82%	98%	0%
Vol Right, %	65%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	142	549	415	10
LT Vol	24	4	10	0
Through Vol	25	449	405	0
RT Vol	93	96	0	10
Lane Flow Rate	142	549	415	10
Geometry Grp	2	5	7	7
Degree of Util (X)	0.234	0.761	0.637	0.013
Departure Headway (Hd)	5.92	4.988	5.522	4.802
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	606	730	656	746
Service Time	3.965	2.988	3.25	2.529
HCM Lane V/C Ratio	0.234	0.752	0.633	0.013
HCM Control Delay	10.8	22	17.5	7.6
HCM Lane LOS	B	C	C	A
HCM 95th-tile Q	0.9	7.2	4.6	0

Intersection	
Intersection Delay, s/veh	35.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	1047	5	4	565	33	4	2	10	61	0	65
Future Vol, veh/h	83	1047	5	4	565	33	4	2	10	61	0	65
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	1047	5	4	565	33	4	2	10	61	0	65
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	48.3	16.7	10.2	11.7
HCM LOS	E	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	25%	14%	0%	1%	0%	48%
Vol Thru, %	12%	86%	99%	99%	90%	0%
Vol Right, %	62%	0%	1%	0%	10%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	607	529	287	316	126
LT Vol	4	83	0	4	0	61
Through Vol	2	524	524	283	283	0
RT Vol	10	0	5	0	33	65
Lane Flow Rate	16	606	528	286	316	126
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.031	1	0.86	0.52	0.566	0.235
Departure Headway (Hd)	7.059	5.934	5.858	6.535	6.454	6.7
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	515	613	618	556	562	546
Service Time	4.989	3.678	3.602	4.23	4.15	4.627
HCM Lane V/C Ratio	0.031	0.989	0.854	0.514	0.562	0.231
HCM Control Delay	10.2	60.5	34.3	16.1	17.2	11.7
HCM Lane LOS	B	F	D	C	C	B
HCM 95th-tile Q	0.1	15	9.7	3	3.5	0.9

Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	85	396	61	100	372	49	41	32	145	12	31	12
Future Vol, veh/h	85	396	61	100	372	49	41	32	145	12	31	12
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	396	61	100	372	49	41	32	145	12	31	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	35.6	32.7	14.1	11.6
HCM LOS	E	D	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	16%	19%	22%
Vol Thru, %	15%	73%	71%	56%
Vol Right, %	67%	11%	9%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	542	521	55
LT Vol	41	85	100	12
Through Vol	32	396	372	31
RT Vol	145	61	49	12
Lane Flow Rate	218	542	521	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.401	0.871	0.845	0.115
Departure Headway (Hd)	6.618	5.788	5.836	7.53
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	543	629	620	474
Service Time	4.681	3.809	3.856	5.617
HCM Lane V/C Ratio	0.401	0.862	0.84	0.116
HCM Control Delay	14.1	35.6	32.7	11.6
HCM Lane LOS	B	E	D	B
HCM 95th-tile Q	1.9	10.1	9.2	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	641	100	189	418	55	29	23	103	43	60	90
Future Volume (veh/h)	140	641	100	189	418	55	29	23	103	43	60	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	140	641	100	189	418	55	29	23	103	43	60	90
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1090	170	197	1118	146	219	126	319	193	192	319
Arrive On Green	0.06	0.36	0.36	0.06	0.36	0.36	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3070	478	3442	3148	412	289	626	1583	234	955	1583
Grp Volume(v), veh/h	140	369	372	189	234	239	52	0	103	103	0	90
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1770	1790	915	0	1583	1188	0	1583
Q Serve(g_s), s	2.0	5.9	6.0	1.9	3.4	3.5	0.1	0.0	1.9	0.2	0.0	1.7
Cycle Q Clear(g_c), s	2.0	5.9	6.0	1.9	3.4	3.5	4.6	0.0	1.9	4.6	0.0	1.7
Prop In Lane	1.00		0.27	1.00		0.23	0.56		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	102	628	631	197	628	636	345	0	319	385	0	319
V/C Ratio(X)	1.38	0.59	0.59	0.96	0.37	0.38	0.15	0.00	0.32	0.27	0.00	0.28
Avail Cap(c_a), veh/h	102	1317	1324	197	1317	1332	1588	0	1677	1717	0	1677
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	9.2	9.2	16.4	8.4	8.4	11.6	0.0	11.9	11.9	0.0	11.8
Incr Delay (d2), s/veh	220.2	0.9	0.9	52.3	0.4	0.4	0.2	0.0	0.6	0.4	0.0	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	7.2	3.0	3.0	2.3	1.7	1.7	0.4	0.0	0.9	0.9	0.0	0.8
LnGrp Delay(d),s/veh	236.7	10.1	10.1	68.7	8.7	8.8	11.8	0.0	12.5	12.2	0.0	12.3
LnGrp LOS	F	B	B	E	A	A	B		B	B		B
Approach Vol, veh/h		881			662			155			193	
Approach Delay, s/veh		46.1			25.9			12.3			12.3	
Approach LOS		D			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	16.9		11.7	6.5	16.9		11.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0				
Max Q Clear Time (g_c+I1), s	3.9	8.0		6.6	4.0	5.5		6.6				
Green Ext Time (p_c), s	0.0	4.5		0.9	0.0	2.8		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			32.8									
HCM 2010 LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	749	47	499	336	945	38	554	907	996	918	43
Future Volume (veh/h)	125	749	47	499	336	945	38	554	907	996	918	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	125	749	47	499	336	861	38	554	863	996	918	43
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	929	58	857	1105	758	49	1214	636	677	2028	95
Arrive On Green	0.14	0.28	0.28	0.17	0.31	0.31	0.03	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3354	210	5003	3539	1430	1774	5085	1527	3442	4972	232
Grp Volume(v), veh/h	125	395	401	499	336	861	38	554	863	996	625	336
Grp Sat Flow(s),veh/h/ln	1774	1770	1795	1668	1770	1430	1774	1695	1527	1721	1695	1814
Q Serve(g_s), s	10.1	32.2	32.2	14.2	11.2	48.4	3.3	14.4	37.0	30.5	20.8	20.8
Cycle Q Clear(g_c), s	10.1	32.2	32.2	14.2	11.2	48.4	3.3	14.4	37.0	30.5	20.8	20.8
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	241	490	497	857	1105	758	49	1214	636	677	1383	740
V/C Ratio(X)	0.52	0.81	0.81	0.58	0.30	1.14	0.78	0.46	1.36	1.47	0.45	0.45
Avail Cap(c_a), veh/h	241	490	497	888	1105	758	102	1214	636	677	1383	740
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	0.87	0.87	0.87	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	52.2	52.2	59.1	40.5	39.0	74.9	50.4	46.0	62.2	33.3	33.3
Incr Delay (d2), s/veh	1.9	13.2	13.1	0.8	0.6	75.2	16.2	0.8	167.8	219.8	1.1	2.0
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	5.1	17.6	17.9	6.6	5.6	48.1	1.8	6.9	56.7	35.2	9.9	10.9
LnGrp Delay(d),s/veh	64.2	65.4	65.3	59.9	41.1	114.2	91.1	51.3	213.8	282.1	34.4	35.3
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	D
Approach Vol, veh/h		921			1696			1455			1957	
Approach Delay, s/veh		65.2			83.7			148.7			160.6	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	31.1	47.4	8.8	67.7	25.6	52.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	30.5	37.0	27.5	42.0	8.9	58.6	21.1	48.4
Max Q Clear Time (g_c+I1), s	32.5	39.0	16.2	34.2	5.3	22.8	12.1	50.4
Green Ext Time (p_c), s	0.0	0.0	1.5	3.0	0.0	7.7	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.5
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	149	56	13	85	128	50	947	31	234	1049	386
Future Volume (veh/h)	347	149	56	13	85	128	50	947	31	234	1049	386
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	347	149	56	13	85	128	50	947	31	234	1049	386
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	304	114	51	354	178	72	1449	451	279	2041	636
Arrive On Green	0.24	0.24	0.24	0.11	0.11	0.11	0.04	0.28	0.28	0.16	0.40	0.40
Sat Flow, veh/h	1774	1292	485	456	3153	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	347	0	205	52	46	128	50	947	31	234	1049	386
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	15.9	0.0	8.5	2.2	2.0	6.7	2.4	14.0	1.2	11.0	13.3	16.5
Cycle Q Clear(g_c), s	15.9	0.0	8.5	2.2	2.0	6.7	2.4	14.0	1.2	11.0	13.3	16.5
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	0	419	206	199	178	72	1449	451	279	2041	636
V/C Ratio(X)	0.83	0.00	0.49	0.25	0.23	0.72	0.69	0.65	0.07	0.84	0.51	0.61
Avail Cap(c_a), veh/h	818	0	819	870	837	749	528	3295	1026	528	3295	1026
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	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	28.3	34.8	34.7	36.7	40.6	26.9	22.3	35.1	19.3	20.3
Incr Delay (d2), s/veh	4.3	0.0	0.9	0.6	0.6	5.4	11.3	0.5	0.1	6.7	0.2	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	8.3	0.0	4.3	1.2	1.0	3.2	1.4	6.6	0.5	5.9	6.3	7.4
LnGrp Delay(d),s/veh	35.4	0.0	29.2	35.4	35.2	42.1	51.9	27.4	22.4	41.8	19.5	21.2
LnGrp LOS	D		C	D	D	D	D	C	C	D	B	C
Approach Vol, veh/h		552			226			1028			1669	
Approach Delay, s/veh		33.1			39.2			28.5			23.0	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.9	28.9		24.7	8.0	38.9		14.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	13.0	16.0		17.9	4.4	18.5		8.7
Green Ext Time (p_c), s	0.5	8.4		2.3	0.1	11.6		1.0

Intersection Summary		
HCM 2010 Ctrl Delay		27.3
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	220	238	11	196	27	265	1094	49	124	889	323
Future Volume (veh/h)	282	220	238	11	196	27	265	1094	49	124	889	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	247	269	238	11	196	27	265	1094	49	124	889	323
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	416	437	372	21	378	54	345	1942	605	191	1501	779
Arrive On Green	0.23	0.23	0.23	0.11	0.12	0.11	0.19	0.38	0.38	0.11	0.30	0.28
Sat Flow, veh/h	1774	1863	1583	165	3039	436	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	247	269	238	123	0	111	265	1094	49	124	889	323
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1854	0	1786	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.8	10.2	10.7	5.0	0.0	4.6	11.2	13.4	1.6	5.3	11.8	10.3
Cycle Q Clear(g_c), s	9.8	10.2	10.7	5.0	0.0	4.6	11.2	13.4	1.6	5.3	11.8	10.3
Prop In Lane	1.00		1.00	0.09		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	437	372	231	0	222	345	1942	605	191	1501	779
V/C Ratio(X)	0.59	0.62	0.64	0.54	0.00	0.50	0.77	0.56	0.08	0.65	0.59	0.41
Avail Cap(c_a), veh/h	917	963	818	900	0	867	895	3878	1208	470	2660	1140
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	1.00	1.00
Uniform Delay (d), s/veh	27.0	27.1	27.3	32.6	0.0	32.6	30.2	19.3	15.6	33.9	23.9	12.9
Incr Delay (d2), s/veh	1.4	1.4	1.8	1.9	0.0	1.7	3.6	0.3	0.1	3.7	0.4	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	5.0	5.4	4.9	2.7	0.0	2.4	5.8	6.3	0.7	2.8	5.6	6.4
LnGrp Delay(d),s/veh	28.3	28.6	29.2	34.6	0.0	34.3	33.9	19.6	15.7	37.6	24.3	13.2
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		754			234			1408			1336	
Approach Delay, s/veh		28.7			34.5			22.1			22.8	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	33.3		21.6	18.4	26.4		12.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	19.5	59.0		39.5	38.5	40.0		37.0				
Max Q Clear Time (g_c+I1), s	7.3	15.4		12.7	13.2	13.8		7.0				
Green Ext Time (p_c), s	0.2	9.9		4.4	0.8	8.1		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			24.5									
HCM 2010 LOS			C									
Notes												

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	20.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	262	70	43	542	22	22	20	36	0	0	0
Future Vol, veh/h	7	262	70	43	542	22	22	20	36	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	262	70	43	542	22	22	20	36	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	11.9	26.2	9.8
HCM LOS	B	D	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	28%	2%	7%	0%
Vol Thru, %	26%	77%	93%	0%
Vol Right, %	46%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	339	585	22
LT Vol	22	7	43	0
Through Vol	20	262	542	0
RT Vol	36	70	0	22
Lane Flow Rate	78	339	585	22
Geometry Grp	2	5	7	7
Degree of Util (X)	0.127	0.455	0.822	0.026
Departure Headway (Hd)	5.855	4.834	5.058	4.317
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	742	714	825
Service Time	3.944	2.89	2.81	2.068
HCM Lane V/C Ratio	0.129	0.457	0.819	0.027
HCM Control Delay	9.8	11.9	26.9	7.2
HCM Lane LOS	A	B	D	A
HCM 95th-tile Q	0.4	2.4	8.9	0.1

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	563	5	2	615	52	9	1	9	34	0	61
Future Vol, veh/h	37	563	5	2	615	52	9	1	9	34	0	61
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	563	5	2	615	52	9	1	9	34	0	61
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13.7	14.2	9.8	10.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	12%	0%	1%	0%	36%
Vol Thru, %	5%	88%	98%	99%	86%	0%
Vol Right, %	47%	0%	2%	0%	14%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	319	287	310	360	95
LT Vol	9	37	0	2	0	34
Through Vol	1	282	282	308	308	0
RT Vol	9	0	5	0	52	61
Lane Flow Rate	19	318	286	310	360	95
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.035	0.508	0.451	0.483	0.551	0.163
Departure Headway (Hd)	6.554	5.739	5.668	5.621	5.515	6.174
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	546	627	636	641	654	581
Service Time	4.596	3.467	3.396	3.349	3.243	4.206
HCM Lane V/C Ratio	0.035	0.507	0.45	0.484	0.55	0.164
HCM Control Delay	9.8	14.3	13	13.5	14.8	10.4
HCM Lane LOS	A	B	B	B	B	B
HCM 95th-tile Q	0.1	2.9	2.3	2.6	3.4	0.6

Intersection	
Intersection Delay, s/veh	40.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	235	13	21	441	18	73	33	142	106	168	94
Future Vol, veh/h	49	235	13	21	441	18	73	33	142	106	168	94
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	235	13	21	441	18	73	33	142	106	168	94
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.4	65	20.8	34.5
HCM LOS	D	F	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	16%	4%	29%
Vol Thru, %	13%	79%	92%	46%
Vol Right, %	57%	4%	4%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	248	297	480	368
LT Vol	73	49	21	106
Through Vol	33	235	441	168
RT Vol	142	13	18	94
Lane Flow Rate	248	297	480	368
Geometry Grp	1	1	1	1
Degree of Util (X)	0.554	0.66	0.986	0.791
Departure Headway (Hd)	8.047	8.003	7.398	7.742
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	446	448	490	467
Service Time	6.136	6.089	5.468	5.817
HCM Lane V/C Ratio	0.556	0.663	0.98	0.788
HCM Control Delay	20.8	25.4	65	34.5
HCM Lane LOS	C	D	F	D
HCM 95th-tile Q	3.3	4.7	12.9	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	570	30	94	622	79	106	50	215	43	26	133
Future Volume (veh/h)	118	570	30	94	622	79	106	50	215	43	26	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	118	570	30	94	622	79	106	50	215	43	26	133
Adj No. of Lanes	1	2	0	2	2	0	0	1	1	0	1	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	878	46	98	811	103	90	27	829	86	34	829
Arrive On Green	0.03	0.26	0.26	0.03	0.26	0.26	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3421	180	3442	3161	401	8	51	1583	7	65	1583
Grp Volume(v), veh/h	118	295	305	94	348	353	156	0	215	69	0	133
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1721	1770	1792	59	0	1583	72	0	1583
Q Serve(g_s), s	2.0	10.5	10.5	1.9	12.8	12.9	0.3	0.0	5.3	0.3	0.0	3.1
Cycle Q Clear(g_c), s	2.0	10.5	10.5	1.9	12.8	12.9	36.9	0.0	5.3	36.9	0.0	3.1
Prop In Lane	1.00		0.10	1.00		0.22	0.68		1.00	0.62		1.00
Lane Grp Cap(c), veh/h	50	454	470	98	454	460	117	0	829	120	0	829
V/C Ratio(X)	2.34	0.65	0.65	0.96	0.77	0.77	1.34	0.00	0.26	0.57	0.00	0.16
Avail Cap(c_a), veh/h	50	653	676	98	653	661	119	0	831	122	0	831
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	23.4	23.4	34.2	24.2	24.3	27.4	0.0	9.3	18.4	0.0	8.7
Incr Delay (d2), s/veh	661.6	1.6	1.5	78.6	3.4	3.4	199.1	0.0	0.2	6.1	0.0	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	10.2	5.3	5.5	2.0	6.6	6.8	8.7	0.0	2.3	1.5	0.0	1.4
LnGrp Delay(d),s/veh	695.8	24.9	24.9	112.8	27.6	27.6	226.5	0.0	9.4	24.5	0.0	8.8
LnGrp LOS	F	C	C	F	C	C	F		A	C		A
Approach Vol, veh/h		718			795			371			202	
Approach Delay, s/veh		135.2			37.7			100.7			14.2	
Approach LOS		F			D			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	22.6		41.4	6.5	22.6		41.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	2.0	26.0		37.0	2.0	26.0		37.0
Max Q Clear Time (g_c+I1), s	3.9	12.5		38.9	4.0	14.9		38.9
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	3.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	355	40	650	702	1245	66	740	761	819	876	70
Future Volume (veh/h)	137	355	40	650	702	1245	66	740	761	819	876	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	355	40	650	702	1161	66	740	717	819	876	70
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	858	95	631	1087	831	84	1214	564	854	2107	168
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.05	0.24	0.24	0.25	0.44	0.44
Sat Flow, veh/h	1774	3166	352	5003	3539	1427	1774	5085	1527	3442	4793	382
Grp Volume(v), veh/h	137	197	198	650	702	1161	66	740	717	819	619	327
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1427	1774	1695	1527	1721	1695	1784
Q Serve(g_s), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.4	19.5
Cycle Q Clear(g_c), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.4	19.5
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	160	480	474	631	1087	831	84	1214	564	854	1491	784
V/C Ratio(X)	0.86	0.41	0.42	1.03	0.65	1.40	0.79	0.61	1.27	0.96	0.42	0.42
Avail Cap(c_a), veh/h	207	480	474	631	1087	831	141	1214	564	855	1491	784
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	0.62	0.62	0.62	0.66	0.66	0.66	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	46.3	46.5	67.7	46.4	35.6	73.1	52.6	49.5	57.5	29.8	29.8
Incr Delay (d2), s/veh	23.4	2.6	2.7	36.0	1.8	183.2	10.4	1.5	131.0	21.4	0.9	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	6.8	7.2	7.4	11.1	13.2	77.6	3.0	9.6	44.7	19.8	9.3	10.0
LnGrp Delay(d),s/veh	93.0	48.9	49.2	103.7	48.2	218.8	83.5	54.1	180.4	79.0	30.6	31.4
LnGrp LOS	F	D	D	F	D	F	F	D	F	E	C	C
Approach Vol, veh/h		532			2513			1523			1765	
Approach Delay, s/veh		60.4			141.4			114.8			53.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.9	41.5	24.1	46.5	11.8	72.6	18.4	52.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	12.3	63.2	18.1	43.4
Max Q Clear Time (g_c+I1), s	38.4	39.0	21.6	16.5	7.7	21.5	13.8	49.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	7.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.6
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	103	86	40	113	220	89	963	52	273	1284	278
Future Volume (veh/h)	294	103	86	40	113	220	89	963	52	273	1284	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	294	103	86	40	113	220	89	963	52	273	1284	278
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	188	157	148	448	263	115	1368	426	316	1945	605
Arrive On Green	0.20	0.20	0.20	0.17	0.17	0.17	0.06	0.27	0.27	0.18	0.38	0.38
Sat Flow, veh/h	1774	940	785	892	2695	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	294	0	189	81	72	220	89	963	52	273	1284	278
Grp Sat Flow(s),veh/h/ln	1774	0	1724	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	15.3	0.0	9.5	3.8	3.4	13.0	4.8	16.5	2.4	14.4	20.1	12.7
Cycle Q Clear(g_c), s	15.3	0.0	9.5	3.8	3.4	13.0	4.8	16.5	2.4	14.4	20.1	12.7
Prop In Lane	1.00		0.46	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	0	345	302	294	263	115	1368	426	316	1945	605
V/C Ratio(X)	0.83	0.00	0.55	0.27	0.24	0.84	0.78	0.70	0.12	0.86	0.66	0.46
Avail Cap(c_a), veh/h	726	0	705	443	431	385	285	2186	681	689	3345	1041
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	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	34.7	35.1	35.0	39.0	44.5	31.8	26.7	38.5	24.6	22.3
Incr Delay (d2), s/veh	4.9	0.0	1.4	0.5	0.4	10.1	10.6	0.7	0.1	7.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	4.6	1.9	1.7	6.4	2.7	7.8	1.1	7.7	9.5	5.7
LnGrp Delay(d),s/veh	41.9	0.0	36.0	35.6	35.4	49.1	55.0	32.5	26.8	45.6	25.0	22.9
LnGrp LOS	D		D	D	D	D	E	C	C	D	C	C
Approach Vol, veh/h		483			373			1104			1835	
Approach Delay, s/veh		39.6			43.5			34.0			27.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.7	30.5		23.8	10.7	41.4		20.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	16.4	18.5		17.3	6.8	22.1		15.0
Green Ext Time (p_c), s	0.8	7.5		2.0	0.1	14.5		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	184	238	22	229	115	274	986	24	113	1247	277
Future Volume (veh/h)	250	184	238	22	229	115	274	986	24	113	1247	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	224	220	238	22	229	115	274	986	10	113	1247	277
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	383	326	32	336	176	331	2224	692	164	1745	869
Arrive On Green	0.21	0.21	0.21	0.14	0.15	0.14	0.19	0.44	0.44	0.09	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	206	2172	1136	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	224	220	238	198	0	168	274	986	10	113	1247	277
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1662	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.5	11.6	15.4	11.1	0.0	10.4	16.2	14.8	0.4	6.7	23.3	10.5
Cycle Q Clear(g_c), s	12.5	11.6	15.4	11.1	0.0	10.4	16.2	14.8	0.4	6.7	23.3	10.5
Prop In Lane	1.00		1.00	0.11		0.68	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	383	326	286	0	257	331	2224	692	164	1745	869
V/C Ratio(X)	0.61	0.57	0.73	0.69	0.00	0.65	0.83	0.44	0.01	0.69	0.71	0.32
Avail Cap(c_a), veh/h	625	656	558	653	0	586	552	3015	939	312	2326	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	1.00	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	39.5	39.1	40.6	43.8	0.0	44.0	42.8	21.5	17.4	48.1	31.2	13.5
Incr Delay (d2), s/veh	1.7	1.4	3.2	3.0	0.0	2.8	5.3	0.1	0.0	5.0	0.7	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	6.3	6.1	7.0	5.9	0.0	5.0	8.4	7.0	0.2	3.5	11.0	6.7
LnGrp Delay(d),s/veh	41.1	40.5	43.7	46.8	0.0	46.8	48.0	21.6	17.4	53.1	31.9	13.7
LnGrp LOS	D	D	D	D		D	D	C	B	D	C	B
Approach Vol, veh/h		682			366			1270			1637	
Approach Delay, s/veh		41.8			46.8			27.3			30.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	50.8		25.5	23.4	40.5		19.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.7	63.3		37.0	32.5	48.5		37.0
Max Q Clear Time (g_c+I1), s	8.7	16.8		17.4	18.2	25.3		13.1
Green Ext Time (p_c), s	0.2	8.5		3.6	0.7	10.7		2.3

Intersection Summary			
HCM 2010 Ctrl Delay			32.8
HCM 2010 LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Appendix C

Peak-Hour Signal Warrant Analysis

1868 Ogden Drive

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Murchison Drive — Critical Approach Speed* (mph) 25

Minor Street: Magnolia Avenue — Critical Approach Speed* (mph) 25

Posted Speed.

Critical speed of major street traffic > 50 mph (64 km/h)……………………… ☐ or
In built up area of isolated community of < 10,000 population……………………… ☐ } **Rural (R)**

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

AM PEAK PERIOD	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB	NB	NB		
Highest Minor Street Average Delay (sec/veh)	11.5	11.6	11.5	11.7	14.0	14.1		
Corresponding Minor Street Approach Volume (veh/hr)	182	182	182	182	218	218		
Minor Street Total Delay (veh-hrs)	0.6	0.6	0.6	0.6	0.8	0.9		
Total Entering Volume (veh/hr)	1112	1141	1119	1148	1329	1336		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes	Yes	Yes		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

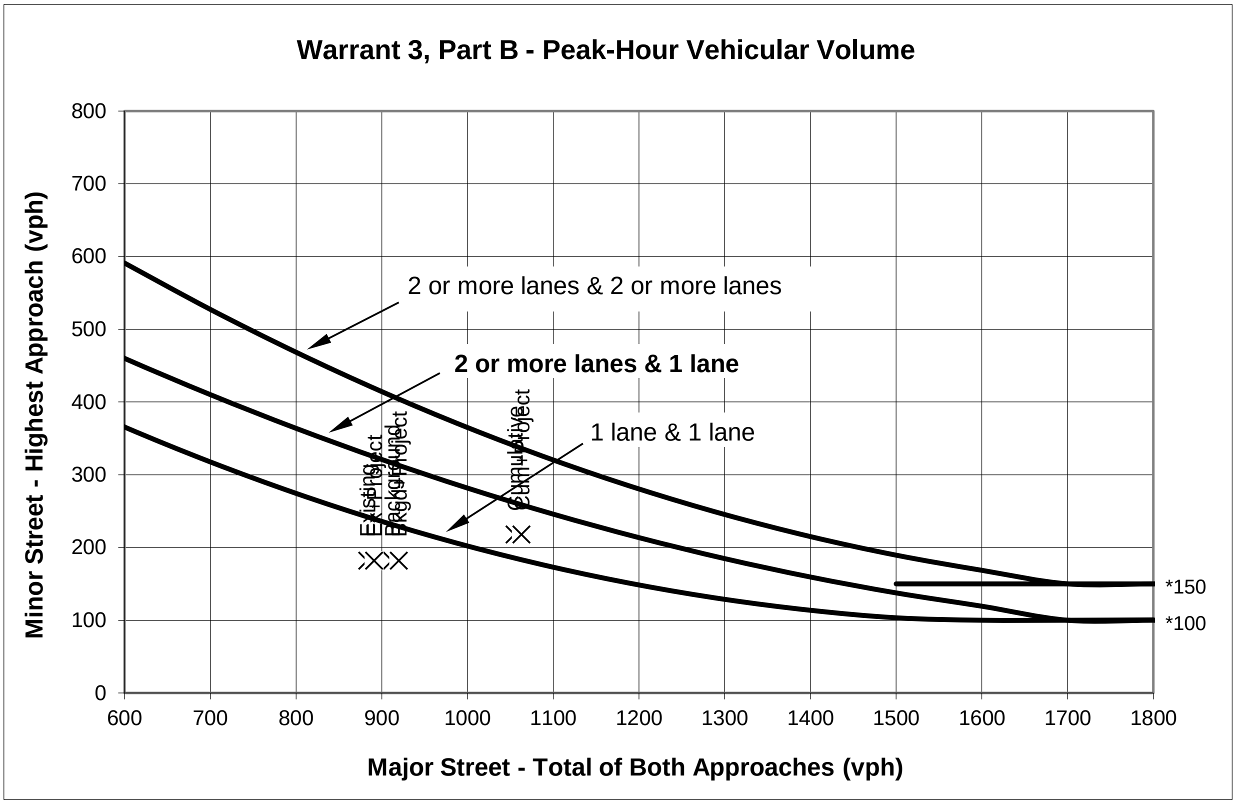
		Approach Lanes: One	Approach Lanes: 2 or More	AM PEAK PERIOD: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		883	912	891	920	1055	1063		
Minor Street - Highest Approach	Magnolia Avenue	X		182	182	182	182	218	218		
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**Yes**	**Yes**		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive

Murchison Drive & Magnolia Avenue **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes: One	Approach Lanes: 2 or More	AM PEAK PERIOD: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		883	912	891	920	1055	1063		
Minor Street - Highest Approach	Magnolia Avenue	X		182	182	182	182	218	218		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**Yes**	**Yes**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Murchison Drive — Critical Approach Speed* (mph) 25

Minor Street: Magnolia Avenue — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)………………………… ☐ or

In built up area of isolated community of < 10,000 population………………… ☐ } **Rural (R)**

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR

	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	SB	SB	SB	SB	SB	SB		
Highest Minor Street Average Delay (sec/veh)	17.3	18.1	17.7	18.5	32.9	34.5		
Corresponding Minor Street Approach Volume (veh/hr)	312	312	313	313	367	368		
Minor Street Total Delay (veh-hrs)	1.5	1.6	1.5	1.6	3.4	3.5		
Total Entering Volume (veh/hr)	1174	1207	1188	1221	1379	1393		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes	Yes	Yes		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

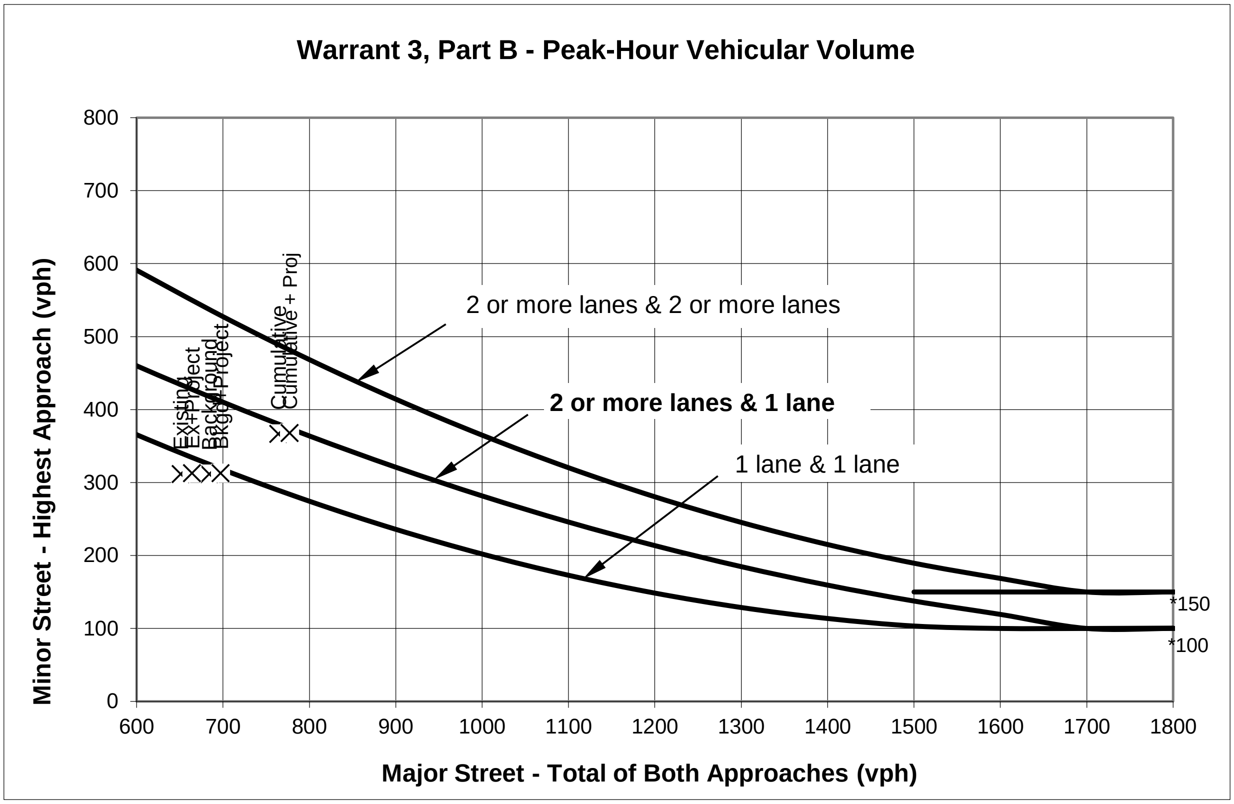
		Approach Lanes: One	Approach Lanes: 2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project	0:00	
Major Street - Both Approaches	Murchison Drive	X		651	684	664	697	764	777	0	
Minor Street - Highest Approach	Magnolia Avenue	X		312	312	313	313	367	368	0	
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**Yes**	**Yes**	**0**	

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive

Murchison Drive & Magnolia Avenue **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes: One	Approach Lanes: 2 or More	PM PEAK HOUR: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		651	684	664	697	764	777		
Minor Street - Highest Approach	Magnolia Avenue	X		312	312	313	313	367	368		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**Yes**	**Yes**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Murchison Drive — Critical Approach Speed* (mph) 25

Minor Street: Ogden Drive/ Mills HS Dwy — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)…………………………… ☐ or

In built up area of isolated community of < 10,000 population…………………… ☐ } **Rural (R)**

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

	AM PEAK PERIOD							
	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB	NB	NB		
Highest Minor Street Average Delay (sec/veh)	9.6	9.7	9.7	9.8	10.5	10.8		
Corresponding Minor Street Approach Volume (veh/hr)	104	104	122	122	124	142		
Minor Street Total Delay (veh-hrs)	0.3	0.3	0.3	0.3	0.4	0.4		
Total Entering Volume (veh/hr)	927	956	935	964	1108	1116		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes	Yes	Yes		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

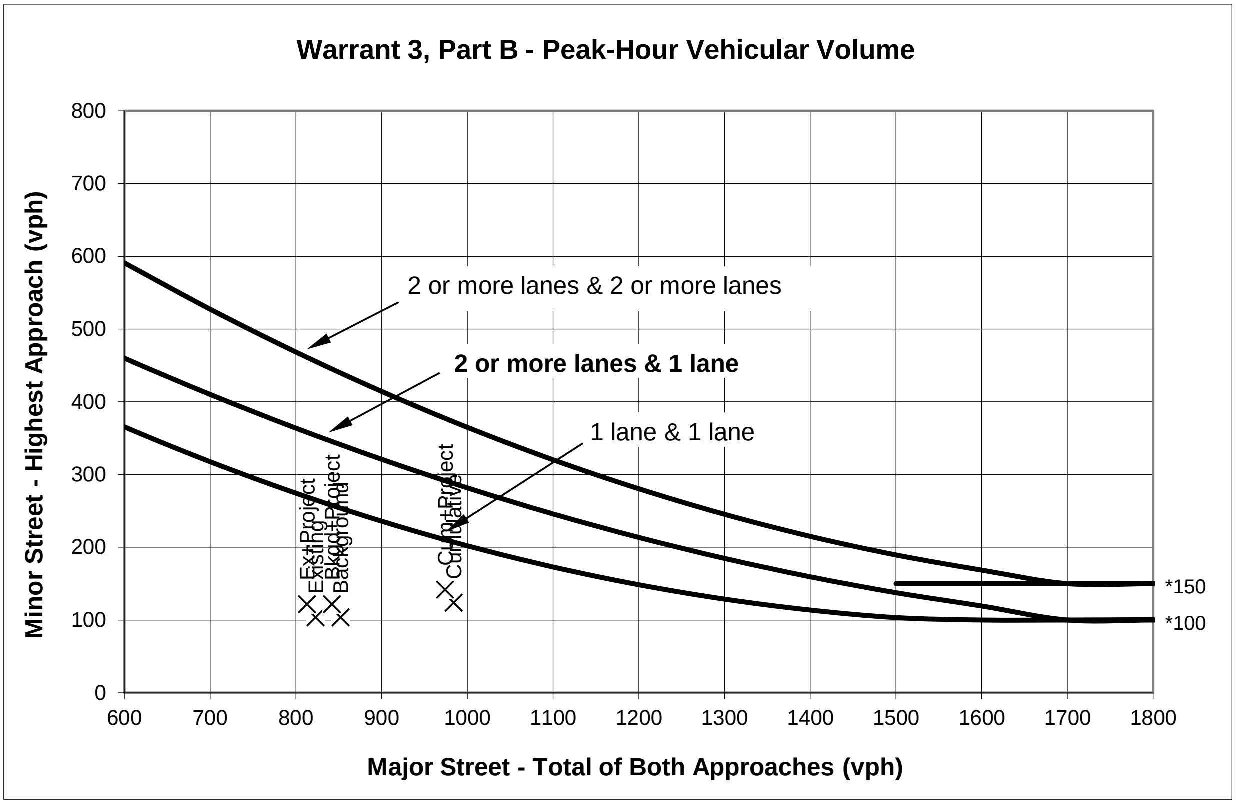
		Approach Lanes: One	Approach Lanes: 2 or More	AM PEAK PERIOD: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		823	852	813	842	984	974		
Minor Street - Highest Approach	Ogden Drive/ Mills HS Dwy	X		104	104	122	122	124	142		
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**No**	**No**		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive

Murchison Drive & Ogden Drive **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		823	852	813	842	984	974		
Minor Street - Highest Approach	Ogden Drive/ Mills HS Dwy	X		104	104	122	122	124	142		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**	**No**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Murchison Drive — Critical Approach Speed* (mph) 25

Minor Street: Ogden Drive/ Mills HS Dwy — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……….…..…......…….. ☐ or ☐ **Rural (R)**

In built up area of isolated community of < 10,000 population……....…………..

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB	NB	NB		
Highest Minor Street Average Delay (sec/veh)	9.2	9.3	9.3	9.4	9.8	9.8		
Corresponding Minor Street Approach Volume (veh/hr)	68	68	66	66	80	78		
Minor Street Total Delay (veh-hrs)	0.2	0.2	0.2	0.2	0.2	0.2		
Total Entering Volume (veh/hr)	860	893	875	908	1009	1024		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	No	No	No	No	No	No		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

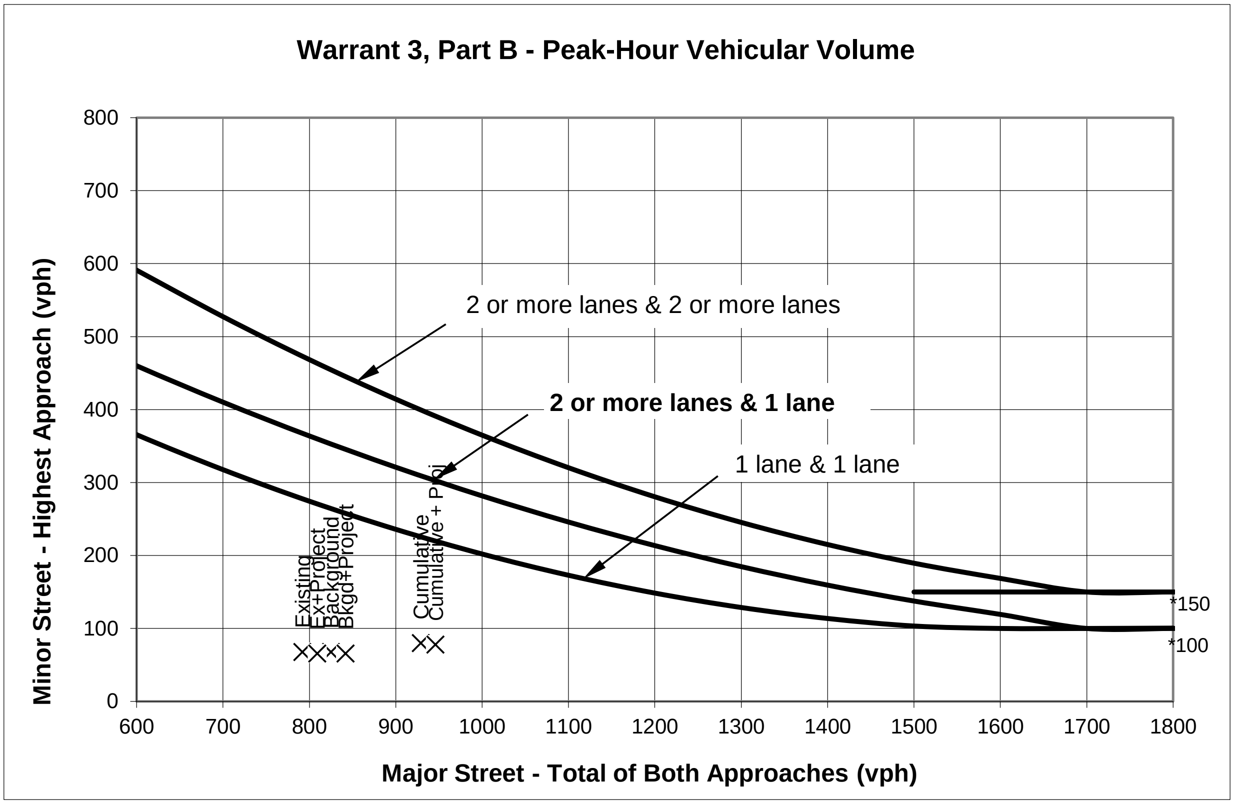
		Approach Lanes: One	Approach Lanes: 2 or More	PM PEAK HOUR: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project	0:00	
Major Street - Both Approaches	Murchison Drive	X		792	825	809	842	929	946	0	
Minor Street - Highest Approach	Ogden Drive/ Mills HS Dwy	X		68	68	66	66	80	78	0	
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**No**	**No**	**0**	

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive

Murchison Drive & Ogden Drive **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes: One	Approach Lanes: 2 or More	PM PEAK HOUR: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Murchison Drive	X		792	825	809	842	929	946		
Minor Street - Highest Approach	Ogden Drive/ Mills HS Dwy	X		68	68	66	66	80	78		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**	**No**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive Project

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Trousdale Drive — Critical Approach Speed* (mph) 35

Minor Street: Ogden Drive — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)…………………………. ☐ or
In built up area of isolated community of < 10,000 population……………………. ☐ } **Rural (R)**

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

	AM PEAK PERIOD							
	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	SB	SB	SB	SB	SB	SB		
Highest Minor Street Average Delay (sec/veh)	10.8	10.9	11.0	11.1	11.5	11.7		
Corresponding Minor Street Approach Volume (veh/hr)	97	97	107	107	116	126		
Minor Street Total Delay (veh-hrs)	0.3	0.3	0.3	0.3	0.4	0.4		
Total Entering Volume (veh/hr)	1569	1623	1573	1627	1875	1879		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	No	No	Yes	Yes	Yes	Yes		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

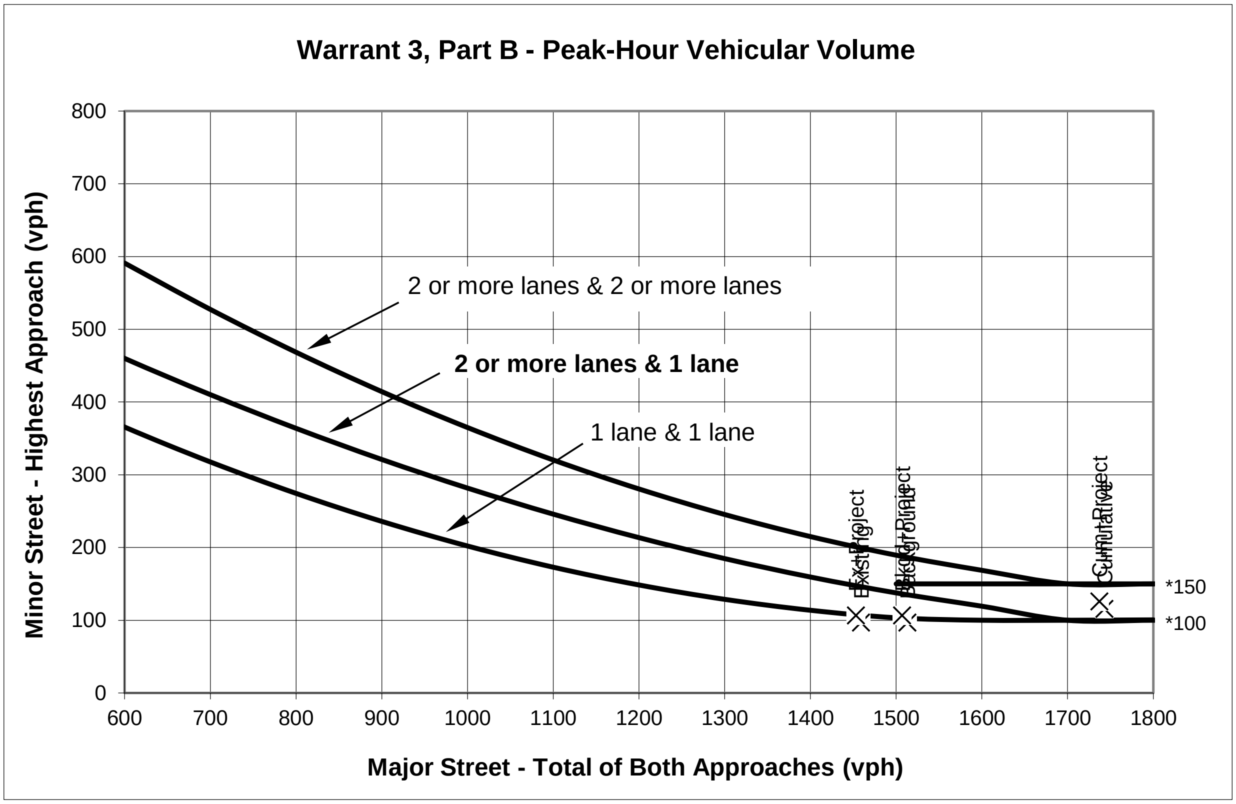
		Approach Lanes: One	Approach Lanes: 2 or More	AM PEAK PERIOD: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Trousdale Drive		X	1459	1513	1453	1507	1743	1737		
Minor Street - Highest Approach	Ogden Drive	X		97	97	107	107	116	126		
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**Yes**	**Yes**		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive Project

Trousdale Drive & Ogden Drive **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes: One	Approach Lanes: 2 or More	AM PEAK PERIOD: Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Trousdale Drive		X	1459	1513	1453	1507	1743	1737		
Minor Street - Highest Approach	Ogden Drive	X		97	97	107	107	116	126		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**Yes**	**Yes**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive Project

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 6/11/20

Major Street: Trousdale Drive — Critical Approach Speed* (mph) 35
Minor Street: Ogden Drive — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……………………… ☐ or
In built up area of isolated community of < 10,000 population……………… ☐ } **Rural (R)**

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR

	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Minor Street Approach Direction w/ Highest Delay	SB	SB	SB	SB	SB	SB		
Highest Minor Street Average Delay (sec/veh)	9.7	9.9	9.7	9.9	10.4	10.4		
Corresponding Minor Street Approach Volume (veh/hr)	82	82	81	81	96	95		
Minor Street Total Delay (veh-hrs)	0.2	0.2	0.2	0.2	0.3	0.3		
Total Entering Volume (veh/hr)	1176	1239	1185	1248	1379	1388		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	No	No	No	No	No	No		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes		
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**No**	**No**		

PART B

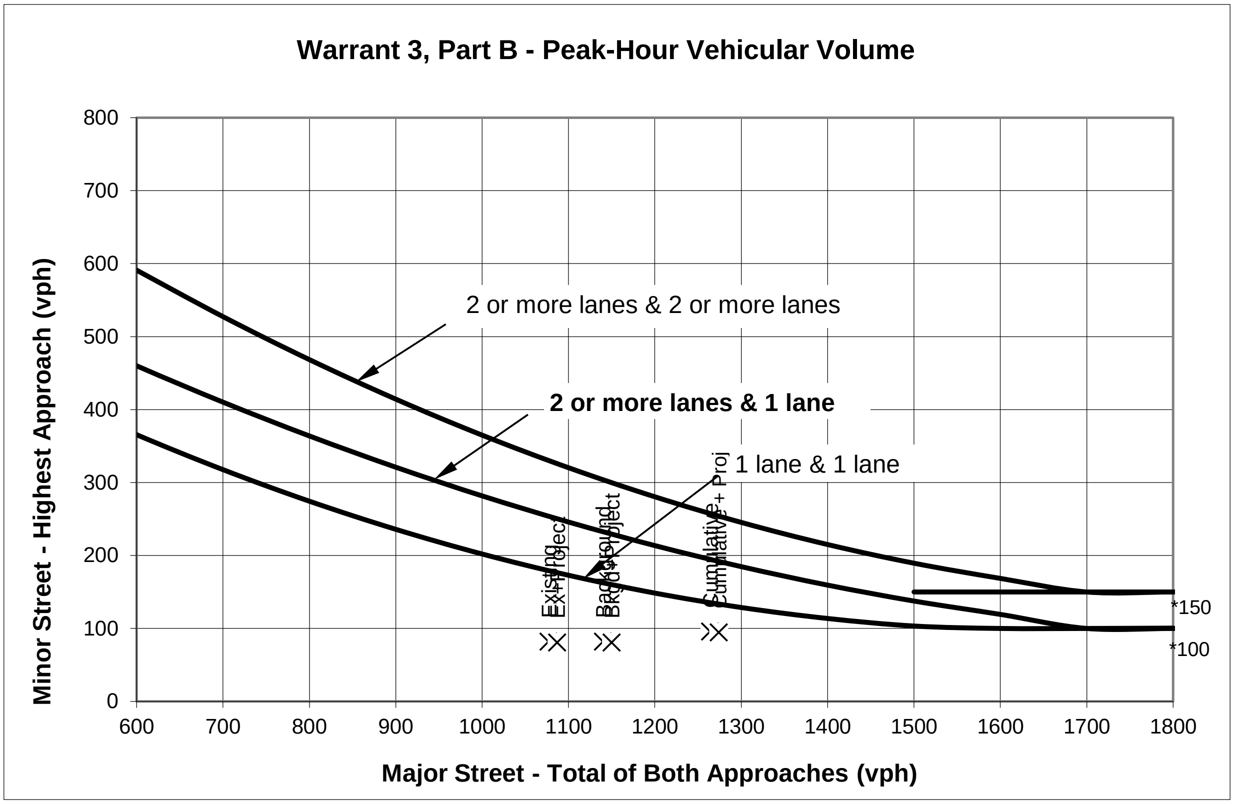
		Approach Lanes: One	Approach Lanes: 2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project	0:00	
Major Street - Both Approaches	Trousdale Drive		X	1077	1140	1087	1150	1264	1274	0	
Minor Street - Highest Approach	Ogden Drive	X		82	82	81	81	96	95	0	
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**No**	**No**	**0**	

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

1868 Ogden Drive Project

Trousdale Drive & Ogden Drive **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	Trousdale Drive		X	1077	1140	1087	1150	1264	1274		
Minor Street - Highest Approach	Ogden Drive	X		82	82	81	81	96	95		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**	**No**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1868 Ogden Drive Residential Development in Burlingame

Transportation Demand Management (TDM) Plan

Prepared for:

ICF

November 9, 2020

Hexagon Transportation Consultants, Inc.

Hexagon Office: 4 North Second Street, Suite 400

San Jose, CA 95113

Hexagon Job Number: 20JL07

Phone: 408.971.6100

Document Name: 1868 Ogden Drive TDM Plan.docx

Table of Contents

Appendices

List of Figures

List of Tables

1. Introduction

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage. This Plan has been prepared for the proposed residential development at 1868 Ogden Drive in Burlingame, California. According to the City of Burlingame's 2030 Climate Action Plan (CAP), new developments are subject to a target drive-alone mode share reduction of 20 percent. This plan has been prepared with the goal of achieving at least a 20 percent reduction in PM peak hour trips. In order to propose effective and appropriate TDM measures, this Plan has been developed based on the project's size, location, and land use. Given that the project is expected to add fewer than 100 peak hour trips, a San Mateo City/County Association of Governments (C/CAG) trip reduction analysis was not prepared.

Project Description

The project is located at 1868 Ogden Drive in Burlingame, California (see Figure 1). The project site is located within the North Burlingame Residential (NBMU) Zoning District in Burlingame. The project proposes to develop the 0.898-acre site with 120 residential units and a parking garage. The site is currently developed with a 26,000 square-foot office building with a parking garage. The existing building would be demolished as part of the project. Vehicle access to the proposed parking garage would be provided via a new full access driveway on Odgen Drive (see Figure 2).

Based on the City of Burlingame Zoning Code for the NBMU Residential District, the project is required to provide 148 parking spaces. The project proposes to provide 150 parking spaces, including 28 tandem spaces for 56 vehicles. To meet the City's requirements, the project would need to provide 82 standard parking spaces. The project proposes to provide 94 standard spaces, which is would exceed the City's requirements.

The basement level of the project would include one secured bike storage room with spaces for 65 bicycles, and bike racks that can hold 15 bicycles would be provided on the ground floor between the entry court and parking spaces for short-term use. Onsite amenities including a public plaza and community space.

Figure 1
Site Location

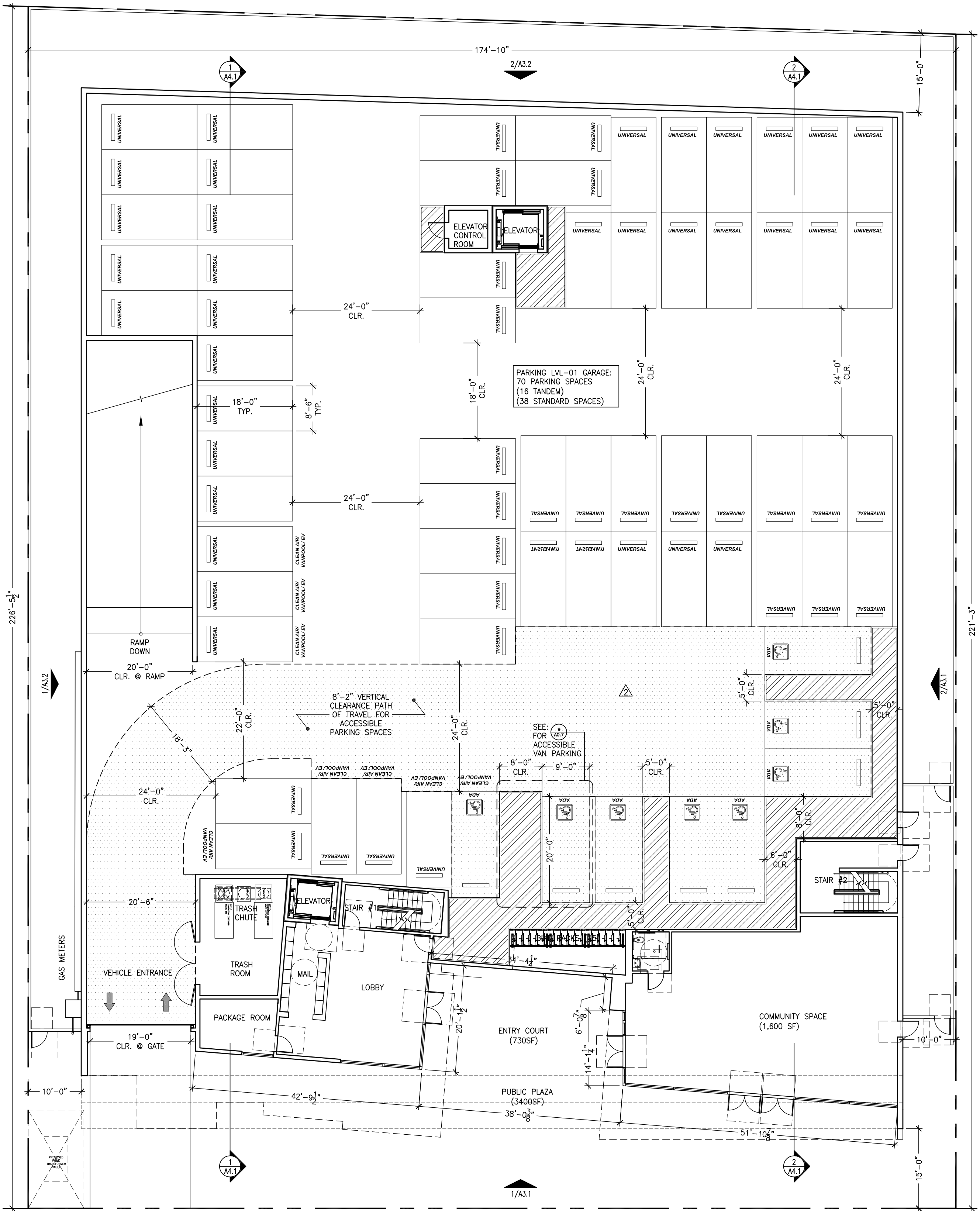


Figure 2
Site Plan

TDM Goals

This TDM Plan responds to the City of Burlingame TDM Program requirement and includes a broad range of TDM measures designed to reduce single-occupant vehicle trips through a combination of appropriate measures to promote alternative forms of transportation. The objective of the TDM Program is to encourage residents to walk, bike, or use existing transit services. The program complies with the City's current expectations for TDM measures and incorporates current best practices for reducing single-occupant vehicle trips to achieve the target drive-alone mode share reduction of 20% for residents.

The trip generation rates published in the Institute of Transportation Engineers' (ITE) manual entitled *Trip Generation, 10th Edition (*2017) for Multifamily Mid-Rise Housing (Land Use 221) were used for this study. Multifamily Mid-Rise Housing includes housing developments between 3 to 10 floors. Before TDM reductions, the proposed project is estimated to generate a total of 653 daily trips with 43 trips during the AM peak hour and 53 trips during the PM peak hour.

As shown in Table 1, in order to meet the City's 20 percent reduction requirement, at least 11 PM peak hour trips would need to be eliminated through implementation of the various TDM measures. Stated conversely, the project would be required to generate no more than 42 PM peak hour trips.

Table 1
Trip Generation Estimates for the 1868 Ogden Drive Residential Project

		Daily		AM Peak Hour				PM Peak Hour			
		Trip		Trip	Trips			Trip	Trips		
Land Use	**Size**	**Rate**	**Trips**	**Rate**	**In**	**Out**	**Total**	**Rate**	**In**	**Out**	**Total**
Proposed Land Uses											
Residential[1]	120 du	5.44	653	0.36	11	32	43	0.44	32	21	53
20% Required TDM Reduction			*-131*		*-2*	*-6*	*-9*		*-6*	*-4*	*-11*
Gross Project Trips (w/ TDM Trip Reductions)			**522**		**9**	**26**	**34**		**26**	**17**	**42**

Notes:
du = dwelling units
All trip rates are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Mid-Rise Multifamily Housing (ITE Land Use 221): average trip rates in trips per dwelling unit were used.
2. General Office (ITE Land Use 710): average trip rates in trips per 1,000 s.f. were used.

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 describes the transportation facilities and services near the apartment and office buildings. Chapter 3 presents the recommended TDM measures for the proposed project. Chapter 4 describes the TDM measurement tool used to estimate the reduction from the recommended TDM measures.

2.
Transportation Facilities and Services

Transportation facilities and services that support sustainable modes of transportation include commuter rail, buses and shuttle buses, high-occupancy vehicle (HOV) lanes, bicycle facilities, and pedestrian facilities. This chapter describes existing facilities and services near the project site that will support the TDM measures contained in this plan. The existing transit service in the project vicinity is described below and shown on Figure 3. Information on nearby roadways are also included in order to provide a more comprehensive description of the nearby transportation network.

Roadway Network

Regional access to the project site is provided via US 101. Local access to the site is provided on El Camino Real (SR 82), Millbrae Avenue, Trousdale Drive, Murchison Drive, and Ogden Drive. These roadways are described below. Although all streets in the study area run at a diagonal compared to the ordinal directions, for the purposes of this study, US 101 and all parallel streets are considered to run north-south, and cross streets are considered to run east-west.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. Access to and from the project study area is provided via a full interchange at Millbrae Avenue.

El Camino Real (SR 82) is a north/south arterial that extends northward to San Francisco, and southward to San Jose. In the project vicinity, El Camino Real has six lanes north of Dufferin Avenue, with left turn lanes at signalized intersections. South of Dufferin Avenue, El Camino Real is narrowed to four lanes. The posted speed limit in the project area is 35 mph. In the project area, El Camino Real provides frontage roads between Murchison Drive and Dufferin Avenue. A continuous northbound frontage road extends between Murchison Drive and Dufferin Avenue. A southbound frontage road extends between Murchison Drive and Trousdale Drive. Sidewalks are present along the east side of the northbound frontage road, the west side of the southbound frontage road, and at the signalized intersections in the project area. Sidewalks also exist on both sides of El Camino Real, north of Murchison Drive. On-street parking is prohibited on both sides of El Camino Real, but permitted on both sides of the southern frontage road and along the east side of the northern frontage road. El Camino Real provides access to the project via its intersections with Murchison Drive and Trousdale Drive.

Millbrae Avenue is an east/west arterial that extends westward from Old Bayshore Highway to Vallejo Drive and I-280, where it terminates. Millbrae Avenue connects the western residential areas of the City of Millbrae to the regional roadways, El Camino Real and US 101. Millbrae has six lanes between El Camino Real and US 101, with a median that provides left-turn pockets at the major intersections. The posted speed limit in the project area is 35 mph. Although there are sidewalks on both sides of Millbrae Avenue, the sidewalk on the north side terminates at the Chevron gas station, located just east of Millbrae Station. Access to the project site from Millbrae Avenue is provided via El Camino Real.

Trousdale Drive an east/west arterial that extends westward from California Drive to I-280. Trousdale Drive has four lanes west of El Camino Real and two lanes east of El Camino Real. The posted speed limit on Trousdale Drive west of El Camino Real is 35 mph. There are sidewalks on both sides of the street and on-street parking is permitted on both sides of the street between El Camino Real and California Drive. Trousdale Drive provides access to the project via its intersection with Ogden Drive.

Murchison Drive an east/west collector street that extends from California Drive to Vallejo Drive near Mills Estates, where it transitions into Hunt Drive. Murchison Drive has two lanes west of El Camino Real and four lanes east of El Camino Real. There are sidewalks on both sides of the street and on-street parking is permitted on both sides of the street. Murchison Drive provides access to the project via its intersection with Ogden Drive.

Ogden Drive is a north/south local road between Murchison Drive and Trousdale Drive. Ogden Drive has two lanes. There are sidewalks along both sides of the street. Parking is permitted along both sides of Ogden Drive. Ogden Drive provides direct access to the site via a new full-access driveway.

Bicycle Facilities

Bicycle facilities are an important component of the City of Burlingame's transportation network. The City's bikeways are classified as Class I, Class II, or Class III facilities, as follows:

- Class I Bicycle Path – bike paths within exclusive right-of-way, sometimes shared with pedestrians
- Class II Bicycle Lane – bike lanes for bicycle use only that are striped within the paved area of roadways
- Class III Bicycle Route – bike routes are shared with motor vehicles on the street. Class III bikeways may also be defined by a wide curb lane and/or use of a shared use arrow stencil marking on the pavement, known as a "sharrow"

Existing and future bicycle facilities near the project site are shown on Figure 3.

North-South bicycle connections consist of a bike lane/bike route along California Drive, from Broadway to Linden Avenue (north of Millbrae Avenue), where bicycle riders can access the Millbrae Station. Closer to the project site, there are bike lanes on both sides of California Drive between Broadway and Murchison Drive, which transitions into bike routes between Murchison Drive and Linden Avenue. A bike route also exists on El Camino Real, north of Millbrae Avenue.

Figure 3
Existing Bicycle Facilties

East-West bicycle connections in the study area consist of designated bike routes on Trousdale Drive between Magnolia Avenue and Ashton Avenue and Rosedale Avenue/Ray Drive between California Drive and Devereux Drive. The Spur Trail bike path exists between South Ashton Avenue (at Mosta Grove Park) and Magnolia Avenue (behind Mills High School).

Pedestrian Facilities

The pedestrian facilities within in the study area include sidewalks along the majority of the streets and striped crosswalks at major intersections. In the vicinity of the project site, crosswalks and pedestrian walk signals are provided at many signalized intersections along El Camino Real. The unsignalized intersection of Ogden Drive/Muchison Avenue north of the project site has crosswalks on all legs, and the unsignalized intersection of Ogden Drive/Trousdale Drive south of the project site has crosswalks on the north and east legs. .

Continuous sidewalks and crosswalks are present between the project site, bus stops in the area, and the Millbrae Station

Millbrae Intermodal Station

The Millbrae Station is located about 0.6 miles north of the project site on California Drive, which is approximately a 13-minute walk. The station has bike racks, bike lockers, and surface parking lots. The Millbrae Station is served by Caltrain, Bay Area Rapid Transit (BART), SamTrans, and shuttles (see Figure 4).

Caltrain

Caltrain provides commuter rail service between San Francisco and San Jose, with limited service to Gilroy during commute hours.

The Millbrae is served by local-stop, limited-stop, and baby bullet trains. During the morning peak period of 6:00 to 9:30 AM, the Millbrae Station is served by eight northbound trains (three local and five limited-stop trains) with headways of 60 minutes. Six southbound trains (three local and three limited-stop trains) serve the Millbrae Station in the AM peak period with headways of 60 minutes.

During the PM peak period between 3:30 and 7:30 PM, the station is served by 19 northbound trains (four local-stop and six limited-stop trains) with headways between 37 and 60 minutes. Eleven southbound trains (four local stop and seven limited-stop trains) with headways between 60 and 80 minutes serve the Millbrae Station during the PM peak period.

As part of the Caltrain Modernization Program, the rail service will be electrified. With the electrification of service, Caltrain will be able to provide faster and more frequent service along the corridor, including at the Millbrae Station.

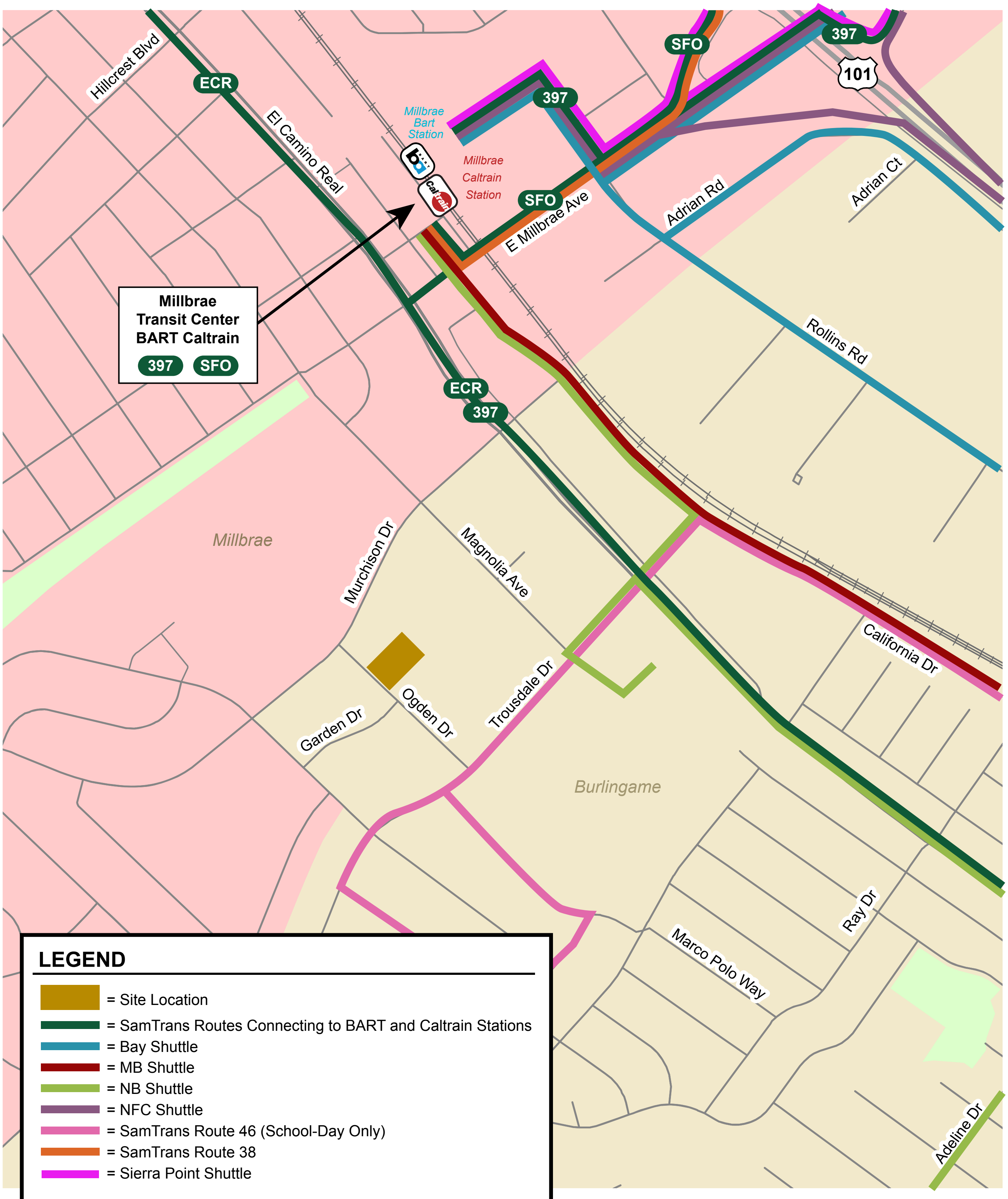


Figure 4
Existing Transit Services

BART

BART operates regional rail service in the Bay Area, connecting between San Francisco International Airport and the Millbrae Intermodal Station to the south, San Francisco to the north, and cities in the East Bay. BART trains operate on 15-minute headways during peak hours and 20-minute headways during off-peak hours. The Richmond-Millbrae line (Red) and Millbrae-SFO-Antioch line (Purple/Yellow) provide service to the Millbrae Station.

Shuttles

Sierra Point Shuttle

The Sierra Point Shuttle is operated by SamTrans and provides two routes to Balboa Park BART and the Millbrae Transit Center. The shuttle routes operate between 1000 Marina Boulevard and either Balboa Park BART or Millbrae Transit Center. The shuttle operates during the peak weekday hours, from 7:35 AM to 10:00 AM, with 27 to 38-minute headways, and from 4:20 PM to 7:40 PM, with 34 to 55-minute headways.

Millbrae/Broadway Shuttle

The Millbrae/Broadway (MB) Shuttle runs between the Broadway Station and Millbrae Station. There are 10 shuttles provided during the AM peak period, with 15 to 22-minute headways, and 11 shuttles provided during the PM peak period, with 18 to 20-minute headways.

North Burlingame BART/Caltrain Shuttle

The North Burlingame (NB) Shuttle runs between the Millbrae Station, Mills-Peninsula Health Services, Sisters of Mercy, and the residents of the Easton-Burlinghome neighborhood during commute hours, Monday through Friday. There are 8 shuttles provided during the AM and PM peak hours with 23-minute headways during the AM peak hour and 25-minute headways during the PM peak hour.

Burlingame Bayside BART/Caltrain Shuttle

The Burlingame-Bayside (BAY) Shuttle runs between the Millbrae Station and the Burlingame Bayside Area during commute hours, Monday through Friday. There are 5 shuttles provided during the AM and PM peak periods with 30 minute headways.

Foster City-North BART/Caltrain

The Foster City-North (NFC) Shuttle runs between the Millbrae Station and businesses in the North Foster City Area during commute hours, Monday through Friday. There are 5 shuttles during the AM peak period, with headways between 43 to 60 minute headways. There for 4 shuttles during the PM peak period with headways between 45 and 60 minutes.

SamTrans Bus Service

SamTrans Route 46 provided service during school days prior to Covid-19 shelter in place orders. A bus stop is located on Trousdale Drive at Magnolia Avenue, approximately 1,450 feet from the project site.

The next closest bus stops are located on El Camino Real at the Murchison Drive intersection, approximately 1,560 to 1,770 feet from the project site, which is served by SamTrans Routes ECR and 397 in both directions, and SamTrans Route SFO traveling northbound. Route ECR travels between the Palo Alto Transit Center and Daly City BART. Route 397 runs between the Palo Alto Transit Center and Drumm Street/Clay Street in San Francisco. Route SFO runs a loop between the Millbrae Station and the SFO Airport.

SamTrans Route 38 provides one bus during the AM peak hour and one bus during the PM peak hour that stops at the Millbrae Station. Route 38 travels between the Millbrae Station and Colma BART.

3.
Recommended TDM Measures

This chapter describes Transportation Demand Management (TDM) measures that are recommended for the proposed project. The recommendations listed in this plan have been developed to meet the 20 percent trip reduction requirement set forth in the City of Burlingame's 2030 Climate Action Plan (CAP).

The TDM measures recommended to be implemented by the project include services, incentives, actions, and planning and design measures related to the attributes of the site design and site amenities. Such design measures encourage walking, biking, use of transit, and internalization of trips. Some of the recommended TDM measures are programs that would be created and implemented by the building manager.

Because the project would generate more trips in the PM peak hour than the AM peak hour, the PM peak-hour estimate of trips is used to determine the number of trip credits required. The project would generate 53 PM peak-hour trips, so in order to meet the City's 20 percent reduction requirement, at least 11 PM peak hour trips would need to be eliminated through implementation of the various TDM measures.

TDM Administration and Promotion

Transportation Coordinator

A Transportation Coordinator should be assigned to provide information regarding alternative modes of transportation to residents of the project. The Transportation Coordinator should be designated by the building developer, the property manager, or any subsequent building owner.

The Transportation Coordinator's responsibilities will include updating information on the online information board/kiosk, providing trip planning assistance and/or ride-matching assistance to residents who are considering an alternative mode for their commute, and managing the annual surveys. The Transportation Coordinator should maintain a supply of up-to-date transit schedules and route maps for SamTrans and Caltrain and be knowledgeable enough to answer residents' TDM program-related questions. The Transportation Coordinator should distribute a carpool/vanpool matching application to all residents as part of the New Resident Information packets. The application will match residents who live at the project site who may be able to carpool or vanpool together.

Promotional Programs

The Transportation Coordinator should undertake additional marketing activities to encourage residents to try alternative travel modes. Additional promotional activities might include email blasts of flyers, brochures or other materials on commute alternatives, ridesharing incentive programs, and transit benefits. SamTrans.com and 511.org contain information that may be useful for marketing programs.

Online Transportation Kiosk

This TDM plan recommends establishing an “online kiosk” with transportation information that residents could access from their smart phones, their homes, or anywhere else. This online kiosk can be available on the project website.

By allowing someone to have all the information about transportation alternatives and TDM programs available to them in a single online location, people will be more likely to refer to this information from home. The project developer or property manager should have responsibility for setting up and maintaining this online information center. This website should include the site-specific information about all the measures, services, and facilities discussed in this plan. In addition, this online information center should include:

- A summary of SamTrans, Caltrain, BART, and nearby shuttle services and links to further information about their routes and schedules.
- Information about ride matching services (511.org and on-site ride matching) and the incentive programs available to carpools and vanpools.
- Information about services such as Uber, Lyft, and other on-demand transportation services will also be included.
- A local bikeways map and bicycling resources on 511.org.
- A link to the many other resources available in the Bay Area, such as Dadnab, the 511 Carpool Calculator, the 511 Transit Trip Planner, real-time traffic conditions, etc.

Resident Orientation (Welcome) Packet

New residents should be provided transportation information packets. This packet should include information about transit maps/schedules (Caltrain, BART, SamTrans, and shuttle services), location of bus stops, bike maps, ride matching services, transit planning resources, and bicycle parking on site. Also included in the packet should be information regarding how to contact the Transportation Coordinator, who can provide information regarding alternative modes of transportation to residents.

The resident orientation (welcome) packet should provide a quick, easy-to-read announcement of the most important features of the TDM program for residents to know about immediately and a message that the building values alternative modes of transportation and takes their commitment to supporting alternative transportation options seriously. For example, it would include a flyer announcing some highlights of the TDM program and where to find more information online.

Bicycle and Pedestrian Amenities

Bicycle Parking

Providing secure bicycle parking encourages bicycle commuting and reduces daily bicycle trips. A total of 15 short-term bicycle spaces will be provided at convenient and well-lit locations near the entrance of the project site and the outdoor plaza. In addition, a total of 65 long-term bicycle spaces will be provided in a secured bike storage room on the basement level of the project site.

The Transportation Coordinator should monitor the usage of the bicycle parking facilities and should also tabulate the mode share for bicycles based on survey results. Additional bicycle parking could be provided if and when it is warranted by demand.

Bicycle Resources

The following resources are available to bicycle commuters through 511.org. These resources should be noted on the project's online information center, in order to make residents aware of them.

- Free Bike Buddy matching
- Bicycle maps
- Bicycle safety tips
- Information about taking bikes on public transit
- Location and use of bike parking at transit stations
- Information on Bike to Work Day
- Tips on selecting a bike, commute gear, and clothing
- Links to bicycle organizations

Pedestrian Design Elements

The project will provide enhanced pedestrian facilities on Ogden Drive and a public plaza between the project site and the sidewalk. New sidewalks landscaped with street trees will be provided along the project's frontages.

Onsite, clearly defined walkways and a central courtyard will be incorporated between the apartment units to enable residents to walk between the buildings to the building's amenities. The entry court and public plaza will provide safe, well-lit, accessible, and convenient access to sidewalks on Ogden Drive.

Passenger Loading for Rideshare Vehicles

Providing convenient passenger loading zones near the entrance of the building would encourage residents and guests to utilize rideshare services/programs (e.g., Uber, Lyft, Scoop, Waze Carpool, etc.) and reduce parking demand. Therefore, the property owner should request that the City designate a curbside passenger loading zone on Ogden Drive near the building entrance.

Onsite Amenities

High-Bandwidth Internet Connection

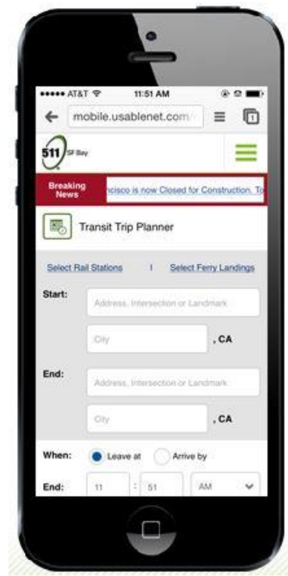
The residential units will include high-bandwidth internet connections to facilitate telecommunicating. Access to high-bandwidth internet connection will allow residents to work from home and therefore reduce the number of commute trips to and from project site.

Electric Vehicle Charging Stations

The project will include a total of 145 parking spaces, of which 8 spaces will be equipped with electric vehicle charging stations. While EV charging station parking spaces will not directly reduce any peak-hour trips, the designated Clean Air Vehicle spaces provide a prominent visual message that the project values a reduction in air pollution.

Carpool and Vanpool Programs

On-Site Ride Matching Assistance



The Transportation Coordinator should distribute a carpool/vanpool matching application to all residents as part of the welcome packets. The application should match residents who work in the same area who may be able to carpool or vanpool together. Some residents who may be reluctant to reach out to find carpool partners via the 511 RideMatch service may be more likely to fill out a form that will be administered by their Transportation Coordinator. Furthermore, residents may be more likely to try ridesharing with a neighbor than with an unknown person who lives nearby.

511 Ride Matching Assistance

511 RideMatch

The 511 RideMatch service provides an interactive, on-demand system that helps commuters find carpools, vanpools, or bicycle partners. The Transportation Coordinator in conjunction with the future building manager contacts, will promote the on-line 511 service to residents. This free car and vanpool ride matching service helps commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential ZIP code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute. The service also provides a list of existing car and vanpools in their residential area that may have vacancies.

Scoop

Scoop offers a fee-based ride matching service through an easy-to-use app. Scoop allows commuters to separate their AM and PM trips, to help accommodate unpredictable work schedules. Scoop also lets users schedule a trip as a driver or passenger, depending on their daily needs. Scoop identifies carpoolers who are heading the same direction and finds the most efficient carpool trip based on fastest route, nearby carpoolers, carpool lanes, and other factors. Payment for each trip is made through the app.

Ride matching assistance is also available through a number of peer-to-peer matching programs, such as Zimride, which utilize social networks to match commuters.

Carpool/Vanpool Incentives

Scoop Discounts for San Mateo County Carpools

San Mateo City/County Association of Governments (C/CAG) has developed the “Carpool in San Mateo County!” program, which provides a $2 incentive per person for each trip that begins or ends in San Mateo County. Drivers and riders can earn up to $4 per day when using the Scoop app to carpool. Drivers and riders using Scoop will automatically receive the $2 incentive per person during commute periods (5:30 a.m. – 10:00 a.m. and 3:30 p.m. – 8:00 p.m.), with a maximum of $4 per rider and driver each day.

The Star Store

The Peninsula Traffic Congestion Relief Alliance has established a program called the Star Store. Residents and commuters who travel to, from, or through San Mateo County can earn points by logging their commutes in the STAR platform. Every day that someone commutes by an alternative to driving alone, they earn a point. Users collect points and then redeem them for rewards.

First Five Rides Free on 511

Currently, the 511 Carpool Program is offering new riders on carpool apps Scoop or Waze Carpool five free rides. Users can download the apps, set up an account, enter their schedule and get their first five rides free.

Vanpool Formation Incentive

The 511 Regional Rideshare Program provides up to $500 in gas cards to new vanpools that meet certain eligibility requirements and complete three to six consecutive months of operation.

Vanpool Seat Subsidy

The 511 Regional Rideshare Program also offers a vanpool seat subsidy in the form of gas cards. The seat subsidy will provide $100 per month, with a limit of three months per van during the program year, to help cover the fare of a lost participant. The gas cards will be offered to eligible vans on a first-come, first-served basis until the funds are exhausted.

Vanpool Participant Rebates

The Peninsula Traffic Congestion Relief Alliance also offers an incentive to commuters to try vanpooling. The Alliance will pay half of the cost of a new vanpool participant’s seat, up to $100 per month, for the first three months in the van. New vanpools that operate for at least six months can receive a one-time rebate of $500, paid to the vanpool driver (rotating drivers may share the bonus).

Transit Elements

Proximity to Transit Center

The project is located about 0.6 miles from the Millbrae Station, which provides direct access to Caltrain and BART services as well as to multiple shuttle routes and SamTrans bus routes. At a normal walking pace, it would take approximately 13 minutes to walk from the project site to the transit center. This encourages the use of Caltrain, BART, and SamTrans for residents of the proposed project.

Transit Subsidies

Transit subsidies promote sustainable modes of transportation. These programs should be implemented by the building developer. Hexagon recommends the following programs and services that promote sustainable modes of transportation:

- **Free Transit Tickets.** The Commute.org (formerly the Peninsula Traffic Congestion Relief Alliance) Try Transit Program provides free transit tickets to people who are interested in trying public transit to get to work. The Try Transit program provides either one $9 BART ticket, three round-trip Caltrain tickets, six one-way SamTrans tickets or three round-trip VTA tickets per household. Commuters requesting tickets must work, live, or drive through San Mateo County.

- **One Time Transit Subsidy.** The project should provide new residents with a one-time initial transit subsidy in the form of a Clipper Card loaded with a one-month pass for SamTrans and BART or Caltrain. This measure would incentivize new residents who are unfamiliar to the area to explore alternative commuting options.

4.
The TDM Measurement Tool

The Bay Area Air Quality Management District (BAAQMD) has prepared a software tool that is designed to quantify by how much a TDM Plan for a specific project in a specific location is likely to reduce Vehicle Miles Traveled (VMT). For this report, a reduction in trips is considered equivalent to a reduction in VMT. This TDM Tool is based on the steps and calculations documented in the California Air Pollution Control Officers Association (CAPCOA) report, *Quantifying Greenhouse Gas Mitigation Measures*, published in August 2010.

The TDM Tool provides an estimate of the amount by which a project's location and land use characteristics, its site enhancements, and the measures taken to reduce commute trips will reduce VMT. Hexagon has applied the BAAQMD tool to the TDM Plan for the residential development at 1868 Ogden Drive in Burlingame, California. Based on the TDM Tool, the project will meet the goal of a 20% reduction in trips through the implementation of this TDM Plan.

The following discussion summarizes how the tool calculated the VMT reduction for this project and this TDM Plan. It should be noted that there are some characteristics of the project (such as its accessibility) for which the TDM Tool gives a significant amount of credit in calculating the VMT reduction, but which are not listed as specific TDM measures in the preceding chapter. Conversely, there are some specific TDM measures (such as efforts to promote bicycling among residents) that are given very little or no credit by the TDM tool. As such, the VMT reduction calculated by the tool should be regarded as a preliminary estimate for the TDM Plan but should not be used as a monitoring tool after the building is occupied. The best way to monitor the success of any TDM Plan is with driveway counts that provide actual data on the trip-making patterns of the residents who live in the building. However, the TDM Tool does provide a useful indicator prior to implementation of a Plan as to whether it is likely to achieve a certain reduction target.

The VMT reduction calculated by the BAAQMD Tool is based on the following factors:

Destination Accessibility. The project is within 2.7 miles of downtown Burlingame and major workplace developments near the project site. These destinations can be easily accessible by transit, bicycle, or walking. Because of this, a VMT reduction is estimated based on the urban setting and desirable location of the project.

Transit Accessibility. The TDM tool compares the transit mode share for this site to that of a typical ITE development. There are numerous transit options within walking distance of the project site. The Millbrae Station is approximately 0.6-mile away from the project site and provides access to BART, Caltrain, and SamTrans bus routes.

Below Market Rate (BMR) Housing. The project proposes to offer approximately 5% of units to be BMR housing. By providing BMR housing, it gives the opportunity for lower income families to live closer to employment centers and to work at jobs near transit. By providing BMR units, the project would build to a higher density, which allows a greater number of families that can be accommodated within transit-oriented development.

Pedestrian Network. The immediate area surrounding the project site is adequately served by pedestrian facilities. The project would bring upgrades to the pedestrian network both on the project site and along the project frontage on Ogden Drive. The project earns VMT reductions based on planned improvements to the pedestrian network and facilities and the high density of the area.

TDM Program with Monitoring and Reporting Requirements. The TDM Tool provides more credit to TDM programs that include a performance standard (such as a trip reduction goal or VMT reduction goal) and that include requirements for monitoring and reporting than those that do not. The rationale for this is that if residential development managers/owners are required to monitor their results and report those results to a City or other authority, and if there is a specific target to be achieved, they will take their responsibilities to implement the TDM Program more seriously.

Transit Fare Subsidy. The TDM tool provides a significant VMT credit for the implementation of transit fare subsidies when available to all residents of the property. This reduction is credited based on the use of the Try Transit Program/Clipper Cards that would be provided to residents of the project site. The proximity to transit stations and connections available from light rail would encourage the use of these Smart Pass/Clipper Cards for all trips. The project's proximity to destinations that are served by light rail and its connections would generate transit trips that are not solely work related.

Telecommute Program. Telecommuting receives VMT reductions as some residents no longer would be required to travel to their work location. With the installation of high-speed internet, a small portion of residents would choose not to drive to their place of work every day. The TDM program assumes that tenants would spend at least 1.5 days per week working from home. As a part of the plan, it is estimated that 5% of residents would telecommute.

Marketing Program for the TDM Plan. This TDM Plan includes creation of an "online kiosk" which would serve to provide information about all resources and programs included in the plan to all residents, wherever and whenever they want to access it. In addition, New Resident Information packets would be distributed to residents when they move into the development. The Transportation Coordinator would be available to answer questions and provide additional information to residents as needed. The TDM Tool provides credit for this level of marketing activity.

Ridesharing Program. The TDM tool also gives credit for ridesharing programs that provide ride-matching assistance and/or a link to websites for coordinating rides. This TDM Plan includes the ride-matching assistance and website.

As noted above, the TDM Tool estimates that the above measures would meet the goal of a 20% overall reduction in trips, with 15% coming from TDM measures. The results of the TDM Tool are shown in Appendix A.

Appendix A
BAAQMD Tool

Global Max Reduction (all VMT):
25.3%
or
13

Cross-Category Max Reduction (all VMT):
22.8%
or
12

Max Reduction (all VMT):
3.3%
or
2

Land Use/ Location	Neighborhood/ Site Enhancements	Parking Policy/ Pricing	Transit System Improvements	Commute Trip Reduction (CTR) Progams (assuming mixed-use development)
Category Reduction (all VMT): 21.2%	Category Reduction (all VMT): 2.0%	Category Reduction (all VMT): 0.0%	Category Reduction (all VMT): 0.0%	Category Reduction (work VMT): 15%
Density 0.0%	**Pedestrian Network** 2.0%	**Parking Supply Limits** 0.0%	**Network Expansion** 0.0%	**CTR Program - Required** (work VMT) 21.0%
Design 0.0%	**Traffic Calming** 0.0%	**Unbundled Parking Costs** 0.0%	**Service Frequency/Speed** 0.0%	**CTR Program - Voluntary** (work VMT) 0.0%
Diversity 0.0%	**NEV Network** 0.0%	**On-Street Market Pricing** 0.0%	**Bus Rapid Transit** 0.0%	**Transit Fare Subsidy** (work VMT) 12.9%
Destination Accessibility 15.5%	**Car Share Program** 0.0%			**Employee Parking Cash-Out** (work VMT) 0.0%
Transit Accessibility 6.5%				**Workplace Parking Pricing** (work VMT) 0.0%
BMR Housing 0.2%				**Alternative Work Schedules and Telecommute Program** (work VMT) 1.1%
				CTR Marketing (work VMT) 4.0%
				Employer-Sponsored Vanpool/Shuttle (work VMT) 0.0%
				Ride Share Program (work VMT) 15.0%
				School Pool (school VMT) 0.0%
				School Bus (school VMT) 0.0%

Appendix C
Department of Parks and Recreation Forms

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 19 ***Resource Name or #** (Assigned by recorder) 1868-1870 Ogden Drive

P1. Other Identifier: 1868-1870 Ogden Drive
***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** San Mateo
***b. USGS 7.5' Quad** Montara Mountain **Date** 1997 **T** **R** ; **¼ of** **¼ of Sec** (un-sectioned) **B.M.**
c. Address: 1868-1870 Ogden Drive City: Burlingame Zip: 94010
d. UTM: (give more than one for large and/or linear resources) Zone 10S; 554060.14 m E / 4160879.39 m N
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN: 025-121-190

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The building at 1868-1870 Ogden Drive is a one-story-over-basement Midcentury Modern-style office building that faces southwest toward Ogden Drive. It lies approximately two blocks west of El Camino Real (California State Route 82) within a neighborhood containing one- to three-story residential and commercial office buildings. The subject building is located on a parcel that slopes downward to the northeast (away from Ogden Drive), which accommodates motor vehicle parking at the basement level. The parking is accessed by driveways on the north and south sides of the lot. The building has a generally rectangular plan, is characterized by cubic forms, and is capped with a flat roof. The exterior walls are primarily constructed of pre-cast concrete panels.

The primary (west) façade faces Ogden Drive and features a centered, broad terrazzo staircase with handrails. The staircase leads from the public sidewalk to a platform and deeply recessed, fully-glazed entrance on the building's first floor (Figures 1 and 2). A pedestrian access ramp adjoins the staircase to the north. A projecting canopy shelters this entrance, which contains two glazed doors that provide access to the building's commercial office tenants. Flanking the entrance are two recessed bays featuring full-height plate glass windows; these recessed bays also contain cast concrete planter boxes. To the left and right of the recessed bays, the façade is constructed of pre-cast concrete panels that have been parged and painted subsequent to the building's construction. The façade is articulated by regularly spaced vertical joints between the pre-cast concrete panels. (See continuation sheet.)

***P3b. Resource Attributes:** (List attributes and codes) HP6 (1-3 story commercial building)
***P4. Resources Present:** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5a. Photograph or Drawing (Photograph required for buildings, structures and objects)

P5b. Description of Photo: (View, date, accession #) Figure 1. View of primary (south) and east façades.

***P6. Date Constructed/Age and Sources:** ☑Historic ☐ Prehistoric ☐ Both
1963-1964 (original building permit and newspaper references)

***P7. Owner and Address:**
Green Banker LLC
398 Primrose Road
Burlingame, CA 94010

***P8. Recorded by:** (Name, affiliation, address)
Alex Ryder, ICF
201 Mission Street, Suite 1500
San Francisco, CA 94105

***P9. Date Recorded:** 2/12/2020
***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:**
***Attachments:** ☐NONE ☐ Location Map ☐ Sketch 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

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***NRHP Status Code** 3CS

***Resource Name or #** (Assigned by recorder) 1868-1870 Ogden Drive

B1. Historic Name: Western Conference of Teamsters Headquarters
B2. Common Name: 1868-1870 Ogden Drive
B3. Original Use: Commercial Office Building B4. Present Use: Commercial Office Building
***B5. Architectural Style:** Midcentury Modern
***B6. Construction History:** (Construction date, alteration, and date of alterations)

Construction of the subject building was underway by December 1963 (*International Teamster* 1963). The building was completed and occupied by December 1964 (*Oakland Tribune* 1964b; *The Times* 1964).

Building permits held by the Building Division of the Community Development Department of the City of Burlingame indicate that the exterior of the building has been altered. The most extensive of these alterations, at the primary façade, were carried out circa 1997. A disability access ramp and guardrails were installed on the north side of the entrance stairs, which necessitated removal of an original planter box that flanked the main entrance. At this time, the exposed aggregate finish of the pre-cast concrete panels was parged over and painted at the primary façade. The rectangular gemstone mosaics flanking the main entrance were also covered. The glazing at the primary entrance was outfitted with tempered glass. These changes were designed by Architectural Design Structure, Inc., an architecture, engineering, and planning firm based in Santa Clara.

Beyond these alterations, building permits indicate that bomb blast damage was repaired in 1974 and that rainwater roof drains were re-routed in 1997. The Teamsters' logo signage was removed from the primary façade circa 1977, when the building was purchased from the Teamsters by the American Red Cross. An original planter box flanking the south side of the front entrance was removed at an unknown date. No other exterior changes are apparent.

Review of building permits and visual inspection indicate the interior of the building has experienced tenant improvement campaigns since the building's use as the headquarters of the Western Conference of Teamsters, involving the conversion of the building to accommodate multiple commercial tenants. In 1997, the building's bathrooms were remodeled, and unspecified alterations were made to the interior walls and ceiling grid. The bathrooms were again remodeled in 2007. Tenants subsequent to the Teamsters appear to have installed partition walls that subdivide the original entrance lobby, which is documented in historic photographs.

***B7. Moved?** ☑ No ☐ Yes ☐ Unknown **Date:** N/A **Original Location:** N/A
***B8. Related Features:** N/A
B9a. Architect: Shigenori Iyama and Robert M. Tanaka b. Builder: Moroney Construction Company, Inc.
***B10. Significance: Theme** United Farm Workers and Twentieth-Century Labor Disputes **Area** Social History
Period of Significance 1966-1977 **Property Type** Office Building **Applicable Criteria** CRHR Criterion 1

(See continuation sheet.)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** (See continuation sheet.)
B13. Remarks: N/A
***B14. Evaluator:** Alex Ryder, ICF
***Date of Evaluation:** 4/21/2020

(This space reserved for official comments.)

(Sketch Map with north arrow required.) N

P3a. Description (continued)**:**

The building's north and south façades are nearly identical. The first floor is comprised of a repeating pattern of projecting boxed bays (seven on the east façade and seven on the west façade), featuring exposed aggregate panels with decorative stamping of rectangular forms (Figure 3). The roofline and pre-cast concrete floor-level platforms extend beyond the projecting bays. The bays are separated by pairings of deeply recessed, vertically oriented fixed windows. Each recessed window pairing is in turn separated by a narrow, vertical band of gemstone mosaic in a concrete surround (Figure 4). The basement parking area is punctuated by multiple entrances and exits for vehicles. Areas of solid wall are constructed of cast cinderblocks, which feature a geometric design and are stacked between columns supporting the building's first story (Figure 3).

At the rear (east) façade, the design of the building's first story is similar to that of the primary façade, except that there is no entrance or accompanying staircase; where the corresponding entrance is located at the primary facade, the rear façade simply features a broad projecting bay over the driveway (Figure 5). The projecting bay is flanked by two vertical bands of mosaic, and the surrounding solid walls are constructed of pre-cast concrete panels featuring the original large aggregate that is no longer visible at the primary façade. The ground floor on this façade is entirely open with the exception of support columns around the perimeter of the basement parking area. Asphalt paved vehicular drives enter the parcel from Ogden Drive north and south of the subject building; each drive is flanked by low concrete block retaining walls. The front of the parcel, nearest Ogden Drive, features a grass lawn containing a few ornamental rocks and trees.

The building is set back from the street and features a modestly landscaped lawn. This lawn is partial enclosed by a low wall that also functions as a retaining wall for the property's two driveways.

Surveyors viewed the interior of the front of the building from the entrance platform: the interior appears to be divided into two reception areas for current building tenants, featuring modern office ceiling and wall finishes.

***B10. Significance** (continued):

Historic Context: Burlingame

The City of Burlingame currently occupies land that was formerly two Mexican-era ranchos: Buri Buri Rancho to the north and Rancho San Mateo to the south. The Buri Buri Rancho was granted to Mexican soldier Jose Antonio Sanchez, who built a house on El Camino Real, near the current border of Millbrae and Burlingame. Rancho San Mateo, originally granted by the last of California's Mexican governors, Pio Pico, changed ownership hands a few times until William Davis Merry Howard acquired it and established a dairy farm on the land.

Once the United States' war with Mexico concluded in 1848, the Treaty of Guadalupe Hidalgo resulted in Mexico ceding California to the United States. Also per the Treaty, Mexicans who lived on existing ranchos were guaranteed property rights and were allowed to remain on the land. However, the start of the California Gold Rush soon led to the dramatic increase in Northern California's population. Specifically, the influx of gold seekers to California's region between San Francisco and the Sierra foothills forced Mexican landowners off their land. Mexican landowners were not protected as many of the landholding records were incomplete. In present-day Burlingame, Sanchez ultimately lost the Buri Buri Rancho in a lawsuit, which was then divided into several parcels. Howard, however, retained Rancho San Mateo in a legal battle (Carey & Co. 2008).

After Howard passed away, his Rancho San Mateo land was divided amongst his family. However, land west of El Camino Real was sold to William C. Ralston, an established banker. Ralston could afford to buy the land after he discovered the Comstock Lode in Nevada in the 1860s. With this real estate, he planned to develop a suburban tract in San Mateo County, with the vision of creating a "sacrosanct colony" (Burlingame Chamber of Commerce 2018).

Ralston hosted many famous people in his home, including one of his first guests, Anson Burlingame, in 1866. Burlingame—a Massachusetts congressman and previously appointed United States Minister to China under President Lincoln—bought approximately one thousand acres from Ralston to build a private villa. Ralston thence decided to name his new development Burlingame after his friend's newly acquired gain. Following Anson Burlingame's premature death, in 1870 Ralston bought back his land and began planning the town's establishment (Carey & Co. 2008; Burlingame Historical Society 2018). Shortly after, survey work was initiated as evidenced by the 1876 Map of Burlingame (Figure 2). At that time, the few existing landowners of present-day Burlingame landscaped their properties that fronted El Camino Real with eucalyptus and elm trees (Burlingame Historical Society 2018). After Ralston's death, the land changed hands several times. In 1893, then-owner Francis Newlands subdivided the property and initiated construction of the Burlingame Country Club and five nearby cottages. While Burlingame increased its development and growth throughout the late 1800s, the 1906 San Francisco earthquake and fire propelled hundreds of new residents to Burlingame in search of safety. In 1908, Burlingame incorporated, and two years later annexed the neighboring Town of Easton, which was once a part of Rancho Buri Buri (Burlingame Historical Society 2018).

Throughout Burlingame's early development, railway transportation provided a vital connection between developing Peninsula towns with the larger Bay Area. In 1859, the San Francisco and San Jose Railroad was established. Once the Southern Pacific Railroad later gained ownership of the line, it positioned a temporary boarding shed at "Oak Grove Crossing" for Burlingame passengers. In 1894, the Burlingame depot station was constructed (Carey & Co. 2008).

In 1954, Burlingame annexed a portion of the Darius Ogden Mills estate at the city's northernmost border: this estate formed the land spanning from Millbrae Avenue to the north to Mills Creek to the south (Peninsula Royalty 2018). As indicated by aerial photographs of the Mills Mansion dating to the 1940s and 1950s, the current site of 1868-1870 Ogden Drive and nearby parcels remained completely undeveloped at that time, even while surrounding areas of Burlingame and Millbrae were covered by suburban growth (NETR 1946, 1956). In the late 1950s and 1960s, however, the area surrounding the subject building rapidly developed with many commercial buildings. By 1968, aerial photographs illustrate that 1868-1870 Ogden Drive and most neighboring buildings had been constructed (NETR 1968).

<u>Ownership and Occupant History</u>
In its 56 years of existence, 1868-1870 Ogden Drive has had relatively few owners and occupants. From 1964 until 1977, the building served as the headquarters for the Western Conference of Teamsters, a geographic division of the International Brotherhood of Teamsters labor union. In 1977, the Teamsters sold the building to the American National Red Cross, which used the building as its Western Field Office until 1997. Since 1997, the building has been owned by Ogden Office Associates LLC (1997-2001), Ogden Properties LLC (2001-2017), and Green Banker LLC (2017-Present). During this time frame, the building was occupied by various commercial tenants, including LCI Construction, Legate & Company, and Erler & Kaliowski Inc.

<u>Architect: Shigenori Iyama</u>
The building at 1868-1870 Ogden Drive was designed by architect Shigenori "Shig" Iyama (1927-1992) and his associate, Robert M. Tanaka. Iyama was an Oakland-based architect whose work is well known in northern California. He was born in Fukuoka, Japan on February 16, 1927 and immigrated to the United States with his family in 1931. During World War II, he and his family were imprisoned at the Thule Lake Segregation Center in California, and, later, the Central Utah Relocation Center in Nevada. After the war, Iyama attended college at the University of California, Berkeley where he received a Bachelor's of the Arts in Architecture in 1949 (Moore 1958:372; Koyl 1962:342). From 1949 until 1953, he worked as a draftsman for Jack Butcher & Associates in Orinda, California. In 1953, he entered into a partnership with Oakland architect Albert R. Hunter Jr., thus forming Hunter and Iyama. He then established his own practice in 1961 (Koyl 1962:342). In 1963, he entered into a partnership with San Francisco designer John M. McWilliams, thus forming McWilliams and Iyama. However, this partnership appears to have been short lived; by 1964 Iyama was producing work under the banner of "S. Iyama and Associates" (Oakland Tribune 1963a:42E). Newspaper research indicates that Iyama was active until at least the early 1980s. He died in 1992 at the age of 65.

Iyama designed a diverse array of buildings. His early work appears to have largely consisted of religious buildings, and included the Lady of Mount Carmel Church (1960) in Cloverdale; St. Joseph Catholic Church (1962) in Cotati; Lincoln Avenue Executives Building (1963); Vallombrosa Center Chapel (1964) in Menlo Park; a residence and chapel for Holy Redeemer College (1964) in Oakland; and St. Sylvester's Church (1966) in San Rafael. Early examples of his commercial work include the former First of California Mortgage Company building (1963) at 1330 Lincoln Avenue in San Rafael, as well as the former headquarters of Woodward-Clyde-Sherard & Associates (1963) at 2811 Adeline Street in Oakland. His most noted building is the Sumitomo Bank of California (1965) in downtown Oakland, which is characterized by its distinctive application of Midcentury Modern design tenets (Cerny 2007:204, 426, 439, 509; *Independent Journal* 1966:29; 1963:20; *Oakland Tribune* 1963b:C3; 1964a:D17; *Petaluma Argus Courier* 1969:5; *Shin Nichibei* 1964:1). By 1980, approximately 40 percent of his work consisted of commercial, office, or retail buildings, and only 25 percent of his work was religious. The remaining 30 percent was divided equally between educational, medical, and interior design work (Schirmer 1980:85).

<u>The Western Conference of Teamsters and the United Farm Workers of America</u>
In serving as the Western Conference of Teamsters headquarters, the subject building became closely associated with the long-standing labor dispute between the Western Conference of Teamsters and the National Farm Workers Association (NFWA), which later merged with another organization to become the United Farm Workers Organizing Committee (UFWOC or, more commonly, UFW). The UFW was a major force in post-World War II labor activism in the United States, and more particularly was highly influential within the emerging movement for Latino/a political and civil rights.

Some of the earliest pronounced efforts to win rights for Latino/a workers took place in urban areas. In the 1960s, Latino/a Californians led strikes with support at the state level by Governor Pat Brown, who gained political control through his 1958 pro-labor campaign. Farmworkers also organized. The Agricultural Workers Unionizing Committee (AWOC), established in 1959, held a strike in 1961 against lettuce growers of the Imperial Valley, and again the following year against the California Packing Corporation (California Office of Historic Preservation 2015:76-77).

On a national level, the National Farm Workers Association (NFWA)—which merged with the AWOC, a primarily Filipino-American workers' rights organization, to form the UFW in 1966—led efforts to organize farm workers. NFWA demanded minimum wage, social security, housing, healthcare, and education assistance for farm laborers. NFWA led several strikes that drew attention nationwide for the first time. In 1972, the UFW had increased California's farmworker wages to nearly double with some then receiving basic healthcare. The UFW peaked in the 1970s while organizing workers in Arizona, California, and Florida, and securing the passage of the Agricultural Labor Relations Act for California, giving farm labor unions new protections (California Office of Historic Preservation 2015:78).

Due to the UFW's leading role in advancing labor rights for farm workers in the United States, the organization encountered the Western Conference of Teamsters, the original owner and tenant of the subject building, repeatedly during the 1960s and 1970s. The historic contexts in which the UFW and Teamsters interacted are detailed in the National Park Service's (NPS) 2012 *Cesar Chavez Special Resource Study*, which establishes context themes related to the life of highly influential Latino/a labor organizer and civil rights leader Cesar Chavez—and specifically, his work fighting for Latino/a farm workers' rights through his leadership of the UFW. Chavez founded the NFWA in 1962 and from then until his death in 1993, he spearheaded various campaigns to establish better bay and working conditions for agricultural workers. For these efforts, he was the recipient of numerous honors, including the Presidential Medal of Freedom in 1994.

The 2012 NPS study identified six historic contexts, two of which are directly relevant to events that took place at 1868-1870 Ogden Drive.

The first of these historic contexts involved a major grape strike and boycott of Delano-area grape growers, which took place between 1965 and 1970. In September 1965, the AWOC struck against Delano-area wine and table grape growers in protest of years of low pay and poor working conditions. Weeks later, the fledging NFWA voted to join the strike in solidarity. Initially, the strike had little effect on growers, and starting in December 1965, NFWA began organizing a boycott of products from Delano-area growers. Success came gradually. The Schenley Corporation—the area's second largest grower—recognized and signed with the NFWA in 1966. That same year, however, the opening salvo of what would become another major battle was fired: The Di Giorgio Company, another major grower, recruited strike breakers and required them to sign cards consenting to be represented by the Teamsters Union, thus breaching a jurisdictional agreement between the Teamsters and NFWA (now the UWF). Progress continued to be made, though. In 1967 the Perelli-Minetti Company and six other wineries also signed with the UFW. The organization's largest victory, however, resulted from a strike of the Guimara Brother Fruit Company—the state's largest table-grape growers—which was launched in 1968. When Guimara finally agreed to negotiate with the UFW in July 1970, Chavez insisted they bring other struck grape growers with them. They did, and ultimately the UFW brought 85 percent of table-grape growers in the state under union contract (National Park Service 2012:241-251). In July 1967, the subject building at 1868-1870 Ogden Drive hosted negotiations between the NFWA and the Perelli-Minetti Company (Figueroa n.d.:15; Levy 2007:261).

The second relevant historic context identified by the NPS study involved a lengthy, violent, and occasionally deadly jurisdictional battle between the UFW and Teamsters that occurred from the late 1960s until 1977. Within this context, the UFW's association with the Western Conference of Teamsters headquarters at 1868-1870 Ogden Drive was sustained. The indented information below is excerpted from the NPS study to describe the details of this context.

> **The Salinas Strike, the Fight against the Teamsters, and the Agricultural Labors Laws in the American West, 1970-1975**
>
> The next period of the farm labor movement saw the UFWOC face familiar challenges brought with unprecedented force. On the same day that the union finished its negotiations with Delano grape growers, Chavez received confirmation that 29 lettuce growers in the Salinas Valley had signed contracts with the International Brotherhood of Teamsters and that at least 175 vegetable growers employing 11,000 farm workers in the Salinas and Santa Maria Valleys were considering Teamsters contracts of their own. Salinas Valley growers were determined to avoid giving in to the UFWOC (as they thought Coachella and Delano growers had done), and they were not adverse to violence. As the UFWOC engaged these new opponents, its leaders also had to administer the union's new contracts and maintain its existing membership base. Moreover, the union initiated two transformative projects moving its headquarters from Delano to a location in the Tehachapi Mountains and completing the process of gaining independent standing within the AFL-CIO [American Federation of Labor and Congress of Industrial Organizations].
>
> Continued success in the fields and the undeniable power of the boycott brought important victories during this period, including the passage of the California Agricultural Labor Relations Act, the first law in the continental United States that recognized the rights of farm worker s to organize and negotiate contracts with growers.

Fight Against the Teamsters

Given the Teamsters' territorial raid in 1966 when the Di Giorgio Company and the Teamsters together tried to thwart the UFWOC, the Teamsters sudden move into the fields of the Salinas Valley was not without precedent. The Teamsters had a longstanding presence in the valley, and in July 1970 the union's Salinas-based local had just renegotiated contracts covering workers in the area's canneries, packing sheds, and frozen-food processing plants as well as field-truck drivers and packing-carton stitchers. As negotiations ended, representatives of the Growers-Shippers Vegetable Association (GSVA) asked if the Teamsters might also sign a contract covering field workers which would violate accepted trade-union policy. Nevertheless, William Grami, director of organizing for the Western Conference of Teamsters saw an opportunity to expand his power and sent word to the GSVA that he was willing to sign recognition agreements immediately.

When Chavez and other union leaders learned of the Teamsters' contracts, they quickly developed a counter-strategy. Chavez already had planned to organize the Salinas Valley, where farm workers picked seventy percent of the nation's iceberg lettuce as well as broccoli, cauliflower, carrots, celery, strawberries, and artichokes, but he had hoped to spend a couple of years after the Delano campaign building farm labor solidarity in the area before confronting growers. The UFWOC's success in Delano forced the issue as growers in the Salinas Valley believed that if they signed a contract with the Teamsters, it would forestall the UFWOC moving into their area. However, the growers underestimated the strength of the UFWOC's organizational base, which Manuel Chavez and Gil Padilla had begun building in the area several months earlier. Second, they underestimated the anger with which farm workers would respond to the contracts when they learned that they had been signed by Teamsters officials and growers without farm workers' consent.

That anger turned into activism when the UFWOC initiated the first step in its counter-strategy, a march on Salinas culminating in a massive rally. On August 2, 1970, more than three thousand farm workers marched through the streets of Salinas and streamed onto the football field of Hartnell Community College, chanting "*huelga*" ["strike"] and carrying UFWOC banners, American and Mexican flags, and pictures of the Virgin of Guadalupe and Martin Luther King, Jr. Chavez took the stage. Alternating between Spanish and English, he denounced the growers and the Teamsters for their "great treason against the aspirations of those men and women who have sacrificed their lives for so many years to make a few men rich". Behind-the-scenes deals would not be accepted, [Chavez] asserted and he urged farm workers to refuse to sign Teamster cards. He asked them to begin forming representative committees at their ranches that would report to the UFWOC's Salinas headquarters during the coming week. […] The crowd voted overwhelmingly to go on strike.

Chavez was able to gain use of the Mexican American Political Association (MAPA) office on South Wood Street in Salinas. When Teamsters organizers, growers, and foremen tried to force the valley's lechugeros (lettuce cutters) and other field workers to sign union cards, many of the workers simply walked off and went to the MAPA office instead. Many of the workers did not know the addresses of the ranches where they worked, so this took a great deal of time. Finally union organizers hung a large map of the valley in the MAPA office. As Padilla recalled, they "color-coded the strikes and then assigned each picket captain two or three ranches and told them to get those workers who had struck those ranches to form the picket lines".

Meanwhile Chavez and AFL-CIO organizing director Bill Kircher pressured the Teamsters to recognize the UFWOC's jurisdiction over field workers. They took their case to AFL-CIO President George Meany, who arranged for a meeting so that the leaders of the competing unions might come to an agreement. After this meeting and further mediation from the U.S. Catholic Bishops' Committee on Farm Labor, the Teamsters agreed on August 10 to sign another "no raid" pact and to explore ways to break their Salinas contracts. Chavez, in turn, declared a six-day moratorium on strikes.

Chavez called off all UFWOC strikes in order to allow the Teamsters and growers to meet without distraction, but he realized that the union would need to maintain some pressure. The union's leaders decided to target the area's largest corporate growers. Each of these operations would be vulnerable to negative publicity and, if necessary, a consumer boycott. Leroy Chatfield had already sent out signals that the union was considering a boycott of United Fruit's popular Chiquita bananas, and the arrival of corporate executives from the East Coast provided an opportunity for further maneuvering. During the second week in August, United Fruit's vice president Will Lauer and Purex's chairman of the board, William Tincher, met with Dolores Huerta, Jerry Cohen, and Marshall Ganz. As negotiations moved forward over the coming days and weeks, the union concluded that the corporate growers would be unwilling to rescind their Teamsters contracts and sign with the UFWOC in order to avoid a boycott.

Uncertain about what would lie ahead—how long growers would hold out, the extent to which the Teamsters could be trusted, and how long the area's farm workers would remain nonviolent—Chavez decided to [fast]. Chavez's health deteriorated quickly, leading him to end the fast on the sixth day. On August 17, Chavez retreated to the Franciscan mission at San Juan Bautista to recuperate, leaving Huerta, Cohen, Ganz, and others to run the UFWOC office and continue negotiations. The mission at San Juan Bautista and others like it appealed greatly to Chavez. He found them to be peaceful places where he could meditate and pray. During his time in San Juan Bautista, [Chavez] noted that he "was able to reflect on what was happening, to shed all of those million little problems, and to look at things a little more dispassionately". The need for a place to retreat, reflect, and plan would stay with Chavez for the rest of his life.

The Salinas Strike

While Chavez was at the mission, the union learned of Grami's decision that the Teamsters were "honor bound" to maintain their contracts with all growers who wanted to keep them. Several corporate growers had notified the Teamsters of their desire to rescind their contracts in order to sign with the UFWOC, but 170 smaller-scale vegetable and soft-fruit growers insisted on staying with the International Brotherhood. The Teamsters' refusal to rescind these contracts shattered [Chavez's] remaining hopes of avoiding a strike. Chavez knew that farm workers' anger had been rising daily. A few days after his initial agreement with Grami, he discovered that the Teamsters had accepted a piece-rate increase of only two and half cents over the five-year length of their contracts. After the initial six-day moratorium period ended, Chavez and Huerta had to plead with union members to refrain from striking in order to give the Teamsters more time. Now, with the announcement on August 21 that members of the GSVA and the Teamsters were keeping their contracts, the area's farm workers would not be stopped. When farm workers met at another rally at Hartnell College on August 23, 1970, they thundered their continuing commitment to a strike and pledged to remain nonviolent. The next morning, as many as 7,000 farm workers walked off their jobs at more than 150 ranches, making this the largest farm labor strike since the 1930s. From Salinas south to Santa Maria, the UFWOC's red banners flew in the towns and along the roads. All across the landscape, "it looked like a revolution," Jerry Cohen remembered.

The atmosphere grew tense as the GSVA obtained injunctions that prohibited picketing, as local growers hired armed guards, and Teamsters officers sent thugs with baseball bats to intimidate UFWOC members, including those employed at grower operations that rescinded their Teamsters contracts. Local law enforcement officers sided with the growers and their men. When two burly Teamsters attacked Jerry Cohen as he was trying to check on the safety of broccoli workers involved in a sit-down [strike], the only response from a sheriff's deputy was a complaint to the semi-conscious UFWOC lawyer that there were too many pickets at the ranch. Cohen, who had suffered a concussion, was hospitalized for eight days. Other acts of violence followed during the next several weeks. A ranch foreman drove a bulldozer into UFWOC pickets' cars, several pickets were shot at, and some were attacked with chains. Some farm workers began to retaliate, throwing rocks and using lead pipes as weapons.

The injunctions and mounting acts of violence convinced Chavez to pull farm workers away from the picket lines and turn the union's boycott machinery against non-UFWOC lettuce. George Meany had announced the official end of the grape boycott on August 31, and the first of several hundred boycott organizers began to return to California a week later. Despite his sense that most of them would not want to leave again so soon, Chavez announced at a press conference on September 17 that the union was sending boycotters to sixty four cities in North America.

The GSVA responded by going to court with the argument that the UFWOC strike was prompted by a jurisdictional dispute between two unions and that growers should not have to suffer the consequences. As union appeals moved forward, the Bud Antle Company, acting independently, went to court with a similar argument and convinced Judge Gordon Campbell to issue an injunction against the boycott of its lettuce. Chavez defied the order, and Judge Campbell summoned him to the Monterey County Courthouse in Salinas on December 4. When Chavez arrived with Jerry Cohen, the courthouse was surrounded and filled by three thousand farm workers standing or kneeling silently in a show of support. The hearing ended after three hours with Chavez refusing to call off the boycott. Chavez was led to jail for contempt of court, and his pre-planned press release went out: "Boycott Bud Antle! . . . And boycott the hell out of them!".

The actions of the Antle Company and Judge Campbell played right into the union's hands. As Chavez passed time in the Monterey County Jail, reading books and answering letters, the union maintained a constant vigil. Priests offered Masses, union leaders organized rallies, and the national media covered every development. Media coverage escalated when Chavez received two prominent visitors, Coretta Scott King and Ethel Rose Kennedy. Both women had confidence in Chavez's struggle, and they passed on the strength that they had shared with their husbands. Clearly, Chavez was now regarded on a par with the nation's other civil rights leaders. He remained in jail for twenty days. On December 24, 1970, the California Supreme Court ordered his release pending its review of the case.

Over the course of the next year, the UFWOC continued to wage its battles against Salinas and Santa Maria Valley growers and against the Teamsters. In Washington, D.C., George Meany and Teamsters President Frank Fitzsimmons brokered a new jurisdictional settlement, which Chavez and Bill Grami signed in mid-March. UFWOC leaders met in May with thirty or forty growers and several Teamsters officials. The Teamsters no longer wanted their contracts with the GSVA, and the growers promised to

> negotiate with the UFWOC if Chavez would suspend the boycott. The UFWOC leaders accepted the deal; however after five months of weekly negotiations, the union concluded that the growers were not willing to sign contracts. Bill Kircher announced in November that the UFWOC was breaking off talks. The lettuce boycott began again, with no end in sight (National Park Service 2012:251-254).

The study further noted the following:

> After a long, difficult year in which most of the union's energy and resources went into driving the campaign for Proposition 14, filing complaints against growers, preparing for elections, and haranguing the farm labor board for its lack of progress, the UFW finally found a cause for celebration and a reason for optimism. In March 1977, Teamsters President Frank Fitzsimmons announced that the International Brotherhood was giving up its claims to field workers and that, with the exception of a contract with Bud Antle, it would not seek to renew any of its remaining contracts covering farm workers in California. This development, though unexpected, reflected the reality of the Teamsters' mounting defeats at the ballot box in 1975 and 1976. The announcement marked the end of the bitter, wasteful struggle between the two unions. Chavez looked back at the period with regret, but looked to the future with great optimism. With a membership approaching forty thousand, the UFW in 1977 was unquestionably the dominant union in California agriculture. With as many as 200,000 farm workers in the state still unorganized, the union seemed poised to grow even stronger (National Park Service 2012:263).

Beyond simply serving as the headquarters of the UFW's chief adversary in the late 1960s and most of the 1970s, research revealed that 1868-1870 Ogden Drive has the following direct associations with the UFW's long-term struggle against the Western Conference of Teamsters:

The building at 1868-1870 Ogden Drive served as a negotiation site between the UFW and the Teamsters. The building was again the scene of negotiations, this time with Teamster leadership, in August 1973 (Levy 2007:504). Additionally, the building at 1868-1870 Ogden Drive was the site of the 1977 jurisdictional agreement between the UFW and Teamster that ended the longstanding conflict between the two organizations—an event that grabbed national headlines, including the front page of the *New York Times*. The agreement was signed by Cesar Chavez and M. E. Anderson, director of the Western Conference of Teamsters. Also present at the signing were Jerry Cohen, the UFW's legal counsel, and Frank E. Fitzsimmons, president of the Teamsters. The *New York Times* reported that Chavez emphasized the importance of the agreement compared to previous failed attempts with the Teamsters: "Now we have the top leadership in the West [Anderson] and the international president [Fitzsimmons] blessing this agreement." (Turner 1977:A1).

The building at 1868-1870 Ogden Drive was the site of UFW demonstrations against the Teamsters. The most notable of these occurred on January 10, 1973, when a crowd of up to 500 women and children held a five-hour demonstration inside and outside the Western Conference's headquarters. UFW spokesperson Jessica Govea Thorbourne demanded the "abolishment of fraudulent contracts, a stop harassment of UFWU members." Present within the group was Dolores Huerta (Bernstein 1973; Rhodes 1973; San Francisco Examiner 1973). In response, the Teamsters filed—and won—a temporary restraining order that limited the number of UFW pickets in front of its headquarters (*The Times* 1973). Recalling the event months later, Thorbourne pointed to it as an important example of the involvement of women in the UFW's 1973 grape strike (United Farm Workers 1973). At least one other demonstration (in May of 1973) is known to have taken place at the subject building (*El Malcriado* 1973:6)

The building at 1868-1870 Ogden Drive was bombed on April 18, 1974. At a few minutes after 6 a.m., an explosive device attached to a support column at the rear of the building exploded. The blast, which was powerful enough to be heard four miles away, shattered most of the building's windows, blew a crater in the floor of the building's parking area, ripped apart metal air ducts underneath the building, and caused other damage inside and outside the building. Dozens of windows in nearby buildings were also shattered. Only one of the building's employees—a custodian—was present at the time of the blast, and no injuries were reported. Teamster officials refused to speculate as to who may have been responsible for the blast but indicated that the only conflict involving the Teamsters was with the UFW. He also indicated that he had instructed other Teamster offices in the state, "particularly those in agricultural areas," to remain alert and check for possible explosives (*Los Angeles Times* 1974; *San Francisco Examiner* 1974; *The Times* 1974). Governor Ronald Reagan denounced the act as a "senseless act of violence" that "was part and parcel of the increasing violent atmosphere that has been building in some sections of the country in recent months (Office of Governor Ronald Reagan 1974). According to the Burlingame Police Department, the bombing was never solved (Personal communication 2020).

<u>CRHR Evaluation of 1868-1870 Ogden Drive</u>
The following section evaluates the subject property to determine whether it meets the eligibility criteria for listing in the California Register of Historical Resources (CRHR) as an individual resource. In order to be eligible for listing in the CRHP, a property must demonstrate significance under one or more of the following criteria:

- Criterion 1 (Events): Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Criterion 2 (Persons): Resources that are associated with the lives of persons important to local, California, or national history.
- Criterion 3 (Design/Construction): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
- Criterion 4 (Information Potential): Resources that have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California, or the nation."

CRITERION 1 (Events):

The subject building is significant for its association with the long struggles and, ultimately, the accomplishments of Cesar Chavez and the UFW. The building served as the headquarters for the UFW's chief adversary—the Western Conference of Teamsters—from 1964 until 1977. As a Teamsters headquarters, the subject building had high symbolic value for the UFW and served as an important demonstration and negotiation site for the farm labor movement, serving as a meeting place for key UFW and Teamster leadership, as well as representatives of at least one fruit grower (Perelli-Minetti) involved in the Delano grape strike and boycott. The significance of the building is particularly reflected through its having hosted negotiations between the UFW and Teamsters during the jurisdictional struggle between the organizations during the first half of the 1970s, as well as its selection as the location where the UFW and Teamsters signed a jurisdictional agreement to end their over-ten-year labor dispute. The signing of the jurisdictional agreement in the subject building in 1977 represented a major victory for the UFW that secured over 10,000 new members from the Teamsters (Turner 1977:A9).The 2012 NPS special resource study on properties associated with the life of Cesar Chavez recognized this context as one of the major historical arcs related to the growing influence of the UFW during the 1960s and 1970s, and the building has direct and significant associations with this context. The NPS study identified certain nationally-significant properties related to the UFW-Teamsters conflict, which include the Monterey County Jail, where Cesar Chavez was imprisoned in 1970 for reasons related to the lettuce boycott, and the UFW field office in San Luis, Arizona that served as an important organizing center (NPS 2012:96-97). The subject building at 1868-1870 Ogden Drive reflects a different, but significant, dimension of the conflict by hosting direct interactions between the UFW and the Teamsters. As such, the building meets the significance threshold of CRHR Criterion 1.

The building's period of significance related to this historic context theme is 1966 to 1977, beginning with the Teamster's territorial raid during the Delano Grape Strike and ending with a UFW-Teamster jurisdictional agreement in 1977. This period encompasses the years when negotiations and protests involving the UFW and Teamsters took place at the building and culminates in the signing of the jurisdictional agreement between the UFW and the Teamsters to end their long-standing labor dispute. 1977 is also the year the Teamsters vacated the building and relocated their Western Conference headquarters to Los Angeles.[1] It is noted that the end of the period of significance, 1977, is less than 50 years in the past from the date of the current evaluation. Although resources found eligible for listing in the CRHR typically have significant historic contexts that took place more than 50 years ago, the California Office of Historic Preservation allows for more recent historic contexts to imbue significance if it can be demonstrated that "sufficient time [has] passed to obtain a scholarly perspective on the events or individuals associated with the resource" (California Office of Historic Preservation n.d.:3). Sufficient time has passed for a scholarly perspective to be developed on the significance of 1868-1870 Ogden Drive. As noted previously, the building at 1868-1870 Ogden Drive was the headquarters of the Western Conference of Teamsters from 1964 until 1977, and the major jurisdictional battle between the Teamsters and the UFW has been identified as an important historic context within the farm labor movement in the NPS's 2012 special resource study. While the 2012 NPS study identified numerous properties associated with Cesar Chavez and the farm labor movement, it did not present a comprehensive survey of all UFW-associated properties. Therefore, the exclusion of the subject building from the 2012 NPS study appears to be an oversight, rather than a deliberate exclusion, and does not support a finding of historic register ineligibility for 1868-1870 Ogden Drive. The subject building received no mention in the study, whereas numerous other headquarters and negotiation sites were identified (including those recommended as ineligible for historic register listing). The current evaluation establishes the direct association between the subject building and the significant historic context presented in the 2012 NPS study. Thus, the subject building is significant under CRHR Criterion 1 even though its significance is partly derived from events that occurred less than 50 years ago.

[1] Although the NPS special resource study assigned the relevant context themes the period of significance of 1970-1975, research conducted for the current evaluation reveals that the UFW's fight against the Teamsters did not begin in 1970, but rather in 1966, when the Teamsters launched a territorial raid involving the Di Giorgio Company (NPS 2012:247-248). Nor did it end in 1975 with the signing of the 1975 California Agricultural Labor Relations Act; instead, it ended in 1977 with the signing of a jurisdictional agreement between the two unions (Turner 1977:A1).

CRITERION 2 (Person):

The subject building is associated with numerous people, including nationally significant individuals such as Cesar Chavez, an enormously influential labor organizer within the farm worker labor rights movement of the second half of the twentieth century. However, Chavez was directly involved in events that occurred at the subject building for only a limited duration. While the analysis under Criterion 1 above recognizes the importance of these events, this association does not justify the building's significance under Criterion 2. Numerous other historic register-eligible properties have more direct and more sustained connections to Chavez's life and achievements. Furthermore, the potential significance of Teamsters employees, UFW protesters, and other figures involved in negotiations as related to the subject building is best understood through the historic events that unfolded there, which is most clearly reflected through the building's significance under Criterion 1, above. Thus, the subject building is not significant under CRHR Criterion 2.

CRITERION 3 (Design/Construction):

The subject building was designed by Shigenori Iyama, a well-known Bay Area architect. WhileAlthough Iyama has not , but not one who has been previously identified as a master design professional previously, he does . While Iyama hashave potential significance as an accomplished architect who worked in the Midcentury Modern style. However, despite, Iyama's potential as a master designer, this building would not represent the merit of his body of work because, the   building's primary façade has been altered to such an extent that it no longer conveys Iyama's original design intent. Iyama's design is still apparent to a degree through the building's Midcentury Modern-style characteristics. This style was a popular postwar architectural aesthetic that was applied to residential, commercial, religious, and institutional buildings alike, and it emerged in the early 1950s as a replacement for the earlier Streamline Moderne style that dominated from 1935 to 1950. 1868-1870 Ogden Drive contains some stylistic elements that elevate the building above more mundane examples of post-World War II office buildings and convey its design by an accomplished trained architect: specifically, the distinctive boxed bays and variation between recessed full-height windows and areas of solid aggregate wall; visual impression of intersecting planes; and artful touches such as the vertical mosaic bands, stamped designs at secondary façades, and geometric concrete block construction at the basement parking level. However, the addition of new cladding over the original concrete panels and mosaic bands at the building's primary façade diminishes the building's original architectural aesthetic and material palette. The changes prohibit the building from fully expressing the characteristics of its style and era, Iyama's original design, and its artistic merit. Thus, 1868-1870 Ogden Drive is not significant under CRHR Criterion 3.

CRITERION 4 (Information Potential):

CRHR Criteria 4 most commonly applies to archaeological resources. The building is a typical example of a Midcentury Modern construction. This historic context is well documented in historical sources, photographs, and other existing documentation, and as such the subject building would not fill any data gaps and would not yield information important to prehistory or history. For this reason, 1868-1870 Ogden is not significant under CRHR Criterion 4.

<u>Integrity</u>
In addition to demonstrating significance under CRHR Criterion 1, a resource must retain integrity when being evaluated for listing in the CRHR. Integrity is the measure by which a resource is evaluated based on that resource's ability to convey its historical significance. To retain historic integrity, a structure must possess several (and usually most) of these aspects. These criteria are: location, design, materials and workmanship, setting, feeling, and association. Furthermore, the NPS presents the following guidance regarding properties eligible under NRHP Criterion A (the equivalent of CRHR Criterion 1): "A property important for association with an event, historical pattern, or person(s) ideally might retain some features of all seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Integrity of design and workmanship, however, might not be as important to the significance […] A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today" (NPS 1995:48). The following is a discussion of 1868-1870 Ogden Drive's integrity.

Location: Location is defined as the place where the resource was constructed or the place where an historic event occurred. The subject building has not been moved and thus retains integrity of location.

Design: Design is defined as the combination of elements that create the form, plan, space, structure, and style of a resource. Some alterations have been made to the original design of the building—most notably the addition of an access ramp to the primary entrance and the addition of a new cladding material at the primary façade that obscures original design elements. Furthermore, the interior of the building appears to have experienced changes to its finishes and spatial arrangement over time to accommodate tenants that followed the Teamsters. However, the building's basic volumetric qualities, series of projecting bays with recessed windows, and overall Midcentury Modern style remain discernible. Thus, the subject building retains low to moderate integrity of design.

Setting: Setting is defined as the physical environment (character) of a resource. The subject building is situated in a suburban office park environment that is substantially similar to the setting of the building during its period of significance. Thus, the building retains integrity of setting.

Materials: Materials are defined as the physical elements that were combined during a particular period of time in a particular pattern or configuration. In the late 1990s, the exposed aggregate panels on the building's primary façade were plastered over and then painted. The rectangular gemstone mosaics flanking the main entrance were also plastered over. However, the material palette at all secondary façades appears to remain the same as during the period of significance. Thus, the building has moderate integrity of materials.

Workmanship: Workmanship is defined as the physical evidence of the crafts during a given period in history. As noted above, the subject building has experienced some alterations to its primary façade, but the building is still readily identifiable as one constructed of pre-cast concrete panels with additional evidence of elevated craftsmanship, primarily the vertical mosaic bands. Thus, the building has moderate integrity of workmanship.

Feeling: Feeling is defined as a resource's expression of the aesthetic or historic sense of a particular period of time. Despite some alterations to the building's materials and design, the subject building still retains the general feeling of mid-twentieth-century office/headquarters building. Thus, the subject building retains moderate integrity of feeling.

Association: Association is defined as the direct link between and important historic event or person and a historical resource. The building remains the past site of significant protests and the 1977 jurisdictional agreement signing between the Teamsters and UFW. The subject building has experienced some exterior alterations and no longer retains any signage indicating it was once the headquarters of the Western Conference of Teamsters. However, as a composite of the other aspects of integrity, the building's integrity of association remains sufficient to convey its historic use during the period of significance, and the building can be clearly understood as the same site where significant events related to the UFW and Western Conference of Teamsters transpired during the 1960s and 1970s. Thus, the subject building retains integrity of association.

In conclusion, 1868-1870 Ogden Drive retains sufficient integrity of location, design, setting, materials, workmanship, feeling, and association in order to convey its integrity under CRHR Criterion 1. The historical resource boundary is the legal parcel containing 1868-1870 Ogden Drive, and the resource's character-defining features are the following:

- One-story-over-basement Midcentury Modern-style office building and its original rectangular footprint and cubic massing.
- Staircase and handrails at the building's primary entrance on Ogden Drive.
- Deeply recessed, fully glazed entrance and projecting entrance canopy.
- Pre-cast concrete panel cladding.
- Projected boxed bays on east, west, and north façades, including the exposed aggregate panels, projecting roofline, projecting floor-level platforms, and vertically oriented fixed windows.

Conclusion

Based on an evaluation under CRHR Criteria 1–4, the building at 1868-1870 Ogden Drive is eligible for individual listing in the CRHR under Criterion 1. The property is therefore a historical resource for the purposes of the California Environmental Quality Act (CEQA), in accordance with Section 15064.5(a)(2)(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

***B12. References** (continued)**:**

Bernstein, Harry. 1973. "Bargaining Talks with Chavez' Union Called 'Unbelievable'. *Las Angeles Times.*

Brown, Mary. 2010. *San Francisco Modern Architecture and Landscape Design, 1935–1979: Historic Context Statement*. San Francisco City and County Planning Department, San Francisco, CA.

Burlingame Chamber of Commerce. 2018. *History of Burlingame*. Available: https://burlingamechamber.org/life-in-burlingame/history/. Accessed March 14, 2018.

Burlingame Historical Society. 2018. "Explore the History of Burlingame." Available: https://burlingamehistory.org/history-of-burlingame/. Accessed: March 11, 2020.

California Office of Historic Preservation. N.d. California Office of Historic Preservation Technical Assistance Series #6: California Register and National Register: A Comparison. California Department of Parks and Recreation, Office of Historic Preservation. Available: https://ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf. Accessed: April 9, 2020.

———. 2015. *Latinos in Twentieth Century California: National Register of Historic Places Context Statement.* Sacramento, CA: California Office of Historic Preservation.

Carey & Co., Inc. 2008. Inventory of Historic Resources. Burlingame Downtown Specific Plan. Burlingame, CA. October 6, 2008.

Cerny, Susan. 2007. *An Architectural Guidebook to San Francisco and the Bay Area.* Salt Lake City: Gibbs Smith.

El Malcriado. 1973. "The Boycott: Bridge of Communication." May 18. Available: https://bit.ly/2TPAPSN. Accessed: March 9, 2020.

Figueroa, Alfredo Acosta. n.d. Essay. Farm Workers Movement Documentation Project. University of California San Diego. Available: https://bit.ly/2PU4mK2. Farm Workers Movement Documentation Project. University of California San Diego. Accessed: March 6, 2020.

Independent Journal. 1966. "Archbishop Dedicates New Church." May 7.

———. 1963. "New Office Building Going Up." Feb. 7.

International Teamster. 1963. "Western Conference Plans to Open New Offices in July." December.

Koyl, George S, ed. 1962. *American Architects Directory*. New York: R. R. Bowker Company.

Levy, Jacqueline. 2007. *Cesar Chavez: Autobiography of La Causa*. Minneapolis: University of Minnesota Press.

Los Angeles Times. 1974. "Bomb Rips Western Teamsters Office, Causes $75,000 Damage". April 19.

Moore, John M. 1958. *Moore's Who is Who in California*. Los Angeles: John M. Moore.

National Minority Business Campaign. 1975. *Try Us: National Minority Business Directory*. Minneapolis: National Minority Business Campaign.

National Park Service. 2012. *Cesar Chavez Special Resource Study and Environmental Assessment.* March. Available: http://www.npshistory.com/publications/cech/srs.pdf. Accessed: March 19, 2020.

———. 1995. How to Apply the National Register Criteria for Evaluation. Available: https://bit.ly/33x5qc2. Accessed: March 19, 2020.

National Environmental Title Research (NETR). 1946. Historic Aerials, 1868-1870 Ogden Drive. Available: https://www.historicaerials.com/viewer. Accessed March 11, 2020.

———. 1956. Historic Aerials, 1868-1870 Ogden Drive. Available: https://www.historicaerials.com/viewer. Accessed March 11, 2020.

———. 1968. Historic Aerials, 1868-1870 Ogden Drive. Available: https://www.historicaerials.com/viewer. Accessed March 11, 2020.

Oakland Tribune. 1963a. "Notes From News of Bay Area Business, Industry," July 2.

———. 1963b. "Office Combines Beauty, Utility." July 14.

———. 1964a. "Holy Redeemer Church to Dedicate Chapel." April 24.

———. 1964b. "Teamsters Move to Burlingame." Dec. 12.

Office of Governor Ronald Reagan. 1974. Press Release. April 18. Available: https://www.reaganlibrary.gov/sites/default/files/digitallibrary/gubernatorial/pressunit/p15/40-840-7408623-p15-010-2017.pdf. Accessed: March 3, 2020.

Peninsula Royalty: The Founding Families of Burlingame-Hillsborough. 2018. *Darius Ogden Mills*. Available: https://burlingamefoundingfamilies.wordpress.com/mills-introduction/darius-ogden-mills/. Accessed March 15, 2018.

Petaluma Argus Courier. 1969. "New St. Josephs Parish Building." April 12.

Rhodes, George. 1973. "Teamsters Ignore Protest: 'Futile'". *San Francisco Examiner.* Jan. 1.

San Francisco Examiner. 1974. "Bomb Explosion Rocks Teamster Headquarters." April 18.

Schirmer, Henry W. 1980. *Pro File.* The Official AIAI Directory of Architectural Firms. Philadelphia: Archimedia Incorporated.

Shin Nichibei. 1963. "Nisea Architect Designs Unique Building in Oakland." July 26.

———. 1964 "Oakland Architect Wins Two Awards." Sept. 30.

Turner, Wallace. 1977. "Chavez and Teamsters Sign Accord." *New York Times.* March 11.

The Times. 1964. "Teamsters Move HQ to Burlingame." Dec. 12.

———. 1973. "Limit Placed on Pickets at Teamsters." Jan. 12.

———. 1974. "Bomb Shatters Teamster Hdqs". April 19.

United Farm Workers. 1973. "Women in the Farm Workers Movement: An interview with Jessica Govea, Organizer for the United Farm Workers of America." Farm Workers Movement Documentation Project. University of California San Diego. Available: https://bit.ly/2VQh5AZ. Accessed: March 6, 2020.

War Relocation Authority. 1945. Final Accountability Roster of the Central Utah Relocation Center. Available: www.familysearch.org. Accessed: March 3, 2020.

———. 1946. Final Accountability Roster of the Tule Lake Relocation Center. Available: www.familysearch.org. Accessed: March 3, 2020.

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

Figures:

Figure 2. View of south (primary) façade of 1868-1870 Ogden Drive looking north, Feb. 12, 2020. Source: ICF.

Figure 3. View of west and north facades of 1868-1870 Ogden Drive, looking south, Feb. 12, 2020. Source: ICF.

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

Figure 4. Detail of decorative gemstone mosaic and exposed aggregate panels with vertical scoring, Feb. 12, 2020. Source: ICF.

Figure 5. View of north facade, looking south, Feb. 12, 2020. Source: ICF.

 ***Resource Name or #**(Assigned by recorder) 1868-1870 Ogden Drive

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

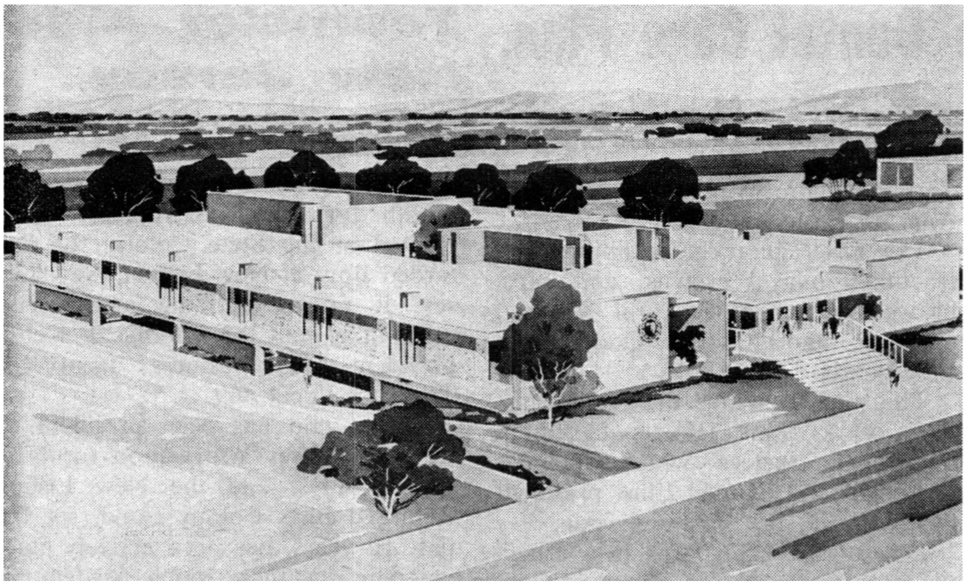


Figure 6. Architect's rendering of 1868-1870 Ogden Drive. Source: *The International Teamster*, Dec. 1963.

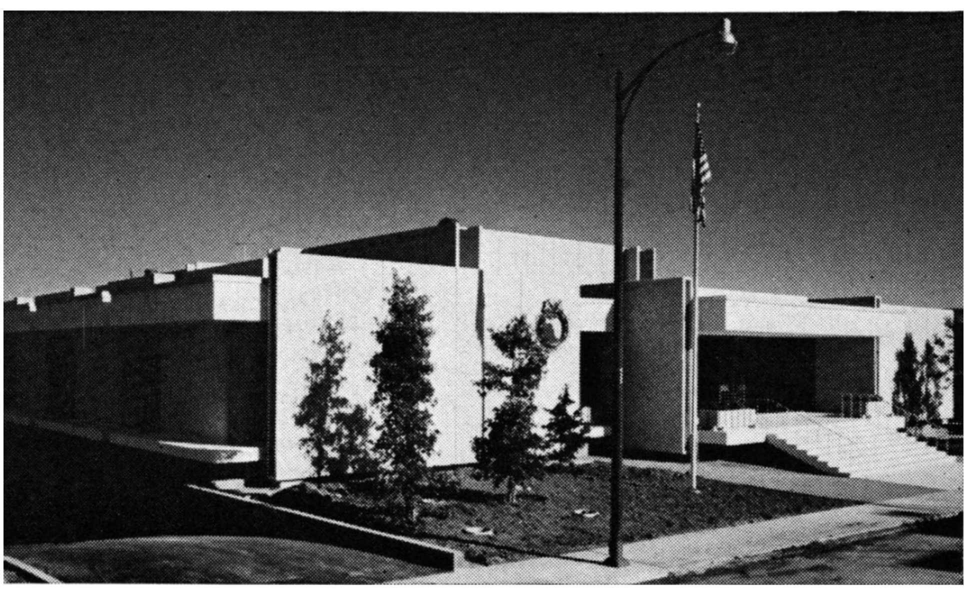


Figure 7. View of west (primary) and north façades. Source: *The International Teamster*, Jan. 1965.

Page 17 of 19 ***Resource Name or #**(Assigned by recorder) 1868-1870 Ogden Drive

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

Figure 8. Demonstrators fill the lobby of the Western Conference of Teamsters headquarters, January 10, 1973. Source: *The Times* [San Mateo], Jan. 11, 1973.

Figure 9. Demonstrators outside 1868-1870 Ogden Drive in May 1973. Source: *El Malcriado, May 18, 1973.*

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

Figure 10. A few of the north (rear) façade of 1868-1870 Ogden Drive showing the damage cause by a bomb that detonated in April 1974. Source: *The Times* [San Mateo], April 18, 1974.

 ***Resource Name or #**(Assigned by recorder) 1868-1870 Ogden Drive

***Recorded by** Alex Ryder, ICF
***Date** April 21, 2020 ☑ Continuation ☐ Update

Figure 11. Cesar Chavez (right) signs an agreement at 1868-1870 Ogden Drive ending more than a decade of hostilities between the UFW and International Brotherhood of Teamsters on March 10, 1977. Source: Associated Press / SFGate

Appendix D

Supporting Air Quality and Greenhouse Gas Information

Project Construction and Operations CalEEMod Output

1868 Ogden - Existing
San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	25.93	1000sqft	0.90	25,925.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity	298.54	**CH4 Intensity**	0.03	**N2O Intensity**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility info from http://www.pgecorp.com/corp_responsibility/reports/2019/en02_climate_change.html & eGRID
Land Use - Lot acreage per PD
Construction Phase - Ops only
Off-road Equipment - Ops only
Trips and VMT - Ops only
Grading - Acreage graded based on project size.
Architectural Coating - Parking area based on land use of 150 spaces
Vehicle Trips - Mobile emissions calculated off-model using TIA trip gen rates and EMFAC2017
Land Use Change - 5,451 SF of shrubs, grasses, vines, and other plants as part of Project landscaping conservatively not quantified
Sequestration - Conservatively did not include net new 9 trees (14 removed, 23 planted)
Construction Off-road Equipment Mitigation -
Area Mitigation - Only NG hearth per BAAQMD regulations.
Water Mitigation - Low-flow fixtures required by CalGreen building standards.
Stationary Sources - Process Boilers - Data request pending

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	25,930.00	25,925.00
tblLandUse	LotAcreage	0.60	0.90
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.54

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated 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	0.6291	2.00E-05	2.66E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05		5.6700e-	5.6700e-	2.0000e-		6.0600e-
Energy	0.0148	0.1346	0.1131	8.10E-04		0.0102	0.0102		0.0102	0.0102		161.5247	161.5247	3.1000e-	2.9600e-	162.4845
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	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	**0.6439**	**0.1346**	**0.1157**	**8.1000e-**	**0.0000**	**0.0102**	**0.0102**	**0.0000**	**0.0102**	**0.0102**		**161.5303**	**161.5303**	**3.1200e-**	**2.9600e-**	**162.4906**

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas	0.0148	0.1346	0.1131	8.1000e-		0.0102	0.0102		0.0102	0.0102		161.5247	161.5247	3.1000e-	2.9600e-	162.4845

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGa	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office	1372.96	0.0148	0.1346	0.1131	8.1000e-		0.0102	0.0102		0.0102	0.0102		161.5247	161.5247	3.1000e-	2.9600e-	162.4845
Total		**0.0148**	**0.1346**	**0.1131**	**8.1000e-**		**0.0102**	**0.0102**		**0.0102**	**0.0102**		**161.5247**	**161.5247**	**3.1000e-**	**2.9600e-**	**162.4845**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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

Unmitigated	0.6291	2.0000e-	2.6600e-	0.0000		1.0000e-	1.0000e-		1.0000e-	1.0000e-		5.6700e-	5.6700e-	2.0000e-		6.0600e-

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural	0.0741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer	0.5548					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-	2.0000e-	2.6600e-	0.0000		1.0000e-	1.0000e-		1.0000e-	1.0000e-		5.6700e-	5.6700e-	2.0000e-		6.0600e-
Total	**0.6291**	**2.0000e-**	**2.6600e-**	**0.0000**		**1.0000e-**	**1.0000e-**		**1.0000e-**	**1.0000e-**		**5.6700e-**	**5.6700e-**	**2.0000e-**		**6.0600e-**

1868 Ogden - Proposed
San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	150.00	Space	0.89	55,423.00	0
Other Asphalt Surfaces	3.40	1000sqft	0.08	3,400.00	0
Condo/Townhouse High Rise	120.00	Dwelling Unit	0.00	113,809.00	343

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity	274.04	**CH4 Intensity**	0.03	**N2O Intensity**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility EF from http://www.pgecorp.com/corp_responsibility/reports/2019/en02_climate_change.html and eGRID
Land Use - Parking = ground/basement 2-story structure. Other asphalt surfaces = 3,400 SF public plaza (staff report)
Construction Phase - PD start date of 11/2020 and end date of 7/2022 used to scale the phase days according to the CalEEMod default % of phase days.
Off-road Equipment - dump truck and water truck modeled off-model
Off-road Equipment - water truck modeled off model
Off-road Equipment - concrete trucks modeled offmodel
Off-road Equipment - water trucks modeled offmode
Trips and VMT - Per 3/11/20 call with Joe McCluskey, Recycling Specialist at the City, construction waste to be hauled 32 miles to the Zanker waste
Grading - Acreage graded based on project size.
Architectural Coating - Parking area based on land use of 150 spaces. Applicant committed to low VOC coatings.
Vehicle Trips - Mobile emissions calculated off-model using TIA trip gen rates and EMFAC2017
Woodstoves - No wood-burning devices allowed in Bay Area new construction, per BAAQMD Wood Burning Rule. All units would have gas fireplace.
Land Use Change - 5,451 SF of shrubs, grasses, vines, and other plants as part of Project landscaping conservatively not quantified
Sequestration - Conservatively did not include net new 9 trees (14 removed, 23 planted)
Construction Off-road Equipment Mitigation - Standard BAAQMD construction BMPs
Mobile Land Use Mitigation -

Area Mitigation - Only NG hearth per BAAQMD regulations.
Water Mitigation - Low-flow fixtures required by CalGreen building standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	3,529.00	55,423.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstDustMitigation	WaterExposedAreaPM10PercentReduc	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduc	55	61
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	35.00
tblConstructionPhase	NumDays	1.00	14.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	100.00	354.00
tblConstructionPhase	NumDays	5.00	18.00
tblConstructionPhase	NumDays	5.00	17.00
tblFireplaces	NumberGas	18.00	120.00
tblFireplaces	NumberNoFireplace	4.80	0.00
tblFireplaces	NumberWood	20.40	0.00
tblGrading	AcresOfGrading	2.00	0.89
tblGrading	MaterialExported	0.00	8,000.00
tblLandUse	LandUseSquareFeet	60,000.00	55,423.00
tblLandUse	LandUseSquareFeet	120,000.00	113,809.00
tblLandUse	LotAcreage	1.35	0.89
tblLandUse	LotAcreage	1.88	0.00
tblOffRoadEquipment	HorsePower	16.00	247.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Site Preparation
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	641.35	274.04
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00

tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblVehicleTrips	ST_TR	4.31	0.00
tblVehicleTrips	SU_TR	3.43	0.00
tblVehicleTrips	WD_TR	4.18	0.00
tblWoodstoves	NumberCatalytic	2.40	0.00
tblWoodstoves	NumberNoncatalytic	2.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.0827	45.4915	22.433	0.1068	3.0371	0.6556	3.6927	0.7876	0.6239	1.4115	0.0000	11,800.37	11,800.378	1.6228	0.0000	11,840.94
2021	1.9493	41.8007	22.828	0.1048	4.9177	0.5787	5.4965	1.2493	0.5504	1.7997	0.0000	11,627.06	11,627.067	1.6336	0.0000	11,667.90
2022	49.7097	9.361	10.0813	0.0245	1.0604	0.3819	1.4422	0.2846	0.3515	0.6361	0.0000	2,466.534	2,466.5348	0.4248	0.0000	2,477.154
Maximum	**49.7097**	**45.4915**	**22.8280**	**0.1068**	**4.9177**	**0.6556**	**5.4965**	**1.2493**	**0.6239**	**1.7997**	**0.0000**	**11,800.37**	**11,800.378**	**1.6336**	**0.0000**	**11,840.94**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4746	2.4368	10.9147	0.0154		0.2426	0.2426		0.2426	0.2426	0.0000	2,982.565	2,982.5657	0.0741	0.0544	3,000.615
Energy	0.031	0.2645	0.1126	1.69E-03		0.0214	0.0214		0.0214	0.0214		337.6798	337.6798	6.4700e-	6.1900e-	339.6865
Mobile	0	0	0	0	0	0	0	0	0	0		0.0000	0.0000	0.0000		0.0000
Stationary	0	0	0	0		0	0		0	0		0.0000	0.0000	0.0000		0.0000
Total	**3.5056**	**2.7013**	**11.0273**	**0.017**	**0**	**0.264**	**0.264**	**0**	**0.264**	**0.264**	**0.0000**	**3,320.245**	**3,320.2456**	**0.0806**	**0.0605**	**3,340.302**

3.0 Construction Detail

Construction Phase

Phase	Phase Name	Phase Type	Start Date	End Date	Num	Num Days	Phase Description
1	Demolition	Demolition	11/1/2020	12/18/2020	5	35	
2	Site Preparation	Site Preparation	12/21/2020	1/7/2021	5	14	
3	Grading	Grading	1/8/2021	1/18/2021	5	7	
4	Building Construction	Building Construction	1/19/2021	5/27/2022	5	354	
5	Paving	Paving	5/28/2022	6/22/2022	5	18	
6	Architectural Coating	Architectural Coating	6/23/2022	7/15/2022	5	17	

Acres of Grading (Site Preparation Phase): 0.89

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.97

Residential Indoor: 230,463; Residential Outdoor: 76,821; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

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	Dumpers/Tenders	0	1.00	247	0.38
Demolition	Off-Highway Trucks	0	8.00	402	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	0	8.00	402	0.38
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Off-Highway Trucks	0	8.00	402	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Off-Highway Trucks	0	7.00	402	0.38
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
Demolition	6	15.00	0.00	118.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	1,000.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	111.00	22.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated 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					0.7291	0.0000	0.7291	0.1104	0.0000	0.1104			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.235	1,147.2352	0.2169		1,152.657
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7291**	**0.4672**	**1.1963**	**0.1104**	**0.4457**	**0.5561**		**1,147.235**	**1,147.2352**	**0.2169**		**1,152.657**

Unmitigated 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	0.0445	1.5818	0.6785	4.2300e-	0.0936	5.3100e-	0.0989	0.0256	5.0800e-	0.0307		479.6403	479.6403	0.0604		481.1495
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
Worker	0.0459	0.0302	0.3006	1.0800e-	0.1232	7.4000e-	0.1240	0.0327	6.8000e-	0.0334		107.9793	107.9793	2.1200e-		108.0323
Total	**0.0904**	**1.6119**	**0.9791**	**5.3100e-**	**0.2168**	**6.0500e-**	**0.2229**	**0.0583**	**5.7600e-**	**0.0641**		**587.6195**	**587.6195**	**0.0625**		**589.1818**

3.3 Site Preparation - 2020

Unmitigated 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					0.1320	0.0000	0.1320	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	1.1085	11.9597	7.8567	0.0163		0.5426	0.5426		0.5157	0.5157		1,566.521	1,566.5218	0.3424		1,575.082
Total	**1.1085**	**11.9597**	**7.8567**	**0.0163**	**0.1320**	**0.5426**	**0.6746**	**0.0171**	**0.5157**	**0.5328**		**1,566.521**	**1,566.5218**	**0.3424**		**1,575.082**

Unmitigated 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	0.9436	33.5117	14.3759	0.0897	2.8229	0.1126	2.9354	0.7488	0.1077	0.8565		10,161.87	10,161.870	1.2790		10,193.84
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
Worker	0.0306	0.0201	0.2004	7.2000e-	0.0822	4.9000e-	0.0826	0.0218	4.6000e-	0.0223		71.9862	71.9862	1.4100e-		72.0215
Total	**0.9742**	**33.5318**	**14.5763**	**0.0904**	**2.9050**	**0.1131**	**3.0181**	**0.7706**	**0.1081**	**0.8787**		**10,233.85**	**10,233.856**	**1.2804**		**10,265.86**

3.3 Site Preparation - 2021

Unmitigated 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					0.1320	0.0000	0.1320	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	1.0207	11.0304	7.7681	0.0163		0.4771	0.4771		0.4531	0.4531		1,565.619	1,565.6199	0.3388		1,574.090
Total	**1.0207**	**11.0304**	**7.7681**	**0.0163**	**0.1320**	**0.4771**	**0.6091**	**0.0171**	**0.4531**	**0.4702**		**1,565.619**	**1,565.6199**	**0.3388**		**1,574.090**

Unmitigated 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	0.9000	30.7523	14.8751	0.0878	4.7036	0.1012	4.8047	1.2105	0.0968	1.3073		9,992.022	9,992.0220	1.2935		10,024.36
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
Worker	0.0286	0.0180	0.1848	7.0000e-	0.0822	4.8000e-	0.0826	0.0218	4.4000e-	0.0222		69.4258	69.4258	1.2700e-		69.4576
Total	**0.9286**	**30.7703**	**15.0599**	**0.0885**	**4.7857**	**0.1017**	**4.8874**	**1.2323**	**0.0972**	**1.3295**		**10,061.44**	**10,061.447**	**1.2948**		**10,093.81**

3.4 Grading - 2021

Unmitigated 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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.433	1,147.4338	0.2138		1,152.779
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7528**	**0.4073**	**1.1601**	**0.4138**	**0.3886**	**0.8024**		**1,147.433**	**1,147.4338**	**0.2138**		**1,152.779**

Unmitigated 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
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
Worker	0.0372	0.0235	0.2403	9.0000e-	0.1068	6.2000e-	0.1074	0.0283	5.7000e-	0.0289		90.2536	90.2536	1.6500e-		90.2948
Total	**0.0372**	**0.0235**	**0.2403**	**9.0000e-**	**0.1068**	**6.2000e-**	**0.1074**	**0.0283**	**5.7000e-**	**0.0289**		**90.2536**	**90.2536**	**1.6500e-**		**90.2948**

3.5 Building Construction - 2021

Unmitigated 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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.215	1,103.2158	0.3568		1,112.135
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.215**	**1,103.2158**	**0.3568**		**1,112.135**

Unmitigated 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
Vendor	0.0724	2.2909	1.0254	5.7100e-	0.1485	5.4000e-	0.1539	0.0427	5.1600e-	0.0479		628.2132	628.2132	0.0555		629.6003
Worker	0.3178	0.2003	2.0514	7.7200e-	0.9118	5.3200e-	0.9172	0.2419	4.9000e-	0.2468		770.6269	770.6269	0.0141		770.9790
Total	**0.3902**	**2.4912**	**3.0769**	**0.0134**	**1.0603**	**0.0107**	**1.0711**	**0.2846**	**0.0101**	**0.2947**		**1,398.840**	**1,398.8401**	**0.0696**		**1,400.579**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.939	1,103.9393	0.3570		1,112.865
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.939**	**1,103.9393**	**0.3570**		**1,112.865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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
Vendor	0.0680	2.1545	1.0224	5.6200e-	0.1485	4.7600e-	0.1533	0.0427	4.5500e-	0.0473		620.1526	620.1526	0.0551		621.5289
Worker	0.3008	0.1808	1.9062	7.4400e-	0.9118	5.2100e-	0.9171	0.2419	4.8000e-	0.2467		742.4429	742.4429	0.0127		742.7601
Total	**0.3688**	**2.3352**	**2.9286**	**0.0131**	**1.0604**	**9.9700e-**	**1.0703**	**0.2846**	**9.3500e-**	**0.2940**		**1,362.595**	**1,362.5955**	**0.0677**		**1,364.289**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.824	1,035.8246	0.3017		1,043.367
Paving	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6586**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.824**	**1,035.8246**	**0.3017**		**1,043.367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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
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
Worker	0.0542	0.0326	0.3435	1.3400e-	0.1643	9.4000e-	0.1652	0.0436	8.6000e-	0.0444		133.7735	133.7735	2.2900e-		133.8307
Total	**0.0542**	**0.0326**	**0.3435**	**1.3400e-**	**0.1643**	**9.4000e-**	**0.1652**	**0.0436**	**8.6000e-**	**0.0444**		**133.7735**	**133.7735**	**2.2900e-**		**133.8307**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.4455					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**49.6500**	**1.4085**	**1.8136**	**2.9700e-**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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
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
Worker	0.0596	0.0358	0.3778	1.4700e-	0.1807	1.0300e-	0.1818	0.0479	9.5000e-	0.0489		147.1509	147.1509	2.5100e-		147.2137
Total	**0.0596**	**0.0358**	**0.3778**	**1.4700e-**	**0.1807**	**1.0300e-**	**0.1818**	**0.0479**	**9.5000e-**	**0.0489**		**147.1509**	**147.1509**	**2.5100e-**		**147.2137**

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas	0.0310	0.2645	0.1126	1.6900e-		0.0214	0.0214		0.0214	0.0214		337.6798	337.6798	6.4700e-	6.1900e-	339.6865
NaturalGas	0.0310	0.2645	0.1126	1.6900e-		0.0214	0.0214		0.0214	0.0214		337.6798	337.6798	6.4700e-	6.1900e-	339.6865

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGa	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	2870.28	0.0310	0.2645	0.1126	1.6900e-		0.0214	0.0214		0.0214	0.0214		337.6798	337.6798	6.4700e-	6.1900e-	339.6865
Enclosed Parking	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
Other Asphalt	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
Total		**0.0310**	**0.2645**	**0.1126**	**1.6900e-**		**0.0214**	**0.0214**		**0.0214**	**0.0214**		**337.6798**	**337.6798**	**6.4700e-**	**6.1900e-**	**339.6865**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	3.4746	2.4368	10.9147	0.0154		0.2426	0.2426		0.2426	0.2426	0.0000	2,982.565	2,982.5657	0.0741	0.0544	3,000.615

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural	0.4457					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer	2.4564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2718	2.3224	0.9882	0.0148		0.1878	0.1878		0.1878	0.1878	0.0000	2,964.705	2,964.7059	0.0568	0.0544	2,982.323
Landscaping	0.3008	0.1144	9.9265	5.2000e-		0.0548	0.0548		0.0548	0.0548		17.8599	17.8599	0.0173		18.2920
Total	**3.4746**	**2.4368**	**10.9147**	**0.0153**		**0.2426**	**0.2426**		**0.2426**	**0.2426**	**0.0000**	**2,982.565**	**2,982.5657**	**0.0741**	**0.0544**	**3,000.615**

1868 Ogden - Proposed
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	150.00	Space	0.89	55,423.00	0
Other Asphalt Surfaces	3.40	1000sqft	0.08	3,400.00	0
Condo/Townhouse High Rise	120.00	Dwelling Unit	0.00	113,809.00	343

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity	274.04	**CH4 Intensity**	0.03	**N2O Intensity**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility EF from http://www.pgecorp.com/corp_responsibility/reports/2019/en02_climate_change.html and eGRID
Land Use - Parking = ground/basement 2-story structure. Other asphalt surfaces = 3,400 SF public plaza (staff report)
Construction Phase - PD start date of 11/2020 and end date of 7/2022 used to scale the phase days according to the CalEEMod default % of phase days.
Off-road Equipment - dump truck and water truck modeled off-model
Off-road Equipment - water truck modeled off model
Off-road Equipment - concrete trucks modeled offmodel
Off-road Equipment - water trucks modeled offmode
Trips and VMT - Per 3/11/20 call with Joe McCluskey, Recycling Specialist at the City, construction waste to be hauled 32 miles to the Zanker waste
Grading - Acreage graded based on project size.
Architectural Coating - Parking area based on land use of 150 spaces. Applicant committed to low VOC coatings.
Vehicle Trips - Mobile emissions calculated off-model using TIA trip gen rates and EMFAC2017
Woodstoves - No wood-burning devices allowed in Bay Area new construction, per BAAQMD Wood Burning Rule. All units would have gas fireplace.
Land Use Change - 5,451 SF of shrubs, grasses, vines, and other plants as part of Project landscaping conservatively not quantified
Sequestration - Conservatively did not include net new 9 trees (14 removed, 23 planted)
Construction Off-road Equipment Mitigation - Standard BAAQMD construction BMPs
Area Mitigation - Only NG hearth per BAAQMD regulations.
Water Mitigation - Low-flow fixtures required by CalGreen building standards.
Stationary Sources - Process Boilers - Data request pending

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	3,529.00	55,423.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstDustMitigation	WaterExposedAreaPM10PercentReduc	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduc	55	61
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	35.00
tblConstructionPhase	NumDays	1.00	14.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	100.00	354.00
tblConstructionPhase	NumDays	5.00	18.00
tblConstructionPhase	NumDays	5.00	17.00
tblFireplaces	NumberGas	18.00	120.00
tblFireplaces	NumberNoFireplace	4.80	0.00
tblFireplaces	NumberWood	20.40	0.00
tblGrading	AcresOfGrading	2.00	0.89
tblGrading	MaterialExported	0.00	8,000.00
tblLandUse	LandUseSquareFeet	60,000.00	55,423.00
tblLandUse	LandUseSquareFeet	120,000.00	113,809.00
tblLandUse	LotAcreage	1.35	0.89
tblLandUse	LotAcreage	1.88	0.00
tblOffRoadEquipment	HorsePower	16.00	247.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Site Preparation
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	641.35	274.04
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00
tblTripsAndVMT	HaulingTripLength	20.00	32.00

tblVehicleTrips	ST_TR	4.31	0.00
tblVehicleTrips	SU_TR	3.43	0.00
tblVehicleTrips	WD_TR	4.18	0.00
tblWoodstoves	NumberCatalytic	2.40	0.00
tblWoodstoves	NumberNoncatalytic	2.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0260	0.3690	0.2509	7.9000e-	0.0299	0.0112	0.0411	6.3700e-	0.0107	0.0171	0.0000	75.9195	75.9195	0.011	0	76.1956
2021	0.1482	1.4315	1.3593	3.4100e-	0.1420	0.0599	0.2019	0.0387	0.0552	0.0940	0.0000	314.0432	314.0432	0.0525	0	315.3547
2022	0.4824	0.5565	0.6094	1.4400e-	0.0563	0.0234	0.0797	0.0152	0.0216	0.0368	0.0000	130.7728	130.7728	0.0229	0	131.3439
Maximum	**0.4824**	**1.4315**	**1.3593**	**3.4100e-**	**0.1420**	**0.0599**	**0.2019**	**0.0387**	**0.0552**	**0.0940**	**0.0000**	**314.0432**	**314.0432**	**0.0525**	**0.0000**	**315.3547**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**11-1-2020**	**1-31-2021**	0.5612	0.5612
2	**2-1-2021**	**4-30-2021**	0.3689	0.3689
3	**5-1-2021**	**7-31-2021**	0.3790	0.3790
4	**8-1-2021**	**10-31-2021**	0.3802	0.3802
5	**11-1-2021**	**1-31-2022**	0.3689	0.3689
6	**2-1-2022**	**4-30-2022**	0.3300	0.3300
7	**5-1-2022**	**7-31-2022**	0.5813	0.5813
		Highest	0.5813	0.5813

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5582	0.0232	0.8989	1.3000e-		5.9800e-	5.9800e-		5.9800e-	5.9800e-	0.0000	16.4389	16.4389	1.70E-03	2.70E-04	16.5632
Energy	5.6500e-	0.0483	0.0205	3.1000e-		3.9000e-	3.9000e-		3.9000e-	3.9000e-	0.0000	163.1271	163.1271	0.0128	2.59E-03	164.2191
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0	0
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0	0	0	0
Waste						0.0000	0.0000		0.0000	0.0000	11.2051	0.0000	11.2051	0.6622	0	27.7602
Water						0.0000	0.0000		0.0000	0.0000	2.4804	7.4031	9.8836	0.2556	6.12E-03	18.0978
Total	**0.5639**	**0.0715**	**0.9194**	**4.4000e-**	**0.0000**	**9.8800e-**	**9.8800e-**	**0.0000**	**9.8800e-**	**9.8800e-**	**13.6855**	**186.9691**	**200.6547**	**0.9323**	**8.9800e-**	**226.6403**

3.0 Construction Detail

Construction Phase

Phase	Phase Name	Phase Type	Start Date	End Date	Num	Num Days	Phase Description
1	Demolition	Demolition	11/1/2020	12/18/2020	5	35	
2	Site Preparation	Site Preparation	12/21/2020	1/7/2021	5	14	
3	Grading	Grading	1/8/2021	1/18/2021	5	7	
4	Building Construction	Building Construction	1/19/2021	5/27/2022	5	354	
5	Paving	Paving	5/28/2022	6/22/2022	5	18	
6	Architectural Coating	Architectural Coating	6/23/2022	7/15/2022	5	17	

Acres of Grading (Site Preparation Phase): 0.89

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.97

Residential Indoor: 230,463; Residential Outdoor: 76,821; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

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	Dumpers/Tenders	0	1.00	247	0.38
Demolition	Off-Highway Trucks	0	8.00	402	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	0	8.00	402	0.38
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Off-Highway Trucks	0	8.00	402	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Off-Highway Trucks	0	7.00	402	0.38
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
Demolition	6	15.00	0.00	118.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	1,000.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT

Building Construction	5	111.00	22.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	32.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated 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					0.0128	0.0000	0.0128	1.93E-03	0	1.9300e-	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1378	0.1334	2.1000e-		8.1800e-	8.1800e-		7.80E-03	7.8000e-	0.0000	18.2132	18.2132	3.4400e-	0.0000	18.2993
Total	**0.0152**	**0.1378**	**0.1334**	**2.1000e-**	**0.0128**	**8.1800e-**	**0.0209**	**1.9300e-**	**7.8000e-**	**9.7300e-**	**0.0000**	**18.2132**	**18.2132**	**3.4400e-**	**0.0000**	**18.2993**

Unmitigated 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	7.7000e-	0.0274	0.0118	7.0000e-	1.5800e-	9.0000e-	1.6700e-	4.30E-04	9.00E-05	5.2000e-	0.0000	7.6452	7.6452	9.6000e-	0.0000	7.6691
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-	4.9000e-	5.1100e-	2.0000e-	2.0700e-	1.0000e-	2.0800e-	5.50E-04	1.00E-05	5.6000e-	0.0000	1.7208	1.7208	3.0000e-	0.0000	1.7216
Total	**1.4900e-**	**0.0279**	**0.0169**	**9.0000e-**	**3.6500e-**	**1.0000e-**	**3.7500e-**	**9.8000e-**	**1.0000e-**	**1.0800e-**	**0.0000**	**9.3659**	**9.3659**	**9.9000e-**	**0.0000**	**9.3907**

3.3 Site Preparation - 2020

Unmitigated 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					9.2000e-	0.0000	9.2000e-	1.20E-04	0	1.2000e-	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9900e-	0.0538	0.0354	7.0000e-		2.4400e-	2.4400e-		2.32E-03	2.3200e-	0.0000	6.3951	6.3951	1.4000e-	0.0000	6.4300
Total	**4.9900e-**	**0.0538**	**0.0354**	**7.0000e-**	**9.2000e-**	**2.4400e-**	**3.3600e-**	**1.2000e-**	**2.3200e-**	**2.4400e-**	**0.0000**	**6.3951**	**6.3951**	**1.4000e-**	**0.0000**	**6.4300**

Unmitigated 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	4.2100e-	0.1494	0.0643	4.1000e-	0.0122	5.0000e-	0.0127	3.25E-03	4.80E-04	3.7300e-	0.0000	41.6503	41.6503	5.2100e-	0.0000	41.7805
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-	8.0000e-	8.8000e-	0.0000	3.5000e-	0.0000	3.6000e-	9.00E-05	0	1.0000e-	0.0000	0.2950	0.2950	1.0000e-	0.0000	0.2951
Total	**4.3300e-**	**0.1495**	**0.0652**	**4.1000e-**	**0.0126**	**5.0000e-**	**0.0131**	**3.3400e-**	**4.8000e-**	**3.8300e-**	**0.0000**	**41.9453**	**41.9453**	**5.2200e-**	**0.0000**	**42.0757**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.2000e-	0.0000	9.2000e-	1.20E-04	0	1.2000e-	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5500e-	0.0276	0.0194	4.0000e-		1.1900e-	1.1900e-		1.13E-03	1.1300e-	0.0000	3.5508	3.5508	7.7000e-	0.0000	3.5700
Total	**2.5500e-**	**0.0276**	**0.0194**	**4.0000e-**	**9.2000e-**	**1.1900e-**	**2.1100e-**	**1.2000e-**	**1.1300e-**	**1.2500e-**	**0.0000**	**3.5508**	**3.5508**	**7.7000e-**	**0.0000**	**3.5700**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2300e-	0.0762	0.0370	2.2000e-	0.0113	2.5000e-	0.0115	2.90E-03	2.40E-04	3.1400e-	0.0000	22.7524	22.7524	2.9300e-	0.0000	22.8256
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-	4.0000e-	4.5000e-	0.0000	2.0000e-	0.0000	2.0000e-	5.00E-05	0	5.0000e-	0.0000	0.1581	0.1581	0.0000	0.0000	0.1581
Total	**2.2900e-**	**0.0762**	**0.0375**	**2.2000e-**	**0.0115**	**2.5000e-**	**0.0117**	**2.9500e-**	**2.4000e-**	**3.1900e-**	**0.0000**	**22.9105**	**22.9105**	**2.9300e-**	**0.0000**	**22.9837**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6300e-	0.0000	2.6300e-	1.45E-03	0	1.4500e-	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-	0.0254	0.0265	4.0000e-		1.4300e-	1.4300e-		1.36E-03	1.3600e-	0.0000	3.6433	3.6433	6.8000e-	0.0000	3.6602
Total	**2.7900e-**	**0.0254**	**0.0265**	**4.0000e-**	**2.6300e-**	**1.4300e-**	**4.0600e-**	**1.4500e-**	**1.3600e-**	**2.8100e-**	**0.0000**	**3.6433**	**3.6433**	**6.8000e-**	**0.0000**	**3.6602**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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	0	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	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-	8.0000e-	8.2000e-	0.0000	3.6000e-	0.0000	3.6000e-	1.00E-04	0	1.0000e-	0.0000	0.2877	0.2877	1.0000e-	0.0000	0.2878
Total	**1.2000e-**	**8.0000e-**	**8.2000e-**	**0.0000**	**3.6000e-**	**0.0000**	**3.6000e-**	**1.0000e-**	**0.0000**	**1.0000e-**	**0.0000**	**0.2877**	**0.2877**	**1.0000e-**	**0.0000**	**0.2878**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0965	0.9941	0.9043	1.4200e-		0.0557	0.0557		0.0513	0.0513	0.0000	124.6022	124.6022	0.0403	0.0000	125.6096
Total	**0.0965**	**0.9941**	**0.9043**	**1.4200e-**		**0.0557**	**0.0557**		**0.0513**	**0.0513**	**0.0000**	**124.6022**	**124.6022**	**0.0403**	**0.0000**	**125.6096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	8.7500e-	0.2853	0.1224	7.2000e-	0.0179	6.5000e-	0.0185	5.16E-03	6.20E-04	5.7900e-	0.0000	71.6805	71.6805	6.2000e-	0.0000	71.8354
Worker	0.0352	0.0229	0.2483	9.7000e-	0.1088	6.6000e-	0.1095	0.029	6.10E-04	0.0296	0.0000	87.3684	87.3684	1.5900e-	0.0000	87.4080
Total	**0.0440**	**0.3082**	**0.3708**	**1.6900e-**	**0.1266**	**1.3100e-**	**0.1280**	**0.0341**	**1.2300e-**	**0.0354**	**0.0000**	**159.0489**	**159.0489**	**7.7900e-**	**0.0000**	**159.2434**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0360	0.3689	0.3755	6.0000e-		0.0195	0.0195		0.018	0.0180	0.0000	52.5775	52.5775	0.0170	0.0000	53.0027
Total	**0.0360**	**0.3689**	**0.3755**	**6.0000e-**		**0.0195**	**0.0195**		**0.0180**	**0.0180**	**0.0000**	**52.5775**	**52.5775**	**0.0170**	**0.0000**	**53.0027**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4700e-	0.1131	0.0516	3.0000e-	7.5300e-	2.4000e-	7.7700e-	2.18E-03	2.30E-04	2.4100e-	0.0000	29.8380	29.8380	2.5900e-	0.0000	29.9029
Worker	0.0140	8.7200e-	0.0974	3.9000e-	0.0459	2.7000e-	0.0462	0.0122	2.50E-04	0.0125	0.0000	35.4945	35.4945	6.0000e-	0.0000	35.5095
Total	**0.0175**	**0.1219**	**0.1490**	**6.9000e-**	**0.0534**	**5.1000e-**	**0.0539**	**0.0144**	**4.8000e-**	**0.0149**	**0.0000**	**65.3325**	**65.3325**	**3.1900e-**	**0.0000**	**65.4124**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8200e-	0.0533	0.0633	1.0000e-		2.6600e-	2.6600e-		2.48E-03	2.4800e-	0.0000	8.4572	8.4572	2.4600e-	0.0000	8.5188
Paving	1.0000e-					0.0000	0.0000		0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9200e-**	**0.0533**	**0.0633**	**1.0000e-**		**2.6600e-**	**2.6600e-**		**2.4800e-**	**2.4800e-**	**0.0000**	**8.4572**	**8.4572**	**2.4600e-**	**0.0000**	**8.5188**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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	0	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	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-	2.7000e-	3.0100e-	1.0000e-	1.4200e-	1.0000e-	1.4300e-	3.80E-04	1.00E-05	3.8000e-	0.0000	1.0964	1.0964	2.0000e-	0.0000	1.0968
Total	**4.3000e-**	**2.7000e-**	**3.0100e-**	**1.0000e-**	**1.4200e-**	**1.0000e-**	**1.4300e-**	**3.8000e-**	**1.0000e-**	**3.8000e-**	**0.0000**	**1.0964**	**1.0964**	**2.0000e-**	**0.0000**	**1.0968**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4203					0.0000	0.0000		0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7400e-	0.0120	0.0154	3.0000e-		6.9000e-	6.9000e-		6.90E-04	6.9000e-	0.0000	2.1703	2.1703	1.4000e-	0.0000	2.1738

Total	0.4220	0.0120	0.0154	3.0000e-		6.9000e-	6.9000e-		6.9000e-	6.9000e-	0.0000	2.1703	2.1703	1.4000e-	0.0000	2.1738

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	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	0	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	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-	2.8000e-	3.1300e-	1.0000e-	1.4700e-	1.0000e-	1.4800e-	3.90E-04	1.00E-05	4.0000e-	0.0000	1.1390	1.1390	2.0000e-	0.0000	1.1395
Total	**4.5000e-**	**2.8000e-**	**3.1300e-**	**1.0000e-**	**1.4700e-**	**1.0000e-**	**1.4800e-**	**3.9000e-**	**1.0000e-**	**4.0000e-**	**0.0000**	**1.1390**	**1.1390**	**2.0000e-**	**0.0000**	**1.1395**

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity						0.0000	0.0000		0.0000	0.0000	0.0000	107.2204	107.2204	0.0117	1.5700e-	107.9802
Electricity						0.0000	0.0000		0.0000	0.0000	0.0000	107.2204	107.2204	0.0117	1.5700e-	107.9802
NaturalGas	5.6500e-	0.0483	0.0205	3.1000e-		3.9000e-	3.9000e-		3.9000e-	3.9000e-	0.0000	55.9067	55.9067	1.0700e-	1.0200e-	56.2389
NaturalGas	5.6500e-	0.0483	0.0205	3.1000e-		3.9000e-	3.9000e-		3.9000e-	3.9000e-	0.0000	55.9067	55.9067	1.0700e-	1.0200e-	56.2389

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGa	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.04765e+	5.6500e-	0.0483	0.0205	3.1000e-		3.9000e-	3.9000e-		3.9000e-	3.9000e-	0.0000	55.9067	55.9067	1.0700e-	1.0200e-	56.2389
Enclosed Parking	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
Other Asphalt	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
Total		**5.6500e-**	**0.0483**	**0.0205**	**3.1000e-**		**3.9000e-**	**3.9000e-**		**3.9000e-**	**3.9000e-**	**0.0000**	**55.9067**	**55.9067**	**1.0700e-**	**1.0200e-**	**56.2389**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	537798	66.8496	7.3200e-	9.8000e-	67.3233
Enclosed Parking	324779	40.3708	4.4200e-	5.9000e-	40.6569
Other Asphalt	0	0.0000	0.0000	0.0000	0.0000
Total		**107.2204**	**0.0117**	**1.5700e-**	**107.9802**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.5582	0.0232	0.8989	1.3000e-		5.9800e-	5.9800e-		5.9800e-	5.9800e-	0.0000	16.4389	16.4389	1.7000e-	2.7000e-	16.5632

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural	0.0813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer	0.4483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5100e-	0.0129	5.5000e-	8.0000e-		1.0500e-	1.0500e-		1.0500e-	1.0500e-	0.0000	14.9807	14.9807	2.9000e-	2.7000e-	15.0697
Landscaping	0.0271	0.0103	0.8934	5.0000e-		4.9300e-	4.9300e-		4.9300e-	4.9300e-	0.0000	1.4582	1.4582	1.4100e-	0.0000	1.4935
Total	**0.5582**	**0.0232**	**0.8989**	**1.3000e-**		**5.9800e-**	**5.9800e-**		**5.9800e-**	**5.9800e-**	**0.0000**	**16.4389**	**16.4389**	**1.7000e-**	**2.7000e-**	**16.5632**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	9.8836	0.2556	6.1200e-	18.0978

7.2 Water by Land Use

Unmitigated

	Indoor/Out	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	7.81848 /	9.8836	0.2556	6.1200e-	18.0978
Enclosed Parking	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.8836**	**0.2556**	**6.1200e-**	**18.0978**

8.0 Waste Detail

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	11.2051	0.6622	0.0000	27.7602

8.2 Waste by Land Use

Unmitigated

	Waste	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	55.2	11.2051	0.6622	0.0000	27.7602
Enclosed Parking	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt	0	0.0000	0.0000	0.0000	0.0000
Total		**11.2051**	**0.6622**	**0.0000**	**27.7602**

Health Risk Assessment Methodology and Calculations

The AERMOD model is a steady-state Gaussian plume model that was developed by EPA for estimating ground-level impacts from point, area, and fugitive sources in simple and complex terrain. Dispersion models such as AERMOD require local meteorological parameters such as wind speed, stability class, mixing height, and temperature. Hourly meteorological data previously developed by CARB from the San Francisco International Airport covering a 5-year period from 2009 through 2013 were used in the analysis. Construction activities were modeled to occur Monday through Friday between 9 a.m. and 5 p.m. throughout the year.

The OEHHA-recommended range for analyzing the inhalation pathway is 0 to 1.8 meters. For construction of the Project, all receptors were modeled at 0 meters. Receptors were placed at all residences, senior care centers, schools, and outdoor recreational facilities within 1,000 feet of the Project site. Onsite construction exhaust and dust emissions for the Project were characterized as area sources (AREAPOLY) with a release height of 4.1 meters (13.5 feet) and 0.9 meters (3.0 feet), respectively. Offsite construction exhaust and dust emissions were characterized as line/area sources (LINEAREA) with a release height of 3.4 meters (10.7 feet) and 0.9 meters (3.0 feet), respectively. The urban dispersion option with an elevation of 0 meters was used for this location. All other AERMOD inputs are considered regulatory defaults.

The risk calculations incorporate OEHHA's recent guidance update, which now includes age-specific factors that take into account increased sensitivity to carcinogens during early-in-life exposure. The approach to estimating cancer risk from long-term inhalation, with exposure to carcinogens, requires calculating a range of potential doses and multiplying by cancer potency factors in units corresponding to the inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure duration. The cancer risks calculated for individual age groups are summed to estimate the cancer risk for each receptor.

The project would be constructed in 20 months. For construction, the age-specific sensitivity factors for the maximally exposed individual were conservatively based on an individual aged 0 to 2 for the construction period. The construction age bins assumption is consistent with OEHHA and BAAQMD recommendations.

Unmitigated

SUMMARY OF DPM

ONSITE DPM - OFFROAD

Phase	2020 Start date	2020 End date	Days (2020)	DPM (tons)	DPM (grams)	2021 Start date	2021 End date	Days (2021)	DPM (tons)	DPM (grams)
Demolition	11/1/2020	12/18/2020	35	0.0087	7,863					0
Site Preparation	12/21/2020	12/31/2020	9	0.0024	2,208	1/1/2021	1/7/2021	5	0.001	1,068
Grading					0	1/8/2021	1/18/2021	7	0.001	1,294
Building Construction					0	1/19/2021	12/31/2021	249	0.051	46,539
Paving					0					0
Architectural Coating					0					0
Total	11/1/2020	12/31/2020	44	0.011	10,071	1/1/2021	12/31/2021	261	0.054	48,901
	11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261		

Phase	2022 Start date	2022 End date	Days (2022)	DPM (tons)	DPM (grams)	2023 Start date	2023 End date	Days (2023)	DPM (tons)	DPM (grams)
Demolition					0					0
Site Preparation					0					0
Grading					0					0
Building Construction	1/1/2022	5/27/2022	105	0.018	16,329					0
Paving	5/28/2022	6/22/2022	18	0.003	2,316					0
Architectural Coating	6/23/2022	7/15/2022	17	0.001	626					0
Total	1/1/2022	7/15/2022	140	0.021	19,271	1/0/1900	1/0/1900	0	0.000	0
	1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	0<2	2-9	g/day	total g 3rd tri	0<2	2-9	g/sec 3rd tri	0<2	2-9	g/sec-m2 3rd tri	0<2	2-9		days sum
Demolition	11/1/2020	12/18/2020	35	0	35	0	225	0	7863	0	#DIV/0!	0.00780078	#DIV/0!	#DIV/0!	0.00000226	#DIV/0!	*0*	35
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	234	0	3276	0	#DIV/0!	0.00812611	#DIV/0!	#DIV/0!	0.00000235	#DIV/0!	*0*	14
Grading	1/8/2021	1/18/2021	7	0	7	0	185	0	1294	0	#DIV/0!	0.00641959	#DIV/0!	#DIV/0!	0.00000186	#DIV/0!	*0*	7
Building Construction	1/19/2021	5/27/2022	354	0	354	0	178	0	62868	0	#DIV/0!	0.00616642	#DIV/0!	#DIV/0!	0.00000179	#DIV/0!	*0*	354
Paving	5/28/2022	6/22/2022	18	0	18	0	129	0	2316	0	#DIV/0!	0.00446728	#DIV/0!	#DIV/0!	0.00000129	#DIV/0!	*0*	18
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	37	0	626	0	#DIV/0!	0.00127851	#DIV/0!	#DIV/0!	0.00000037	#DIV/0!	*0*	17
Total				0	445	0		0	78244	0	#DIV/0!	0.00611	#DIV/0!	#DIV/0!	0.00000177	#DIV/0!		445
			max per oehha	91	730	2555												
			range of days		11/1/2020													
					11/1/2022													
					730													

ONROAD

Phase	Total trips in Caleemod vendor	employee	haul	caleemd trip length vendor	employee	haul	Caleemod avg trip length	Aermod avg trip length	VMT scalar
Demolition	0		118	7.3	10.8	32	32	0.31	0.010
Site Preparation	0		1,000	7.3	10.8	32	32	0.31	0.010
Grading	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!
Building Construction	7788		0	7.3	10.8	32	7	0.31	0.042
Paving	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!
Architectural Coating	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!

<-- using this to scale onroad DPM for each phase

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	0<2	2-9	g/day, caelmod	g/day, aermod	total g 3rd tri	0<2	2-9	g/sec 3rd tri	0<2	2-9	g/sec-m2 3rd tri	0<2	2-9	
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.33E+00	0.023	0.00E+00	7.89E-01	0.00E+00	#DIV/0!	7.82E-07	#DIV/0!	#DIV/0!	1.03E-10	#DIV/0!	*0*
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.67E+01	0.451	0.00E+00	6.31E+00	0.00E+00	#DIV/0!	1.56E-05	#DIV/0!	#DIV/0!	2.07E-09	#DIV/0!	
Grading	1/8/2021	1/18/2021	7	0	7	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Building Construction	1/19/2021	5/27/2022	354	0	354	0	2.18E+00	0.092	0.00E+00	3.27E+01	0.00E+00	#DIV/0!	3.20E-06	#DIV/0!	#DIV/0!	4.24E-10	#DIV/0!	
Paving	5/28/2022	6/22/2022	18	0	18	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Total				0	445	0	5.12E+01	0.565	0	40	0	#DIV/0!	0.00000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	1.77E-06	#DIV/0!	
OFFSITE	#DIV/0!	4.10E-10	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Unmitigated

OFFSITE DPM - ONROAD TRUCKS																									
2020					**2021**					**2022**					**2023**					onsite combined			offsite combined		
Start date	End date	Days (2020)	DPM (tons)	DPM (grams)	Start date	End date	Days (2021)	DPM (tons)	DPM (grams)	Start date	End date	Days (2022)	DPM (tons)	DPM (grams)	Start date	End date	Days (2023)	DPM (tons)	DPM (grams)	DPM g	days	g/d	DPM g	days	g/d
11/1/2020	12/18/2020	35	9.00E-05	82					0					0					0	7863	35	225	81.647	35	2.333
12/21/2020	12/31/2020	9	4.80E-04	435	1/1/2021	1/7/2021	5	0.00024	218					0					0	3276	14	234	653.173	14	46.655
				0	1/8/2021	1/18/2021	7	0.00E+00	0					0					0	1294	7	185	0.000	7	0.000
				0	1/19/2021	12/31/2021	249	6.20E-04	562	1/1/2022	5/27/2022	105	2.30E-04	209					0	62868	354	178	771.107	354	2.178
				0					0	5/28/2022	6/22/2022	18	0.00E+00	0					0	2316	18	129	0.000	18	0.000
				0					0	6/23/2022	7/15/2022	17	0.00E+00	0					0	626	17	37	0.000	17	0.000
11/1/2020	12/31/2020	44	0.00057	517	1/1/2021	12/31/2021	261	0.00086	780	1/1/2022	7/15/2022	140	0.00023	209	1/0/1900	1/0/1900	0	0.00000	0	78243.521	445	175.828	1505.927	445	3.384
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc		
seconds	0	12816000
grams	#DIV/0!	39.752596

Unmitigated

SUMMARY OF PM2.5

ONSITE PM2.5 - OFFROAD

2020

Phase	Start date	End date	Days (2020)	PM2.5 (tons)	PM2.5 (grams)
Demolition	11/1/2020	12/18/2020	35	0.0087	7,863
Site Preparation	12/21/2020	12/31/2020	9	0.0024	2,208
Grading					0
Building Construction					0
Paving					0
Architectural Coating					0
Total	11/1/2020	12/31/2020	44	0.011	10,071
	11/1/2020	12/31/2020	44		

2021

Phase	Start date	End date	Days (2021)	PM2.5 (tons)	PM2.5 (grams)
Demolition					0
Site Preparation	1/1/2021	1/7/2021	5	0.001	1,068
Grading	1/8/2021	1/18/2021	7	0.001	1,294
Building Construction	1/19/2021	12/31/2021	249	0.051	46,539
Paving					0
Architectural Coating					0
Total	1/1/2021	12/31/2021	261	0.054	48,901
	1/1/2021	12/31/2021	261		

2022

Phase	Start date	End date	Days (2022)	PM2.5 (tons)	PM2.5 (grams)
Demolition					0
Site Preparation					0
Grading					0
Building Construction	1/1/2022	5/27/2022	105	0.018	16,329
Paving	5/28/2022	6/22/2022	18	0.003	2,316
Architectural Coating	6/23/2022	7/15/2022	17	0.001	626
Total	1/1/2022	7/15/2022	140	0.021	19,271
	1/1/2022	7/15/2022	140		

2023

Phase	Start date	End date	Days (2023)	PM2.5 (tons)	PM2.5 (grams)
Demolition					0
Site Preparation					0
Grading					0
Building Construction					0
Paving					0
Architectural Coating					0
Total	1/0/1900	1/0/1900	0	0.000	0
	1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

				Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2				
Phase	Start date	End date	days	3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9		days sum
Demolition	11/1/2020	12/18/2020	35	0	35	0	225	0	7863	0	#DIV/0!	0.00780078	#DIV/0!	#DIV/0!	0.00000226	#DIV/0!	0	35
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	234	0	3276	0	#DIV/0!	0.00812611	#DIV/0!	#DIV/0!	0.00000235	#DIV/0!	0	14
Grading	1/8/2021	1/18/2021	7	0	7	0	185	0	1294	0	#DIV/0!	0.00641959	#DIV/0!	#DIV/0!	0.00000186	#DIV/0!	0	7
Building Construction	1/19/2021	5/27/2022	354	0	354	0	178	0	62868	0	#DIV/0!	0.00616642	#DIV/0!	#DIV/0!	0.00000179	#DIV/0!	0	354
Paving	5/28/2022	6/22/2022	18	0	18	0	129	0	2316	0	#DIV/0!	0.00446728	#DIV/0!	#DIV/0!	0.00000129	#DIV/0!	0	18
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	37	0	626	0	#DIV/0!	0.00127851	#DIV/0!	#DIV/0!	0.00000037	#DIV/0!	0	17
Total				0	445	0		0	78244	0	#DIV/0!	0.00611	#DIV/0!	#DIV/0!	0.00000177	#DIV/0!		445
			max per oehha	91	730	2555												
			range of days		11/1/2020													
					11/1/2022													
					730													

ONROAD

	Total trips in Caleemod			caleemd trip length			Caleemod	Aermod		
Phase	vendor	employee	haul	vendor	employee	haul	avg trip length	avg trip length	VMT scalar	<-- using this to scale onroad PM2.5 for each phase
Demolition	0	15	118	7.3	10.8	32	30	0.31	0.010	
Site Preparation	0	10	1,000	7.3	10.8	32	32	0.31	0.010	
Grading	0	13	0	7.3	10.8	32	11	0.31	0.029	
Building Construction	7788	111	0	7.3	10.8	32	7	0.31	0.042	
Paving	0	20	0	7.3	10.8	32	11	0.31	0.029	
Architectural Coating	0	22	0	7.3	10.8	32	11	0.31	0.029	

				Days in Bin per OEHHA			g/day,	g/day,	total g			g/sec			g/sec-m2			
Phase	Start date	End date	days	3rd tri	0<2	2-9	caeelmod	aermod	3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9	
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.59E+00	0.027	0.00E+00	9.47E-01	0.00E+00	#DIV/0!	9.40E-07	#DIV/0!	#DIV/0!	1.24E-10	#DIV/0!	0
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.67E+01	0.454	0.00E+00	6.35E+00	0.00E+00	#DIV/0!	1.58E-05	#DIV/0!	#DIV/0!	2.08E-09	#DIV/0!	
Grading	1/8/2021	1/18/2021	7	0	7	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Building Construction	1/19/2021	5/27/2022	354	0	354	0	4.38E+00	0.184	0.00E+00	6.53E+01	0.00E+00	#DIV/0!	6.40E-06	#DIV/0!	#DIV/0!	8.46E-10	#DIV/0!	
Paving	5/28/2022	6/22/2022	18	0	18	0	5.04E-01	0.014	0.00E+00	2.60E-01	0.00E+00	#DIV/0!	5.01E-07	#DIV/0!	#DIV/0!	6.62E-11	#DIV/0!	
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	5.34E-01	0.015	0.00E+00	2.60E-01	0.00E+00	#DIV/0!	5.30E-07	#DIV/0!	#DIV/0!	7.01E-11	#DIV/0!	
Total				0	445	0	5.47E+01	0.695	0	73	0	#DIV/0!	0.00001	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	1.77E-06	#DIV/0!	
OFFSITE	#DIV/0!	7.54E-10	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Unmitigated

OFFSITE PM2.5 - ONROAD TRUCKS																									
2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 (tons)	PM2.5 (grams)	PM2.5 g	days	g/d	PM2.5 g	days	g/d
11/1/2020	12/18/2020	35	1.00E-04	91					0					0					0	7863.185	35	224.662	90.718	35	2.592
12/21/2020	12/31/2020	9	4.80E-04	435	1/1/2021	1/7/2021	5	0.00024	218					0					0	3276.449	14	234.032	653.173	14	46.655
				0	1/8/2021	1/18/2021	7	0.00E+00	0					0					0	1294.190	7	184.884	0.000	7	0.000
				0	1/19/2021	12/31/2021	249	1.23E-03	1,116	1/1/2022	5/27/2022	105	4.80E-04	435					0	62867.902	354	177.593	1551.286	354	4.382
				0					0	5/28/2022	6/22/2022	18	1.00E-05	9					0	2315.838	18	128.658	9.072	18	0.504
				0					0	6/23/2022	7/15/2022	17	1.00E-05	9					0	625.957	17	36.821	9.072	17	0.534
11/1/2020	12/31/2020	44	0.00058	526	1/1/2021	12/31/2021	261	0.00147	1,334	1/1/2022	7/15/2022	140	0.00050	454	1/0/1900	1/0/1900	0	0.00000	0	78243.521	445	175.828	2313.321	445	5.198
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc		
seconds	0	12816000
grams	#DIV/0!	73.070487

Unmitigated

SUMMARY OF Fug Dust

ONSITE Fug Dust - OFFROAD

Phase	2020 Start date	2020 End date	Days (2020)	Fug Dust (tons)	Fug Dust (grams)	2021 Start date	2021 End date	Days (2021)	Fug Dust (tons)	Fug Dust (grams)
Demolition	11/1/2020	12/18/2020	35	0.0026	2,320					0
Site Preparation	12/21/2020	12/31/2020	9	0.0002	182	1/1/2021	1/7/2021	5	0.000	150
Grading					0	1/8/2021	1/18/2021	7	0.002	1,372
Building Construction					0	1/19/2021	12/31/2021	249	0.000	0
Paving					0					0
Architectural Coating					0					0
Total	11/1/2020	12/31/2020	44	0.003	2,502	1/1/2021	12/31/2021	261	0.002	1,522
	11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261		

Phase	2022 Start date	2022 End date	Days (2022)	Fug Dust (tons)	Fug Dust (grams)	2023 Start date	2023 End date	Days (2023)	Fug Dust (tons)	Fug Dust (grams)
Demolition					0					0
Site Preparation					0					0
Grading					0					0
Building Construction	1/1/2022	5/27/2022	105	0.000	0					0
Paving	5/28/2022	6/22/2022	18	0.000	146					0
Architectural Coating	6/23/2022	7/15/2022	17	0.000	0					0
Total	1/1/2022	7/15/2022	140	0.000	146	1/0/1900	1/0/1900	0	0.000	0
	1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	0<2	2-9	g/day	total g 3rd tri	0<2	2-9
Demolition	11/1/2020	12/18/2020	35	0	35	0	66	0	2320	0
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	24	0	332	0
Grading	1/8/2021	1/18/2021	7	0	7	0	196	0	1372	0
Building Construction	1/19/2021	5/27/2022	354	0	354	0	0	0	0	0
Paving	5/28/2022	6/22/2022	18	0	18	0	8	0	146	0
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	0	0	0	0
Total				0	445	0		0	4171	0
			max per oehha	91	730	2555				
			range of days		11/1/2020					
					11/1/2022					
					730					

Phase	g/sec 3rd tri	0<2	2-9	g/sec-m2 3rd tri	0<2	2-9		days sum
Demolition	#DIV/0!	0.00230195	#DIV/0!	#DIV/0!	0.00000067	#DIV/0!	*0*	35
Site Preparation	#DIV/0!	0.00082248	#DIV/0!	#DIV/0!	0.00000024	#DIV/0!	*0*	14
Grading	#DIV/0!	0.00680738	#DIV/0!	#DIV/0!	0.00000197	#DIV/0!	*0*	7
Building Construction	#DIV/0!	0.00000000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	*0*	354
Paving	#DIV/0!	0.00028249	#DIV/0!	#DIV/0!	0.00000008	#DIV/0!	*0*	18
Architectural Coating	#DIV/0!	0.00000000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	*0*	17
Total	#DIV/0!	0.00033	#DIV/0!	#DIV/0!	0.00000009	#DIV/0!		445

ONROAD

Phase	Total trips in Caleemod vendor	employee	haul	caleemd trip length vendor	employee	haul	Caleemod avg trip length	Aermod avg trip length	VMT scalar	
Demolition	0	15	118	7.3	10.8	32	30	0.31	0.010	<-- using this to scale onroad Fug Dust for each phase
Site Preparation	0	10	1,000	7.3	10.8	32	32	0.31	0.010	
Grading	0	13	0	7.3	10.8	32	11	0.31	0.029	
Building Construction	7788	111	0	7.3	10.8	32	7	0.31	0.042	
Paving	0	20	0	7.3	10.8	32	11	0.31	0.029	
Architectural Coating	0	22	0	7.3	10.8	32	11	0.31	0.029	

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	0<2	2-9	g/day, caeelmod	g/day, aermod	total g 3rd tri	0<2	2-9
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.54E+01	0.265	0.00E+00	9.28E+00	0.00E+00
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.08E+02	3.963	0.00E+00	5.55E+01	0.00E+00
Grading	1/8/2021	1/18/2021	7	0	7	0	1.30E+01	0.371	0.00E+00	2.60E+00	0.00E+00
Building Construction	1/19/2021	5/27/2022	354	0	354	0	1.24E+02	5.232	0.00E+00	1.85E+03	0.00E+00
Paving	5/28/2022	6/22/2022	18	0	18	0	1.92E+01	0.548	0.00E+00	9.87E+00	0.00E+00
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	2.08E+01	0.596	0.00E+00	1.01E+01	0.00E+00
Total				0	445	0	6.10E+02	10.976	0	1940	0

Phase	g/sec 3rd tri	0<2	2-9	g/sec-m2 3rd tri	0<2	2-9	
Demolition	#DIV/0!	9.21E-06	#DIV/0!	#DIV/0!	1.22E-09	#DIV/0!	*0*
Site Preparation	#DIV/0!	1.38E-04	#DIV/0!	#DIV/0!	1.82E-08	#DIV/0!	
Grading	#DIV/0!	1.29E-05	#DIV/0!	#DIV/0!	1.70E-09	#DIV/0!	
Building Construction	#DIV/0!	1.82E-04	#DIV/0!	#DIV/0!	2.40E-08	#DIV/0!	
Paving	#DIV/0!	1.90E-05	#DIV/0!	#DIV/0!	2.52E-09	#DIV/0!	
Architectural Coating	#DIV/0!	2.07E-05	#DIV/0!	#DIV/0!	2.74E-09	#DIV/0!	
Total	#DIV/0!	0.00015	#DIV/0!	#DIV/0!	0.00000002	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	9.43E-08	#DIV/0!	
OFFSITE	#DIV/0!	2.00E-08	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Unmitigated

OFFSITE Fug Dust - ONROAD TRUCKS

2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2021)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2022)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2023)	Fug Dust (tons)	Fug Dust (grams)	Fug Dust g	days	g/d	Fug Dust g	days	g/d
11/1/2020	12/18/2020	35	9.80E-04	889					0					0					0	2320.368	35	66.296	889.041	35	25.401
12/21/2020	12/31/2020	9	3.34E-03	3,030	1/1/2021	1/7/2021	5	0.00295	2,676					0					0	331.625	14	23.687	5706.192	14	407.585
				0	1/8/2021	1/18/2021	7	1.00E-04	91					0					0	1372.368	7	196.053	90.718	7	12.960
				0	1/19/2021	12/31/2021	249	3.42E-02	30,989	1/1/2022	5/27/2022	105	1.44E-02	13,045					0	0.000	354	0.000	44034.747	354	124.392
				0					0	5/28/2022	6/22/2022	18	3.80E-04	345					0	146.443	18	8.136	344.730	18	19.152
				0					0	6/23/2022	7/15/2022	17	3.90E-04	354					0	0.000	17	0.000	353.802	17	20.812
11/1/2020	12/31/2020	44	0.00432	3,919	1/1/2021	12/31/2021	261	0.03721	33,756	1/1/2022	7/15/2022	140	0.01515	13,744	1/0/1900	1/0/1900	0	0.00000	0	4170.804	445	9.373	51419.231	445	115.549
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc		
seconds	0	12816000
grams	#DIV/0!	1939.6147

Unmitigated

Type	Location Lookup	Cancer Risk by Bin	Chronic HI (max annual)
Residential	554077.26, 4160850.36	77.45	0.05
Residential	554102.26, 4160875.36	54.47	0.04
Residential	554052.26, 4160825.36	47.39	0.03

Unmitigated

Type	Location Lookup	PM2.5 Total (ug/m3)
Residential	554077.26, 4160850.36	0.29456
Residential	554102.26, 4160875.36	0.20714
Residential	554052.26, 4160825.36	0.18027

Mitigated

SUMMARY OF DPM

ONSITE DPM - OFFROAD

	2020					2021					2022					2023				
Phase	Start date	End date	Days (2020)	DPM (tons)	DPM (grams)	Start date	End date	Days (2021)	DPM (tons)	DPM (grams)	Start date	End date	Days (2022)	DPM (tons)	DPM (grams)	Start date	End date	Days (2023)	DPM (tons)	DPM (grams)
Demolition	11/1/2020	12/18/2020	35	0.0012	1,068					0					0					0
Site Preparation	12/21/2020	12/31/2020	9	0.0001	104	1/1/2021	1/7/2021	5	0.000	98					0					0
Grading					0	1/8/2021	1/18/2021	7	0.000	115					0					0
Building Construction					0	1/19/2021	12/31/2021	249	0.002	2,105	1/1/2022	5/27/2022	105	0.001	889					0
Paving					0					0	5/28/2022	6/22/2022	18	0.000	184					0
Architectural Coating					0					0	6/23/2022	7/15/2022	17	0.000	27					0
Total	11/1/2020	12/31/2020	44	0.001	1,172	1/1/2021	12/31/2021	261	0.003	2,317	1/1/2022	7/15/2022	140	0.001	1,100	1/0/1900	1/0/1900	0	0.000	0
	11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

				Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2				
Phase	Start date	End date	days	3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9		days sum
Demolition	11/1/2020	12/18/2020	35	0	35	0	31	0	1068	0	#DIV/0!	0.00105989	#DIV/0!	#DIV/0!	0.00000031	#DIV/0!	*0*	35
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	14	0	201	0	#DIV/0!	0.00049874	#DIV/0!	#DIV/0!	0.00000014	#DIV/0!	*0*	14
Grading	1/8/2021	1/18/2021	7	0	7	0	16	0	115	0	#DIV/0!	0.00056969	#DIV/0!	#DIV/0!	0.00000017	#DIV/0!	*0*	7
Building Construction	1/19/2021	5/27/2022	354	0	354	0	8	0	2994	0	#DIV/0!	0.00029364	#DIV/0!	#DIV/0!	0.00000009	#DIV/0!	*0*	354
Paving	5/28/2022	6/22/2022	18	0	18	0	10	0	184	0	#DIV/0!	0.00035485	#DIV/0!	#DIV/0!	0.00000010	#DIV/0!	*0*	18
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	2	0	27	0	#DIV/0!	0.00005559	#DIV/0!	#DIV/0!	0.00000002	#DIV/0!	*0*	17
Total				0	445	0		0	4589	0	#DIV/0!	0.00036	#DIV/0!	#DIV/0!	0.00000010	#DIV/0!		445
			max per oehha	91	730	2555												
			range of days		11/1/2020													
					11/1/2022													
					730													

ONROAD

	Total trips in Caleemod			caleemd trip length			Caleemod	Aermod	
Phase	vendor	employee	haul	vendor	employee	haul	avg trip length	avg trip length	VMT scalar
Demolition	0		118	7.3	10.8	32	32	0.31	0.010
Site Preparation	0		1,000	7.3	10.8	32	32	0.31	0.010
Grading	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!
Building Construction	7788		0	7.3	10.8	32	7	0.31	0.042
Paving	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!
Architectural Coating	0		0	7.3	10.8	32	#DIV/0!	0.31	#DIV/0!

<-- using this to scale onroad DPM for each phase

				Days in Bin per OEHHA			g/day,	g/day,	total g			g/sec			g/sec-m2			
Phase	Start date	End date	days	3rd tri	0<2	2-9	caeelmod	aermod	3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9	
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.33E+00	0.023	0.00E+00	7.89E-01	0.00E+00	#DIV/0!	7.82E-07	#DIV/0!	#DIV/0!	1.03E-10	#DIV/0!	*0*
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.67E+01	0.451	0.00E+00	6.31E+00	0.00E+00	#DIV/0!	1.56E-05	#DIV/0!	#DIV/0!	2.07E-09	#DIV/0!	
Grading	1/8/2021	1/18/2021	7	0	7	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Building Construction	1/19/2021	5/27/2022	354	0	354	0	2.18E+00	0.092	0.00E+00	3.27E+01	0.00E+00	#DIV/0!	3.20E-06	#DIV/0!	#DIV/0!	4.24E-10	#DIV/0!	
Paving	5/28/2022	6/22/2022	18	0	18	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Total				0	445	0	5.12E+01	0.565	0	40	0	#DIV/0!	0.00000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	1.04E-07	#DIV/0!	
OFFSITE	#DIV/0!	4.10E-10	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Mitigated

OFFSITE DPM - ONROAD TRUCKS																									
2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	DPM (tons)	DPM (grams)	Start date	End date	Days (2021)	DPM (tons)	DPM (grams)	Start date	End date	Days (2022)	DPM (tons)	DPM (grams)	Start date	End date	Days (2023)	DPM (tons)	DPM (grams)	DPM g	days	g/d	DPM g	days	g/d
11/1/2020	12/18/2020	35	9.00E-05	82					0					0					0	1068	35	31	81.647	35	2.333
12/21/2020	12/31/2020	9	4.80E-04	435	1/1/2021	1/7/2021	5	0.00024	218					0					0	201	14	14	653.173	14	46.655
				0	1/8/2021	1/18/2021	7	0.00E+00	0					0					0	115	7	16	0.000	7	0.000
				0	1/19/2021	12/31/2021	249	6.20E-04	562	1/1/2022	5/27/2022	105	2.30E-04	209					0	2994	354	8	771.107	354	2.178
				0					0	5/28/2022	6/22/2022	18	0.00E+00	0					0	184	18	10	0.000	18	0.000
				0					0	6/23/2022	7/15/2022	17	0.00E+00	0					0	27	17	2	0.000	17	0.000
11/1/2020	12/31/2020	44	0.00057	517	1/1/2021	12/31/2021	261	0.00086	780	1/1/2022	7/15/2022	140	0.00023	209	1/0/1900	1/0/1900	0	0.00000	0	4589.192	445	10.313	1505.927	445	3.384
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc		
seconds	0	12816000
grams	#DIV/0!	39.752596

Mitigated

SUMMARY OF PM2.5

ONSITE PM2.5 - OFFROAD

	2020					2021				
Phase	Start date	End date	Days (2020)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 (tons)	PM2.5 (grams)
Demolition	11/1/2020	12/18/2020	35	0.0012	1,068					0
Site Preparation	12/21/2020	12/31/2020	9	0.0001	104	1/1/2021	1/7/2021	5	0.000	98
Grading					0	1/8/2021	1/18/2021	7	0.000	115
Building Construction					0	1/19/2021	12/31/2021	249	0.002	2,105
Paving					0					0
Architectural Coating					0					0
Total	11/1/2020	12/31/2020	44	0.001	1,172	1/1/2021	12/31/2021	261	0.003	2,317
	11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261		

	2022					2023				
Phase	Start date	End date	Days (2022)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 (tons)	PM2.5 (grams)
Demolition					0					0
Site Preparation					0					0
Grading					0					0
Building Construction	1/1/2022	5/27/2022	105	0.001	889					0
Paving	5/28/2022	6/22/2022	18	0.000	184					0
Architectural Coating	6/23/2022	7/15/2022	17	0.000	27					0
Total	1/1/2022	7/15/2022	140	0.001	1,100	1/0/1900	1/0/1900	0	0.000	0
	1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

				Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2				
Phase	Start date	End date	days	3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9		days sum
Demolition	11/1/2020	12/18/2020	35	0	35	0	31	0	1068	0	#DIV/0!	0.00105989	#DIV/0!	#DIV/0!	0.00000031	#DIV/0!	*0*	35
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	14	0	201	0	#DIV/0!	0.00049874	#DIV/0!	#DIV/0!	0.00000014	#DIV/0!	*0*	14
Grading	1/8/2021	1/18/2021	7	0	7	0	16	0	115	0	#DIV/0!	0.00056969	#DIV/0!	#DIV/0!	0.00000017	#DIV/0!	*0*	7
Building Construction	1/19/2021	5/27/2022	354	0	354	0	8	0	2994	0	#DIV/0!	0.00029364	#DIV/0!	#DIV/0!	0.00000009	#DIV/0!	*0*	354
Paving	5/28/2022	6/22/2022	18	0	18	0	10	0	184	0	#DIV/0!	0.00035485	#DIV/0!	#DIV/0!	0.00000010	#DIV/0!	*0*	18
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	2	0	27	0	#DIV/0!	0.00005559	#DIV/0!	#DIV/0!	0.00000002	#DIV/0!	*0*	17
Total				0	445	0		0	4589	0	#DIV/0!	0.00036	#DIV/0!	#DIV/0!	0.00000010	#DIV/0!		445
			max per oehha	91	730	2555												
			range of days		11/1/2020													
					11/1/2022													
					730													

ONROAD

	Total trips in Caleemod			caleemd trip length			Caleemod	Aermod		
Phase	vendor	employee	haul	vendor	employee	haul	avg trip length	avg trip length	VMT scalar	
Demolition	0	15	118	7.3	10.8	32	30	0.31	0.010	<-- using this to scale onroad PM2.5 for each phase
Site Preparation	0	10	1,000	7.3	10.8	32	32	0.31	0.010	
Grading	0	13	0	7.3	10.8	32	11	0.31	0.029	
Building Construction	7788	111	0	7.3	10.8	32	7	0.31	0.042	
Paving	0	20	0	7.3	10.8	32	11	0.31	0.029	
Architectural Coating	0	22	0	7.3	10.8	32	11	0.31	0.029	

				Days in Bin per OEHHA			g/day,	g/day,	total g			g/sec			g/sec-m2			
Phase	Start date	End date	days	3rd tri	0<2	2-9	caeelmod	aermod	3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9	
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.59E+00	0.027	0.00E+00	9.47E-01	0.00E+00	#DIV/0!	9.40E-07	#DIV/0!	#DIV/0!	1.24E-10	#DIV/0!	*0*
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.67E+01	0.454	0.00E+00	6.35E+00	0.00E+00	#DIV/0!	1.58E-05	#DIV/0!	#DIV/0!	2.08E-09	#DIV/0!	
Grading	1/8/2021	1/18/2021	7	0	7	0	0.00E+00	0.000	0.00E+00	0.00E+00	0.00E+00	#DIV/0!	0.00E+00	#DIV/0!	#DIV/0!	0.00E+00	#DIV/0!	
Building Construction	1/19/2021	5/27/2022	354	0	354	0	4.38E+00	0.184	0.00E+00	6.53E+01	0.00E+00	#DIV/0!	6.40E-06	#DIV/0!	#DIV/0!	8.46E-10	#DIV/0!	
Paving	5/28/2022	6/22/2022	18	0	18	0	5.04E-01	0.014	0.00E+00	2.60E-01	0.00E+00	#DIV/0!	5.01E-07	#DIV/0!	#DIV/0!	6.62E-11	#DIV/0!	
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	5.34E-01	0.015	0.00E+00	2.60E-01	0.00E+00	#DIV/0!	5.30E-07	#DIV/0!	#DIV/0!	7.01E-11	#DIV/0!	
Total				0	445	0	5.47E+01	0.695	0	73	0	#DIV/0!	0.00001	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	1.04E-07	#DIV/0!	
OFFSITE	#DIV/0!	7.54E-10	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Mitigated

OFFSITE PM2.5 - ONROAD TRUCKS

2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 (tons)	PM2.5 (grams)	PM2.5 g	days	g/d	PM2.5 g	days	g/d
11/1/2020	12/18/2020	35	1.00E-04	91					0					0					0	1068.371	35	30.525	90.718	35	2.592
12/21/2020	12/31/2020	9	4.80E-04	435	1/1/2021	1/7/2021	5	0.00024	218					0					0	201.092	14	14.364	653.173	14	46.655
				0	1/8/2021	1/18/2021	7	0.00E+00	0					0					0	114.850	7	16.407	0.000	7	0.000
				0	1/19/2021	12/31/2021	249	1.23E-03	1,116	1/1/2022	5/27/2022	105	4.80E-04	435					0	2993.710	354	8.457	1551.286	354	4.382
				0					0	5/28/2022	6/22/2022	18	1.00E-05	9					0	183.954	18	10.220	9.072	18	0.504
				0					0	6/23/2022	7/15/2022	17	1.00E-05	9					0	27.216	17	1.601	9.072	17	0.534
11/1/2020	12/31/2020	44	0.00058	526	1/1/2021	12/31/2021	261	0.00147	1,334	1/1/2022	7/15/2022	140	0.00050	454	1/0/1900	1/0/1900	0	0.00000	0	4589.192	445	10.313	2313.321	445	5.198
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc			
	seconds	0	12816000
grams		#DIV/0!	73.070487

Mitigated

SUMMARY OF Fug Dust

ONSITE Fug Dust - OFFROAD

Phase	2020 Start date	2020 End date	Days (2020)	Fug Dust (tons)	Fug Dust (grams)	2021 Start date	2021 End date	Days (2021)	Fug Dust (tons)	Fug Dust (grams)
Demolition	11/1/2020	12/18/2020	35	0.0014	1,250					0
Site Preparation	12/21/2020	12/31/2020	9	0.0002	164	1/1/2021	1/7/2021	5	0.000	86
Grading					0	1/8/2021	1/18/2021	7	0.001	565
Building Construction					0	1/19/2021	12/31/2021	249	0.000	0
Paving					0					0
Architectural Coating					0					0
Total	11/1/2020	12/31/2020	44	0.002	1,414	1/1/2021	12/31/2021	261	0.001	651
	11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261		

Phase	2022 Start date	2022 End date	Days (2022)	Fug Dust (tons)	Fug Dust (grams)	2023 Start date	2023 End date	Days (2023)	Fug Dust (tons)	Fug Dust (grams)
Demolition					0					0
Site Preparation					0					0
Grading					0					0
Building Construction	1/1/2022	5/27/2022	105	0.000	0					0
Paving	5/28/2022	6/22/2022	18	0.000	146					0
Architectural Coating	6/23/2022	7/15/2022	17	0.000	0					0
Total	1/1/2022	7/15/2022	140	0.000	146	1/0/1900	1/0/1900	0	0.000	0
	1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0		

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	Days in Bin per OEHHA 0<2	Days in Bin per OEHHA 2-9	g/day	total g 3rd tri	total g 0<2	total g 2-9	g/sec 3rd tri	g/sec 0<2	g/sec 2-9	g/sec-m2 3rd tri	g/sec-m2 0<2	g/sec-m2 2-9		days sum
Demolition	11/1/2020	12/18/2020	35	0	35	0	36	0	1250	0	#DIV/0!	0.00123997	#DIV/0!	#DIV/0!	0.00000036	#DIV/0!	*0*	35
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	18	0	250	0	#DIV/0!	0.00061999	#DIV/0!	#DIV/0!	0.00000018	#DIV/0!	*0*	14
Grading	1/8/2021	1/18/2021	7	0	7	0	81	0	565	0	#DIV/0!	0.00280245	#DIV/0!	#DIV/0!	0.00000081	#DIV/0!	*0*	7
Building Construction	1/19/2021	5/27/2022	354	0	354	0	0	0	0	0	#DIV/0!	0.00000000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	*0*	354
Paving	5/28/2022	6/22/2022	18	0	18	0	8	0	146	0	#DIV/0!	0.00028249	#DIV/0!	#DIV/0!	0.00000008	#DIV/0!	*0*	18
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	0	0	0	0	#DIV/0!	0.00000000	#DIV/0!	#DIV/0!	0.00000000	#DIV/0!	*0*	17
Total				0	445	0		0	2211	0	#DIV/0!	0.00017	#DIV/0!	#DIV/0!	0.00000005	#DIV/0!		445
			max per oehha	91	730	2555												
			range of days		11/1/2020													
					11/1/2022													
					730													

ONROAD

Phase	Total trips in Caleemod vendor	Total trips in Caleemod employee	Total trips in Caleemod haul	caleemd trip length vendor	caleemd trip length employee	caleemd trip length haul	Caleemod avg trip length	Aermod avg trip length	VMT scalar	
Demolition	0	15	118	7.3	10.8	32	30	0.31	0.010	<-- using this to scale onroad Fug Dust for each phase
Site Preparation	0	10	1,000	7.3	10.8	32	32	0.31	0.010	
Grading	0	13	0	7.3	10.8	32	11	0.31	0.029	
Building Construction	7788	111	0	7.3	10.8	32	7	0.31	0.042	
Paving	0	20	0	7.3	10.8	32	11	0.31	0.029	
Architectural Coating	0	22	0	7.3	10.8	32	11	0.31	0.029	

Phase	Start date	End date	days	Days in Bin per OEHHA 3rd tri	Days in Bin per OEHHA 0<2	Days in Bin per OEHHA 2-9	g/day, caeelmod	g/day, aermod	total g 3rd tri	total g 0<2	total g 2-9	g/sec 3rd tri	g/sec 0<2	g/sec 2-9	g/sec-m2 3rd tri	g/sec-m2 0<2	g/sec-m2 2-9	
Demolition	11/1/2020	12/18/2020	35	0	35	0	2.54E+01	0.265	0.00E+00	9.28E+00	0.00E+00	#DIV/0!	9.21E-06	#DIV/0!	#DIV/0!	1.22E-09	#DIV/0!	*0*
Site Preparation	12/21/2020	1/7/2021	14	0	14	0	4.08E+02	3.963	0.00E+00	5.55E+01	0.00E+00	#DIV/0!	1.38E-04	#DIV/0!	#DIV/0!	1.82E-08	#DIV/0!	
Grading	1/8/2021	1/18/2021	7	0	7	0	1.30E+01	0.371	0.00E+00	2.60E+00	0.00E+00	#DIV/0!	1.29E-05	#DIV/0!	#DIV/0!	1.70E-09	#DIV/0!	
Building Construction	1/19/2021	5/27/2022	354	0	354	0	1.24E+02	5.232	0.00E+00	1.85E+03	0.00E+00	#DIV/0!	1.82E-04	#DIV/0!	#DIV/0!	2.40E-08	#DIV/0!	
Paving	5/28/2022	6/22/2022	18	0	18	0	1.92E+01	0.548	0.00E+00	9.87E+00	0.00E+00	#DIV/0!	1.90E-05	#DIV/0!	#DIV/0!	2.52E-09	#DIV/0!	
Architectural Coating	6/23/2022	7/15/2022	17	0	17	0	2.08E+01	0.596	0.00E+00	1.01E+01	0.00E+00	#DIV/0!	2.07E-05	#DIV/0!	#DIV/0!	2.74E-09	#DIV/0!	
Total				0	445	0	6.10E+02	10.976	0	1940	0	#DIV/0!	0.00015	#DIV/0!	#DIV/0!	0.00000002	#DIV/0!	

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9	
ONSITE	#DIV/0!	5.00E-08	#DIV/0!	
OFFSITE	#DIV/0!	2.00E-08	#DIV/0!	0.00

ASSUMPTIONS

	onsite	offsite	
Areas	3,450.70	7562.00	m2
AERMOD segment	497.5	meters	
meters to mile	0.000621371		

Mitigated

OFFSITE Fug Dust - ONROAD TRUCKS																									
2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2021)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2022)	Fug Dust (tons)	Fug Dust (grams)	Start date	End date	Days (2023)	Fug Dust (tons)	Fug Dust (grams)	Fug Dust g	days	g/d	Fug Dust g	days	g/d
11/1/2020	12/18/2020	35	9.80E-04	889					0					0					0	1249.890	35	35.711	889.041	35	25.401
12/21/2020	12/31/2020	9	3.34E-03	3,030	1/1/2021	1/7/2021	5	0.00295	2,676					0					0	249.978	14	17.856	5706.192	14	407.585
				0	1/8/2021	1/18/2021	7	1.00E-04	91					0					0	564.974	7	80.711	90.718	7	12.960
				0	1/19/2021	12/31/2021	249	3.42E-02	30,989	1/1/2022	5/27/2022	105	1.44E-02	13,045					0	0.000	354	0.000	44034.747	354	124.392
				0					0	5/28/2022	6/22/2022	18	3.80E-04	345					0	146.443	18	8.136	344.730	18	19.152
				0					0	6/23/2022	7/15/2022	17	3.90E-04	354					0	0.000	17	0.000	353.802	17	20.812
11/1/2020	12/31/2020	44	0.00432	3,919	1/1/2021	12/31/2021	261	0.03721	33,756	1/1/2022	7/15/2022	140	0.01515	13,744	1/0/1900	1/0/1900	0	0.00000	0	2211.284	445	4.969	51419.231	445	115.549
11/1/2020	12/31/2020	44			1/1/2021	12/31/2021	261			1/1/2022	7/15/2022	140			1/0/1900	1/0/1900	0								

TRUE

qc		
seconds	0	12816000
grams	#DIV/0!	1939.6147

Mitigated

Type	Location Lookup	Cancer Risk by Bin	Chronic HI (max annual)
Residential	554077.26, 4160850.36	4.69	0.00
Residential	554102.26, 4160875.36	3.30	0.00
Residential	554052.26, 4160825.36	2.88	0.00

Mitigated

Type	Location Lookup	PM2.5 Total (ug/m3)
Residential	554077.26, 4160850.36	0.01633
Residential	554102.26, 4160875.36	0.01148
Residential	554052.26, 4160825.36	0.01005

AERMOD Output Available Upon Request

Climate Action Plan Consistency Checklist

CAP Consistency Checklist
Submittal Application

This checklist helps determine whether new development is consistent with the City of Burlingame's 2030 Climate Action Plan Update (CAP) and may provide a streamlined review process for projects undergoing CEQA review.

Projects that are consistent with the CAP by implementing all applicable CAP measures (as demonstrated using this Checklist) may rely on the CAP for the impact analysis of GHG emissions, as allowable under CEQA. Projects not consistent with the CAP should prepare a project-specific GHG analysis, including a qualitative/quantitative analysis of project GHG emissions and identification appropriate mitigation measures.

The Checklist applies to projects 10,000 sq. ft. and higher and/or ten units or more. To be consistent with Burlingame's CAP, projects must be consistent with the City's General Plan and must address each of the CAP measures listed below as feasible and appropriate for the project.

Burlingame Climate Action Plan, https://www.burlingame.org/departments/sustainability/

Burlingame General Plan, https://www.burlingame.org/departments/planning/

Project Information

Project Name: ______________________________

Property Address: 1868 Ogden Drive, Burlingame, CA 94010

Applicant Name: Stanley Lo Applicant Company: ______________

Applicant Phone: 650-373-0007 Email: stanleylo@greenbanker.com

If a consultant was used to complete this checklist complete the following:

Consultant Name: Franco Zaragoza Consultant Company: Levy Design Partners

Consultant Phone: 415-777-0561 Email: franco@levydesignpartners.com

Briefly describe the proposed project: New construction of a privately funded 6-story condominium building under Tier 3 development standards for the North Burlingame Mixed Use District. Providing 120 residential units with ground floor and basement parking, on-site inclusionary housing and community benefits. The community benefits include affordable housing at 5% for low-income households, a public plaza, and a cultural arts space.

Project size (sq. ft. or acres): Lot Size: 39,138 SF

Identify all applicable proposed land uses:

- ☐ Single-family Residential (# of units): ______________
- ■ Multi-family Residential (# of multi-family units): 120 Units
- ☐ Commercial (total square footage): ______________
- ☐ Industrial (total square footage): ______________
- ☐ Other (describe): ______________

CAP Consistency

Consistency with General Plan: Project's inconsistent with the General Plan's land use and zoning designations cannot use this Checklist to streamline the project's GHG analysis under CEQA and will have to conduct a project-specific GHG analysis during CEQA review and incorporate the CAP measures listed below into the project as applicable.	1. Is the proposed project consistent with the General Plan's land use and zoning designations? ■ Yes ☐ No 2. If no, please explain:

CAP Measures

Mixed Use Development and Transit-Oriented Infill Development, and Transit Supportive Land Use: The City shall facilitate and encourage mixed-use and high-density residential development near major transit nodes.	1. Is the project within a half mile of BART, Caltrain or other major transit station? ■ Yes ❑ No 2. List which stations: Millbrae Bart Station (.45miles away) 3. What is the project's walkscore (www.walkscore.com)? Walk Score of 87
Transportation Demand Management (TDM): The City shall require new multi-unit residential developments of 10 units or more and commercial developments of 10,000 sq. ft. or more to incorporate TDM strategies that reduce vehicle miles traveled (VMT) by 20%. TDM measures may include but are not limited to: shuttles, carpool, transit incentives, and car and/or bike share programs. Residential projects of 100 units or more and commercial projects of 100,000 sq. ft. or more shall have a designated TDM coordinator and provide a report to city staff annually on the effectiveness of the TDM plan. ▪ GreenTRIP: http://www.transformca.org/landing-page/greentrip ▪ City/County Association of Governments of San Mateo County, http://ccag.ca.gov/programs/transportation-programs/transportation-demand-management/ ▪ City of San Francisco TDM Tool, https://sfplanning.org/resource/transportation-demand-management-tdm-tool	1. Will the project have a TDM program that meets the 20% reduction in VMT when compared to standard ITE trip generation rates? ■ Yes ❑ No 2. Briefly describe the project's TDM Plan:
Complete Streets: The City shall develop a well-connected network of Complete Streets that can move all modes safely, efficiently, and comfortably to promote efficient circulation, public health, and safety. Complete Street infrastructure improvements include, but are not limited to: bike lanes, traffic calming measures, signal timers, and street narrowing.	1. Will the project include pedestrian, transit, or cycling improvements to streets, such as, sidewalk improvements, traffic calming, bike lanes, or shuttle stops? ■ Yes ❑ No 2. If yes, describe the project's Complete Streets measures or why such measures are not included: The project will be promoting the public realm by providing a public plaza that will be directly accessible from the right-of-way via sidewalk access. This plaza is creating a widening of public realm with bicycle parking and pedestrian seating zones.

Electric Vehicle Infrastructure and Initiatives: The City shall support the electric vehicle network by incentivizing use of electric vehicles and installations of charging stations. The City requires the following EV infrastructure in new developments: ▪ Residential 1-3 stories: (1) Level 2 outlet and (1) Level 1 outlet ▪ Multifamily < 20 units: (1) Level 2 outlet/dwelling ▪ Multifamily > 20 unites: 25% Level 2 outlet/dwelling; 75% Level 1 outlet/dwelling ▪ Office: 10% Level 2 stations; 10% Level 1 outlet; 30% Level 2 outlets or capable ▪ Commercial: 6% Level 2 stations; 5% Level 1 outlet; (1) fast charger per 100 spaces	1. Will the project comply with the City's EV charging station requirements? ■ Yes ❑ No 2. Is the project utilizing any EV charging grant opportunities (e.g., from PCE or the BAAQMD)? ❑ Yes ■ No 3. List the number of EV stations and details on grants received:
Parking Pricing, Parking Requirements, and Creative Parking Approaches: The City shall require all new non-residential developments to reduce parking spaces by 20% below the ITE or other reputable parking source requirements. The City shall promote and support creative approaches to parking including, but not limited to, parking lifts, shared parking, and unbundling of parking to encourage alternative transportation and less driving.	1. Will the project include strategies to reduce parking demand? ■ Yes ❑ No 2. Describe the project's parking strategies: The project will be providing space saving techniques to reduce the footprint and impacts of a larger parking structure to accommodate the city required parking numbers. We will be utilizing parking tandem spaces to assist with spatial implications.
Burlingame Shuttle Service: The City shall Increase the use of available shuttles in Burlingame by improving signage, outreach, and coordination. ▪ Shuttle map: https://www.burlingame.org/departments/sustainability/shuttles.php	1. Is the project located near a shuttle station? ■ Yes ❑ No 2. If yes, how will shuttle information be distributed to occupants? The project is very close to the North Burlingame route and a shuttle station that is less than ¼ mile away. The HOA will ensure proper communication to the building occupants of its closeness and proximity to this service.
Electrification of Yard and Garden Equipment: The City shall support the use of electric yard and garden equipment and move away from gasoline powered landscape equipment. ▪ Zero-emission landscaping equipment: https://ww2.arb.ca.gov/our-work/programs/zero-emission-landscaping-equipment	1. Will the project be using electric landscape equipment? ❑ Yes ■ No 2. If yes, describe the landscape equipment that will be used:
Construction Best Management Practices: The City shall require construction projects to implement the Bay Area Air Quality Management District's Best Practices for Construction (BAAQMD BMPs) to reduce dust and exhaust pollution; and encourage projects to use available electrically-powered construction equipment.	1. Will the project comply with the BAAQMD BMPs? ■ Yes ❑ No 2. Will the project utilize any electric construction equipment? ❑ Yes ❑ No 3. If yes, describe what electric equipment will be used:

Green Building Practices and Standards: The City shall encourage new developments to comply with voluntary CALGreen measures that reach beyond the current state code requirements, such as Tier 1 and Tier 2 energy efficiency provisions.	1. Will the project meet CALGreen voluntary tiers or other green building elements that reach beyond CALGreen requirements? ■ Yes ❑ No 2. If yes, describe the green building elements beyond CALGreen: We will be providing a cool roof material, 15% minimum over Title 24, quality insulation installation site inspections, utilizing fly ash where possible at the concrete, and flooring to be installed shall comply with VOC emissions,
Energy Efficiency: The City shall encourage major remodel projects to comply with voluntary CALGreen measures that reach beyond the current state code requirements.	1. Is the project a remodeling project? ❑ Yes ■ No 2. If yes, will it include green building elements beyond CALGreen? ❑ Yes ❑ No 3. If yes, describe the green building elements beyond CALGreen:
Peninsula Clean Energy ECO100: The City shall encourage community members to enroll in ECO100 to support GHG free renewable energy. ▪ https://www.peninsulacleanenergy.com/opt-up/	1. Will the project enroll in ECO100? ❑ Yes ■ No 2. If no, describe how the project will encourage occupants to enroll in ECO100?
Residential Solar Power: The City shall encourage homeowners (and commercial developments) to install solar power systems.	1. Does the project include a solar power system? ❑ Yes ■ No 2. If yes, describe the project's solar power system; and if no, explain why not:
Alternatively-Powered Residential Water Heaters: The City shall support the use of solar or electrically powered water heaters in place of traditional gas powered heaters in residential developments.	1. Does the project include alternatively-powered water heaters? ❑ Yes ■ No 2. If yes, describe the project's heater; and if no, explain why not:

Water Conservation for New Residential Developments: The City shall require new residential developments to use Energy Star rated dishwashers and clothes washers; use low-flow faucets, shower heads, and toilets; and encourages the use of grey water systems for outdoor use. The City shall encourage all developments to include water conservation elements that reach beyond CALGreen requirements, such as efficient landscaping and drip irrigation.	1. Will the project comply with the City's water conservation requirements for new residential developments? ■ Yes ❑ No 2. Describe any water conservation elements beyond CALGreen: The project will be providing drought tolerant native plantings, that will use drip irrigation, and the project will use water sense plumbing fixtures.
Zero Waste: The City shall reduce the amount of organic and recyclable materials going to the landfill and increase the City's waste diversion rate. Zero Waste Resources: ▪ SF Environment Zero Waste Toolkit for Households and Tenants, https://sfenvironment.org/article/residential-recycling-and-composting/zero-waste-toolkit-for-households-and-tenants	1. Will the project include facilities for recycling and composting? ■ Yes ❑ No 2. Describe the project's composting and recycling strategies: The project will be providing trash chute(s) with recycle and compost designation for sorting and proper collecting of these items; all residents will have access to these chutes and trash collection areas.
Increase the Public Tree Population: The City shall increase the number of trees in Burlingame.	1. Will the project remove any trees? ■ Yes ❑ No 2. List the number of trees planted and/or removed: Removing (13) non-protected trees and (1) protected tree. Planting (22) 24" box trees and (1) 15 gallon can tree.

Appendix E
Assembly Bill 52 Consultation Materials

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: 1868 Ogden Drive Project

Local Government/Lead Agency: City of Burlingame

Contact Person: Lily Arias

Street Address: 201 Mission Street, suite 1500

City: San Francisco **Zip:** 94107

Phone: 510.589.0467 **Fax:** ____________

Email: lily.arias@icf.com

Specific Area Subject to Proposed Action

County: San Mateo **City/Community:** Burligame

Project Description:

The 1868 Ogden Drive Project (Project) site includes a one-story office building with one level of parking and minimal landscaping. The Project entails the demolition of these features and the construction of a new six-story, 120-unit residential condominium building with common open space and private open space. The Project would include below market rate units. A total of 150 parking spaces would be provided in two levels of the building (one below grade and one at grade).

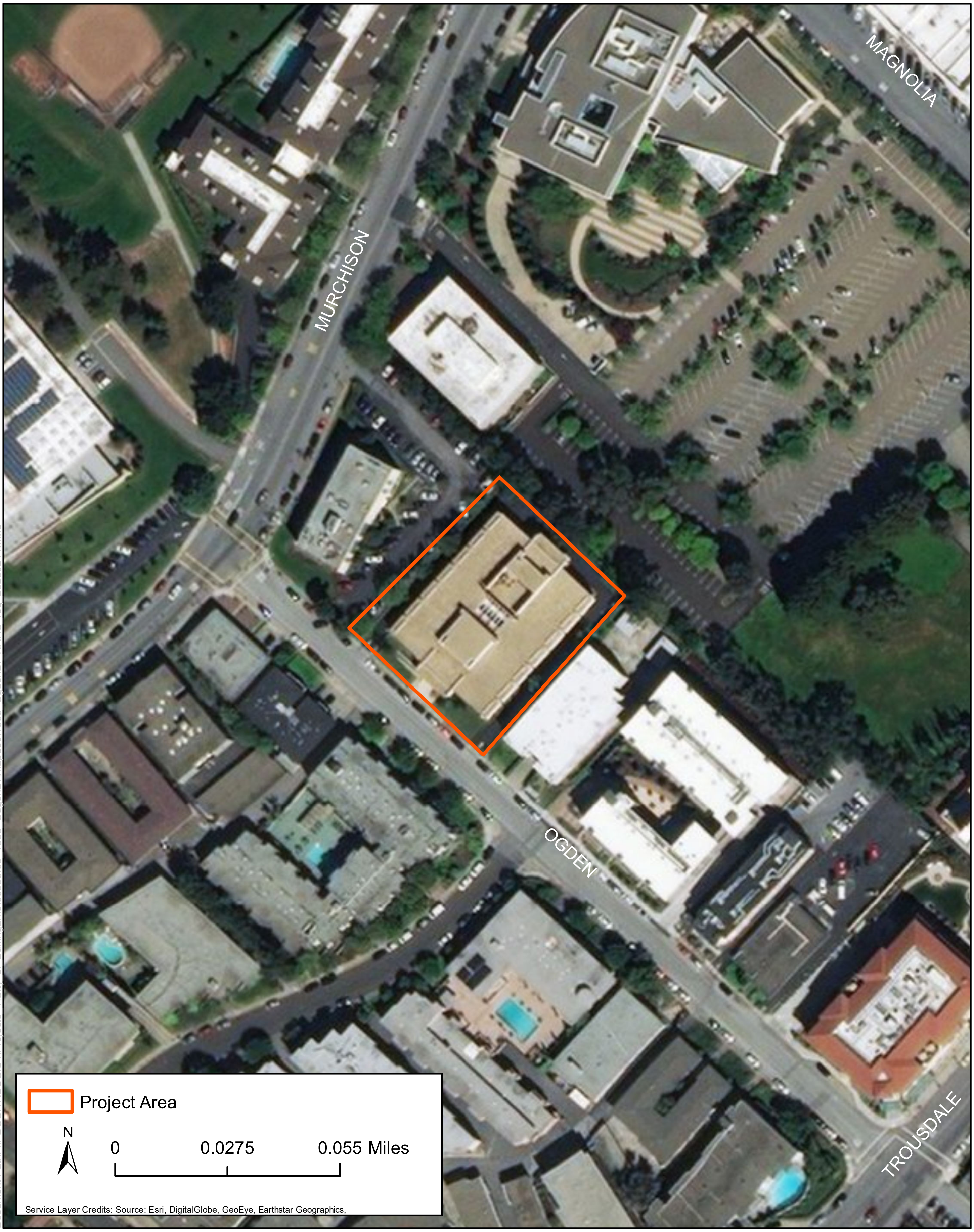
Additional Request

■ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Montara Mountain

Buri Buri Land Grant

Township: ____________ **Range:** ____________ **Section(s):** ____________



USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 17, 2020

Lili Arias, MA, Archaeologist
ICF

Via Email to: lily.arias@icf.com
Cc: amahmutsuntribal@gmail.com
chochenyo@aol.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 1868 Ogden Drive Project, San Mateo County

Dear Ms. Arias:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact Amah Mutsun Tribal Band of Mission San Juan Bautista and the Ohlone Indian Tribe on the attached list for more information.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ca.gov.

Sincerely,

Sarah Fonseca

Sarah Fonseca
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
San Mateo County
7/17/2020

Amah MutsunTribal Band of Mission San Juan Bautista Irenne Zwierlein, Chairperson 789 Canada Road Woodside, CA, 94062 Phone: (650) 851 - 7489 Fax: (650) 332-1526 amahmutsuntribal@gmail.com	Costanoan
Costanoan Rumsen Carmel Tribe Tony Cerda, Chairperson 244 E. 1st Street Pomona, CA, 91766 Phone: (909) 629 - 6081 Fax: (909) 524-8041 rumsen@aol.com	Costanoan
Indian Canyon Mutsun Band of Costanoan Ann Marie Sayers, Chairperson P.O. Box 28 Hollister, CA, 95024 Phone: (831) 637 - 4238 ams@indiancanyon.org	Costanoan
Muwekma Ohlone Indian Tribe of the SF Bay Area Monica Arellano, 20885 Redwood Road, Suite 232 Castro Valley, CA, 94546 Phone: (408) 205 - 9714 marellano@muwekma.org	Costanoan
Muwekma Ohlone Indian Tribe of the SF Bay Area Charlene Nijmeh, Chairperson 20885 Redwood Road, Suite 232 Castro Valley, CA, 94546 Phone: (408) 464 - 2892 cnijmeh@muwekma.org	Costanoan
The Ohlone Indian Tribe Andrew Galvan, P.O. Box 3388 Fremont, CA, 94539 Phone: (510) 882 - 0527 Fax: (510) 687-9393 chochenyo@AOL.com	Bay Miwok Ohlone Patwin Plains Miwok

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 Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 1868 Ogden Drive Project, San Mateo County.

CITY OF BURLINGAME

City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

PH: (650) 558-7250
FAX: (650) 696-3790

Amah Mutsun Tribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA, 94062

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Chairperson Zwierlein,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description

The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches

ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified an area adjacent to the Project site. Formerly several shell mounds, in 1990 this site was recorded as “a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc.” In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

ICF requested a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF). On July 17, 2020, the NAHC identified Sacred Lands in the vicinity of the project area and listed the Amah Mutsun Tribal Band of Mission San Juan Bautista as having additional information regarding sensitive tribal areas.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or the ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

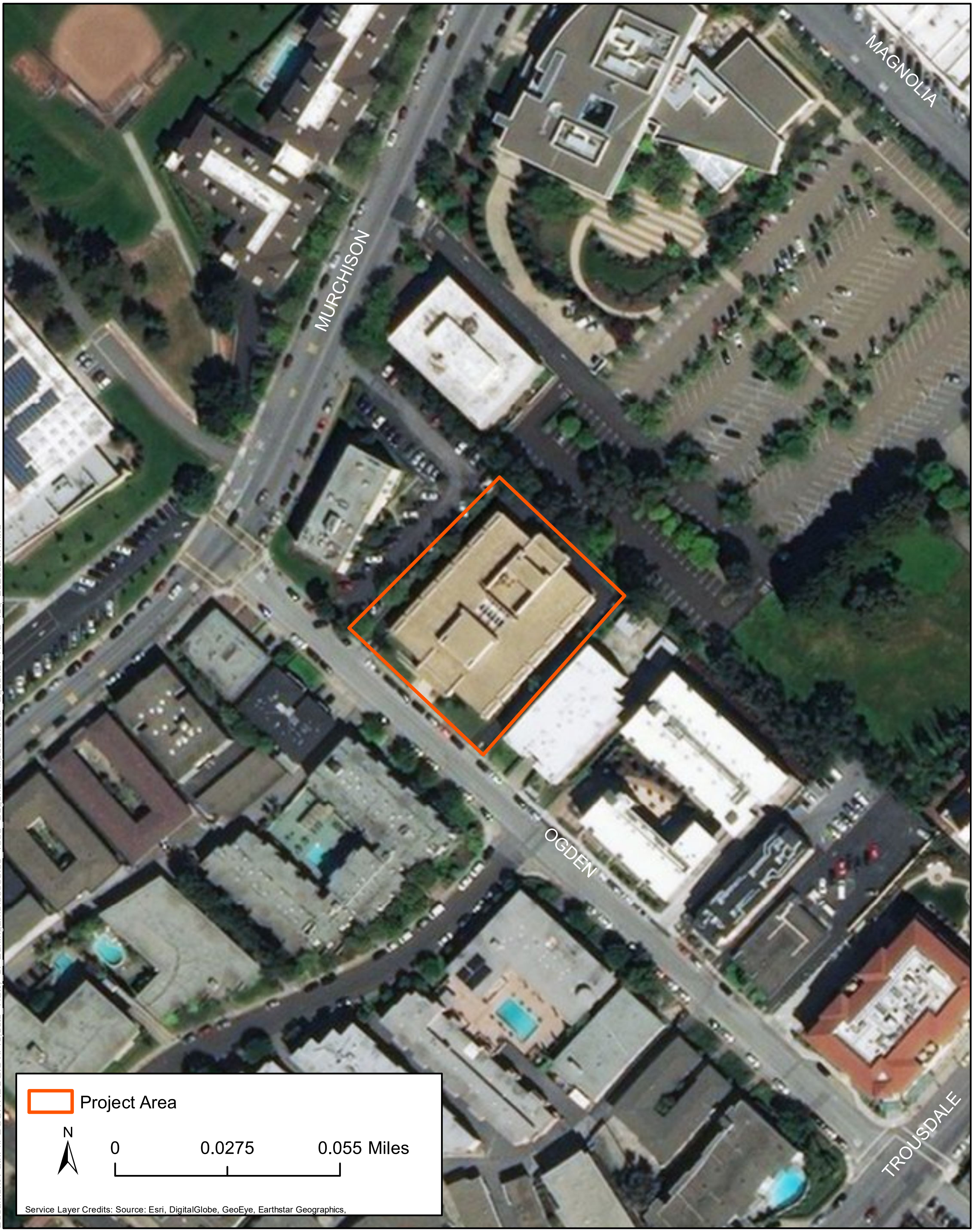
Thank you very much for your interest and assistance.

Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location



USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA, 91766

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Chairperson Cerda,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description
The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches
ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified in an area adjacent to the Project site. Formerly several shell mounds, in 1990 this adjacent site was recorded as “a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc.” In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

On July 17, 2020, the NAHC provided your name as a representative of a California Native American Tribe who may have knowledge of cultural resources within or near the Project site.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

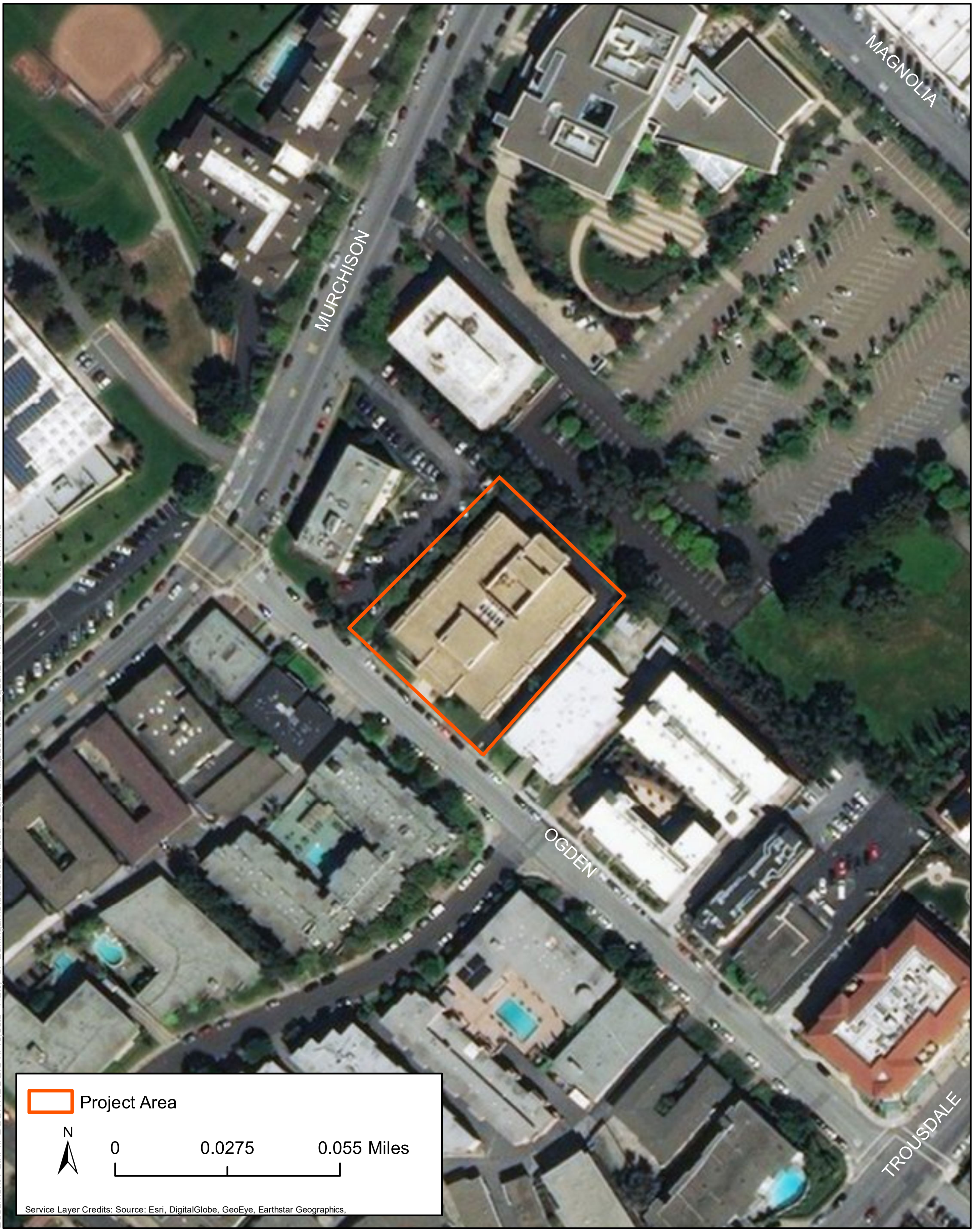
Thank you very much for your interest and assistance.

Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location



Document Path: \\PDCCITRDSGIS1\Projects_1\City_of_Burlingame\00000.00_1868_OgdenDr\mapdoc\1868_OgdenDr_NAHC_req_20200211.mxd

USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

CITY OF BURLINGAME

City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

PH: (650) 558-7250
FAX: (650) 696-3790

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Chairperson Sayers,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description

The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches

ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified in an area adjacent to the Project site. Formerly several shell mounds, in 1990 this adjacent site was recorded as “a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc.” In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

CITY OF BURLINGAME

City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

PH: (650) 558-7250
FAX: (650) 696-3790

On July 17, 2020, the NAHC provided your name as a representative of a California Native American Tribe who may have knowledge of cultural resources within or near the Project site.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

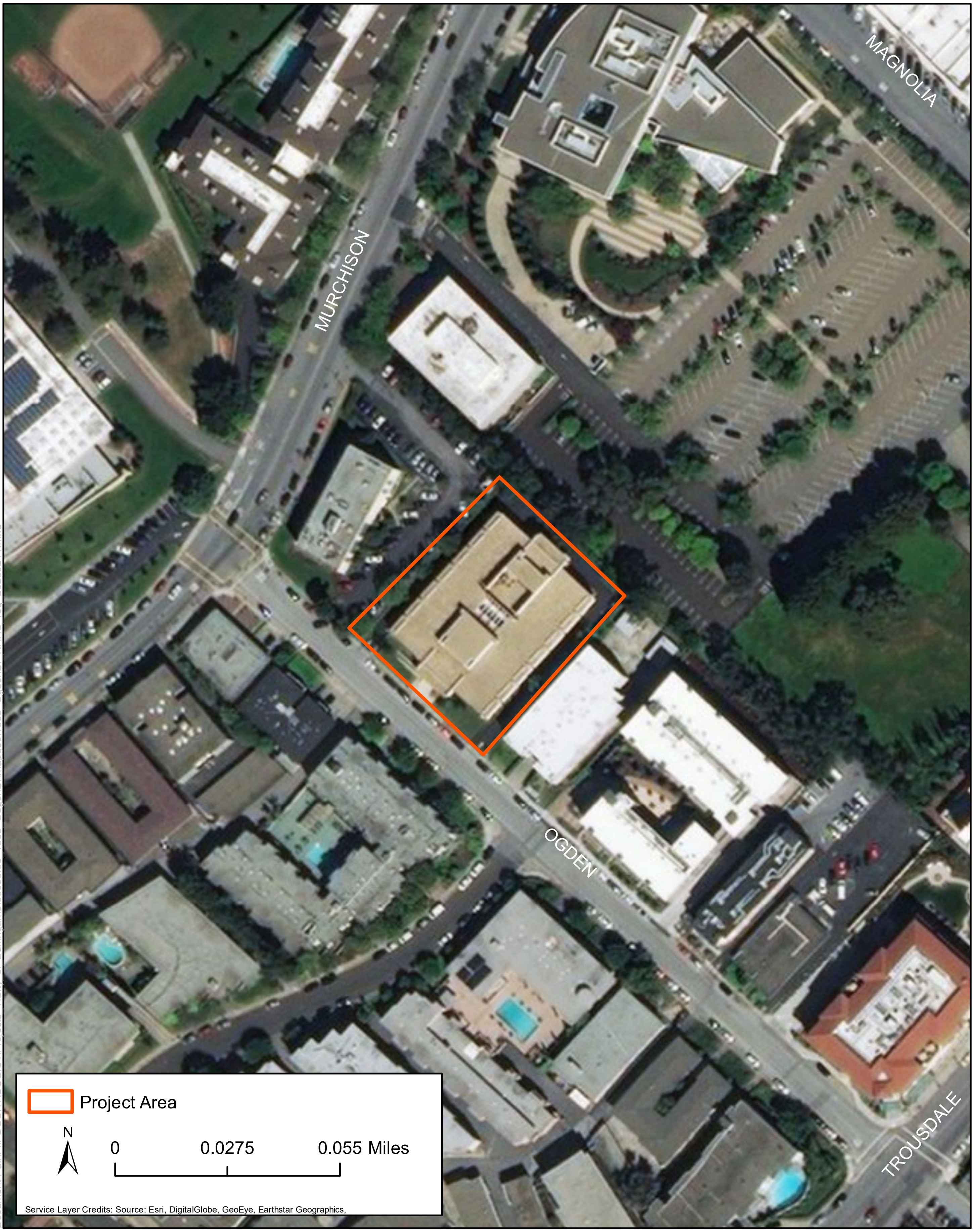
Thank you very much for your interest and assistance.

Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location



Document Path: \\PDCCITRDSGIS1\Projects_1\City_of_Burlingame\00000.00_1868_OdgenDr\mapdoc\1868_OgdenDr_NAHC_req_20200211.mxd

USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

CITY OF BURLINGAME

City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

PH: (650) 558-7250
FAX: (650) 696-3790

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano, Vice-Chairwoman
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Vice-Chairwoman Arellano,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1(d).

Project Description

The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches

ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified in an area adjacent to the Project site. Formerly several shell mounds, in 1990 this adjacent site was recorded as “a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc.” In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

On July 17, 2020, the NAHC provided your name as a representative of a California Native American Tribe who may have knowledge of cultural resources within or near the Project site.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

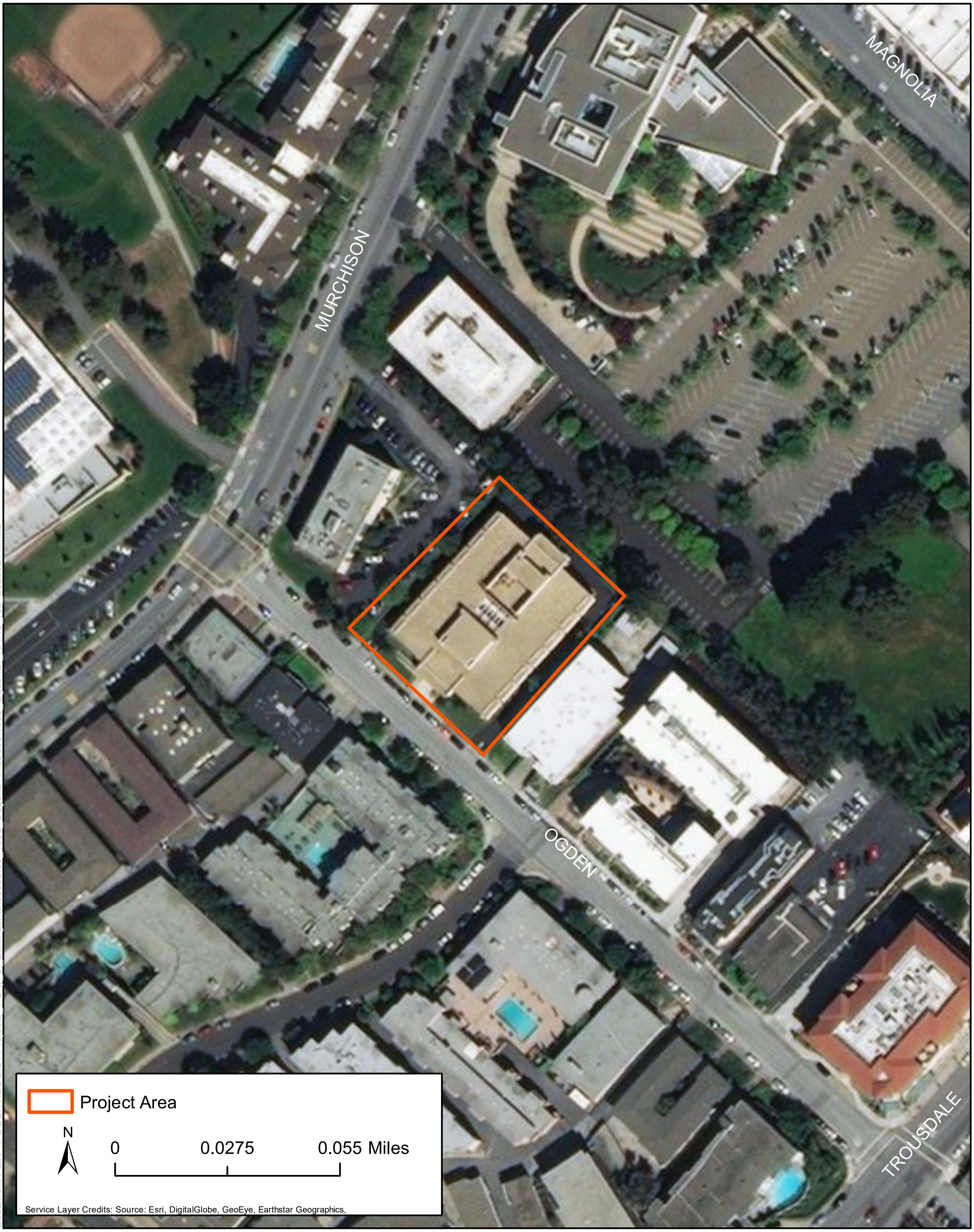
Thank you very much for your interest and assistance.

Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location



USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Chairperson Nijmeh,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description

The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches

ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified in an area adjacent to the Project site. Formerly several shell mounds, in 1990 this adjacent site was recorded as "a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc." In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

CITY OF BURLINGAME
City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
PH: (650) 558-7250
FAX: (650) 696-3790

On July 17, 2020, the NAHC provided your name as a representative of a California Native American Tribe who may have knowledge of cultural resources within or near the Project site.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

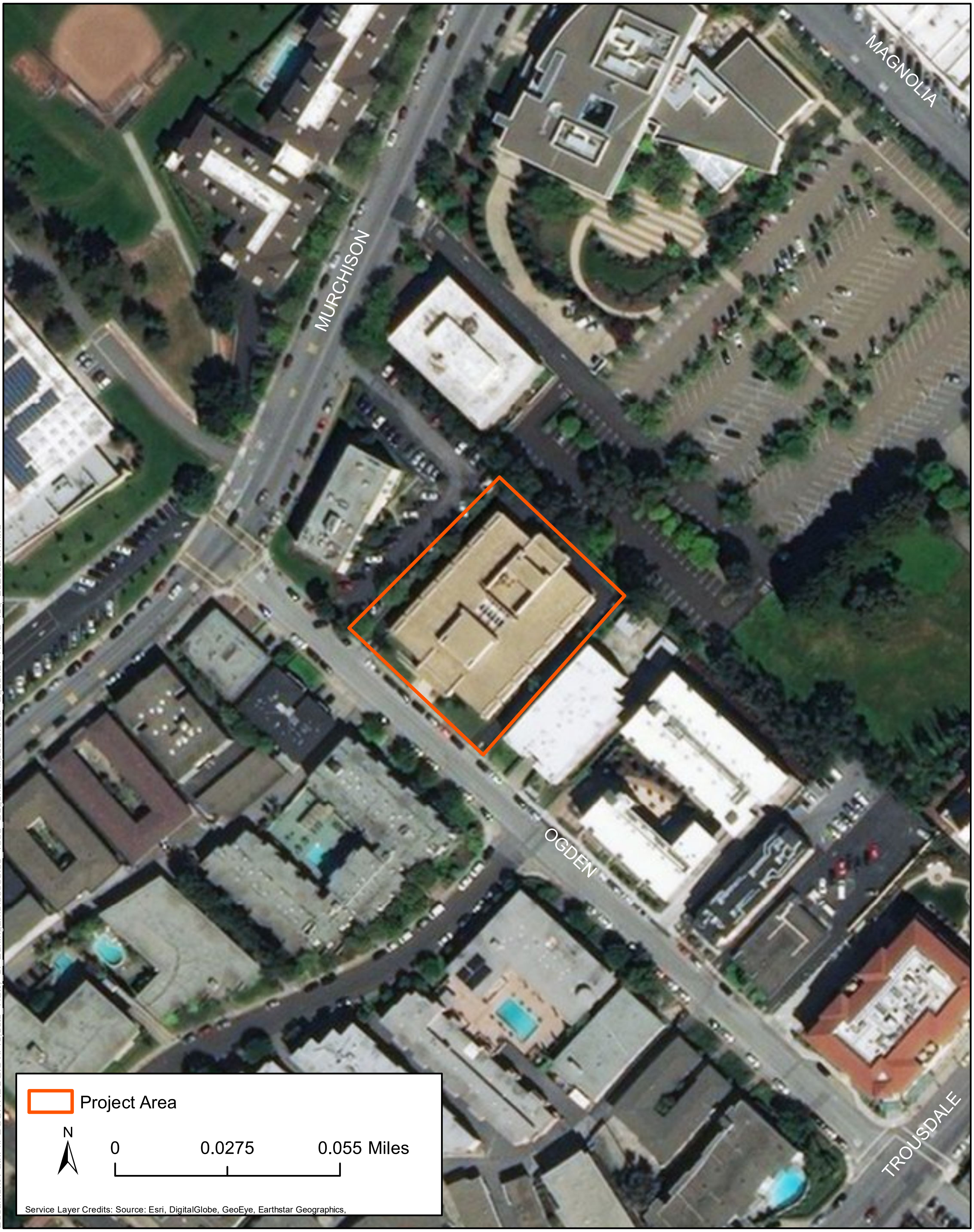
Thank you very much for your interest and assistance.

Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location



USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

CITY OF BURLINGAME

City Hall – 501 Primrose Road
Burlingame, California 94010-3997

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

PH: (650) 558-7250
FAX: (650) 696-3790

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388
Fremont, CA, 94539

August 4th, 2020

RE: Tribal Cultural Resources under the California Environmental Quality Act, Assembly Bill 52 Formal Notification of Project Consideration and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 for the 1868 Ogden Drive Project

Dear Mr. Galvan,

The City of Burlingame (City) has received a project application for the 1868 Ogden Drive Project (Project) and has begun environmental analysis. While no notice has been formally requested under Public Resources Code (PRC) §21080.3.1(b), this letter has been sent upon the recommendation of the Native American Heritage Commission to tribes that are culturally and traditionally affiliated with the area.

Below and on the subsequent pages, please find a description of the project, a map showing the project area, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description

The Project site is located at 1868 and 1870 Ogden Drive on a parcel that has a total size of 0.89 acre. The Project site currently includes a one-story office building. All existing features associated with the Project site would be removed. The Project would include construction of a six-story, 69-foot-high residential building with 120 residential units and with 150 parking spaces located at two levels (one below-grade and one at-grade). The Project would also include a public plaza, common open space, and private open space. The maximum depth of project related ground disturbance has not yet been determined but is expected to be greater than 12 feet since the underground parking would be located 12 feet below grade. The attached map illustrates the Project site.

Results of Records Searches

ICF conducted a literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). While no prehistoric resources were identified within the Project site, one prehistoric resource (CA-SMA-74) was identified in an area adjacent to the Project site. Formerly several shell mounds, in 1990 this adjacent site was recorded as “a large open field containing much shell, some lithics material, a few fire-cracked rocks, etc.” In addition, sixteen formal and two informal recorded resources were identified in the 0.5-mile buffer.

ICF requested a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF). On July 17, 2020, the NAHC identified Sacred Lands in the vicinity of the project area and listed the Ohlone Indian Tribe as having additional information regarding sensitive tribal areas.

On behalf of the City, I would like to provide you with an opportunity to communicate concerns you might have regarding places within the Project site that may be important to your community. The City requests your participation in the identification and protection of cultural resources, sacred lands, or other heritage sites within the above described Project site with the understanding that you or other members of the community might possess specialized knowledge of the area. Pursuant to PRC § 21080.3.1 (b), tribal representatives have 30 days from the receipt of this letter to request consultation, in writing, with the City for the purpose of identifying the significant impacts of the Project, alternatives to the project as proposed, and recommended mitigation measures.

If you have any questions or concerns feel free to contact myself or ICF's point of contact, Lily Arias, for additional support.

Lead Agency Point of Contact
Attn: Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department –
Planning Division
501 Primrose Road
Burlingame, CA 94010
Phone: 650.558.7252
Email: ckeylon@burlingame.org

ICF Point of Contact
Attn: Lily Arias, Archaeologist
Phone: 415.677.7132
Fax: 415.677.7177
Email: lily.arias@icf.com

Thank you very much for your interest and assistance.

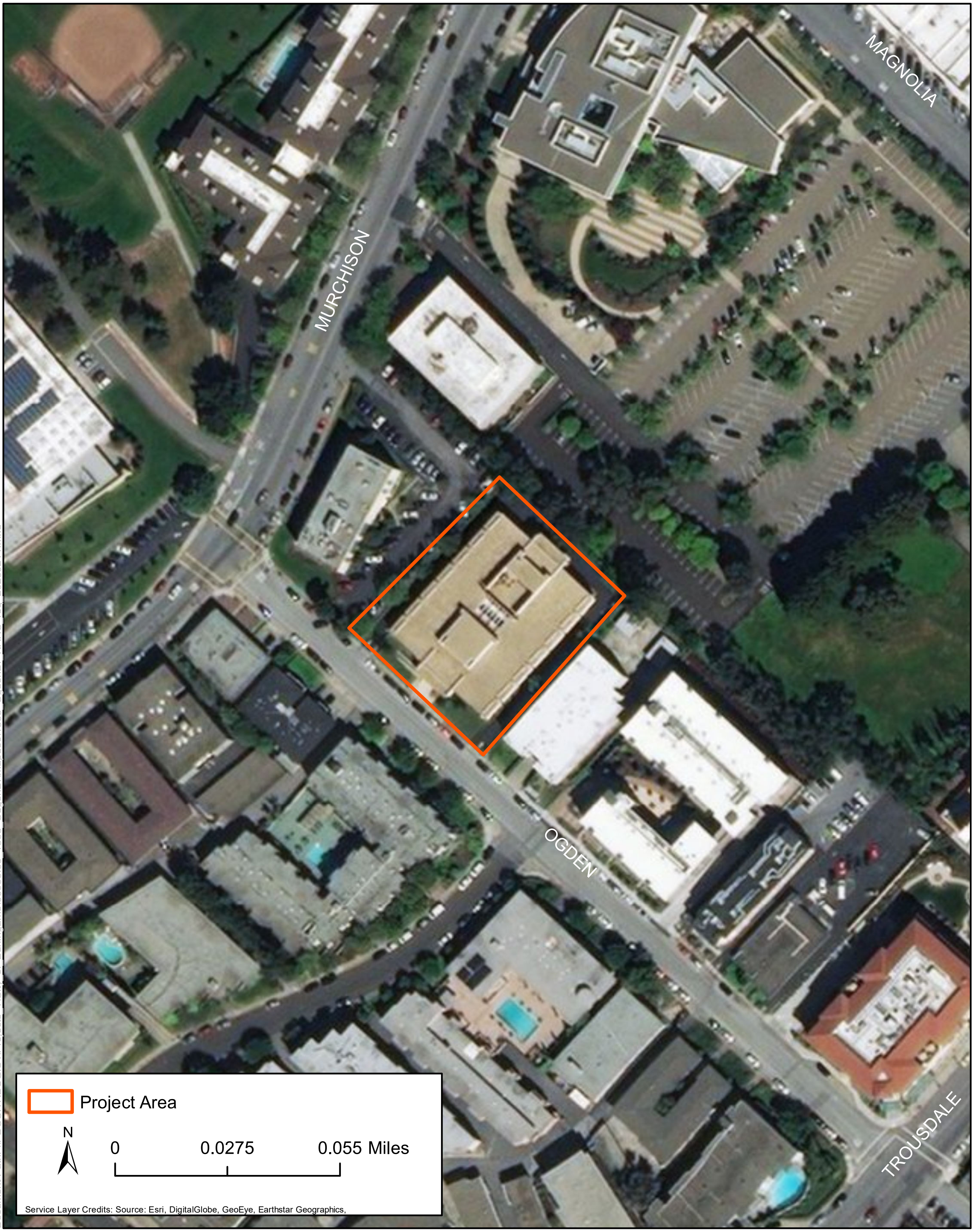
Sincerely,

Catherine Keylon

Catherine Keylon, Senior Planner
City of Burlingame
Community Development Department -- Planning Division

Attachment: Project Location

Document Path: \\PDCCITRDSGIS1\Projects_1\City_of_Burlingame\00000.00_1868_OgdenDr\mapdoc\1868_OgdenDr_NAHC_req_20200211.mxd



USGS Quadrangle: Montara Mountain
Buri Buri Land Grant

Project Area
1868 Ogden Drive Project

Appendix F

Traffic Noise Data Tables

Existing: Existing + P	**Peak Hour**				**Max**	**6.6%**		
Intersection Number	West Link	East Link	North Link	South Link	West Link	East Link	North Link	South Link
1	5	110	0	115	0.1%	1.4%	0.0%	6.6%
2	20	45	65	0	0.2%	0.4%	3.7%	0.0%
3	105	100	5	0	1.3%	1.2%	0.2%	0.0%
4	45	45	0	0	0.4%	0.3%	0.0%	0.0%
5	0	65	35	100	0.0%	0.2%	0.1%	0.4%
6	100	0	100	0	1.2%	0.0%	0.4%	0.0%
7	45	0	0	45	0.4%	0.0%	0.0%	0.2%

Background: Background + P	**Peak Hour**				**Max**	**6.6%**		
Intersection Number	West Link	East Link	North Link	South Link	West Link	East Link	North Link	South Link
1	5	110	0	115	0.1%	1.4%	0.0%	6.6%
2	20	45	65	0	0.1%	0.3%	3.7%	0.0%
3	105	100	5	0	1.3%	1.1%	0.2%	0.0%
4	45	45	0	0	0.3%	0.3%	0.0%	0.0%
5	0	65	35	100	0.0%	0.2%	0.1%	0.4%
6	100	0	100	0	1.1%	0.0%	0.3%	0.0%
7	45	0	0	45	0.3%	0.0%	0.0%	0.2%

Cumulative: Cumulative + P	**Peak Hour**				**Max**	**5.5%**		
Intersection Number	West Link	East Link	North Link	South Link	West Link	East Link	North Link	South Link
1	5	110	0	115	0.1%	1.2%	0.0%	5.5%
2	20	45	65	0	0.1%	0.3%	3.1%	0.0%
3	105	100	5	0	1.1%	1.0%	0.1%	0.0%
4	45	45	0	0	0.3%	0.3%	0.0%	0.0%
5	0	65	35	100	0.0%	0.1%	0.1%	0.3%
6	100	0	100	0	1.0%	0.0%	0.3%	0.0%
7	45	0	0	45	0.3%	0.0%	0.0%	0.2%

Existing Volumes - AM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	818	803	32	201
2	1480	1437	201	20
3	803	893	185	343
4	1184	1210	343	421
5	1163	3570	2914	2367
6	893	536	2582	1797
7	1213	563	1645	1645

Existing Volumes - PM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	769	759	42	150
2	1097	1082	150	23
3	759	809	397	383
4	1341	1378	383	444
5	1246	3771	3322	2641
6	809	683	2813	2143
7	1291	578	2035	1964

Existing Volumes - ADT

Intersection Number	West Link	East Link	North Link	South Link
1	7,935	7,810	370	1,755
2	12,885	12,595	1,755	215
3	7,810	8,510	2,910	3,630
4	12,625	12,940	3,630	4,325
5	12,045	36,705	31,180	25,040
6	8,510	6,095	26,975	19,700
7	12,520	5,705	18,400	18,045

Background Volumes - AM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	847	832	32	201
2	1534	1491	201	20
3	821	922	185	354
4	1256	1282	343	421
5	1207	4046	3220	2601
6	921	644	2818	1939
7	1285	593	1786	1768

Background Volumes - PM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	802	792	42	150
2	1160	1145	150	23
3	779	842	397	396
4	1428	1465	383	444
5	1297	4316	3668	2921
6	841	821	3094	2304
7	1378	615	2196	2107

Background Volumes - ADT

Intersection Number	West Link	East Link	North Link	South Link
1	8,245	8,120	370	1,755
2	13,470	13,180	1,755	215
3	8,000	8,820	2,910	3,750
4	13,420	13,735	3,630	4,325
5	12,520	41,810	34,440	27,610
6	8,810	7,325	29,560	21,215
7	13,315	6,040	19,910	19,375

Existing + P Volumes - AM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	818	811	32	209
2	1481	1440	205	20
3	810	900	185	343
4	1187	1213	343	421
5	1163	3575	2917	2375
6	900	536	2589	1797
7	1216	563	1645	1648

Existing + P Volumes - PM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	770	773	42	165
2	1100	1088	159	23
3	773	822	398	383
4	1347	1384	383	444
5	1246	3779	3326	2653
6	822	683	2826	2143
7	1297	578	2035	1970

Existing + Project Volumes ADT

Intersection Number	West Link	East Link	North Link	South Link
1	7,940	7,920	370	1,870
2	12,905	12,640	1,820	215
3	7,915	8,610	2,915	3,630
4	12,670	12,985	3,630	4,325
5	12,045	36,770	31,215	25,140
6	8,610	6,095	27,075	19,700
7	12,565	5,705	18,400	18,090

Background + P Volumes - AM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	847	840	32	209
2	1535	1494	205	20
3	828	929	185	354
4	1259	1285	343	421
5	1207	4051	3223	2609
6	928	644	2825	1939
7	1288	593	1786	1771

Background + P Volumes - PM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			
1	803	806	42	165
2	1163	1151	159	23
3	793	855	398	396
4	1434	1471	383	444
5	1297	4324	3672	2933
6	854	821	3107	2304
7	1384	615	2196	2113

Background + Project Volumes ADT

Intersection Number	West Link	East Link	North Link	South Link
1	8,250	8,230	370	1,870
2	13,490	13,225	1,820	215
3	8,105	8,920	2,915	3,750
4	13,465	13,780	3,630	4,325
5	12,520	41,875	34,475	27,710
6	8,910	7,325	29,660	21,215
7	13,360	6,040	19,910	19,420

Cumulative Volumes - AM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			

Cumulative Volumes - PM

Intersection Number	West Link	East Link	North Link	South Link
	Peak Hour			

1	978	959	39	240	1	902	891	49	176
2	1768	1717	240	25	2	1287	1269	176	26
3	960	1067	221	410	3	891	950	467	450
4	1415	1446	411	504	4	1573	1617	449	521
5	1338	4427	3578	2955	5	1370	4524	3883	3121
6	1066	640	3084	2146	6	950	801	3299	2514
7	1521	627	2739	2543	7	1446	687	2988	2785

Cumulative Volumes - ADT

Intersection Number	West Link	East Link	North Link	South Link
1	9,400	9,250	440	2,080
2	15,275	14,930	2,080	255
3	9,255	10,085	3,440	4,300
4	14,940	15,315	4,300	5,125
5	13,540	44,755	37,305	30,380
6	10,080	7,205	31,915	23,300
7	14,835	6,570	28,635	26,640

Cumulative + P Volumes - AM **Peak Hour**

Intersection Number	West Link	East Link	North Link	South Link
1	978	967	39	248
2	1769	1720	244	25
3	967	1074	221	410
4	1418	1449	411	504
5	1338	4432	3581	2963
6	1073	640	3091	2146
7	1524	627	2739	2546

Cumulative + P Volumes - PM **Peak Hour**

Intersection Number	West Link	East Link	North Link	South Link
1	903	905	49	191
2	1290	1275	185	26
3	905	963	468	450
4	1579	1623	449	521
5	1370	4532	3887	3133
6	963	801	3312	2514
7	1452	687	2988	2791

Cumulative + P Volumes - ADT

Intersection Number	West Link	East Link	North Link	South Link
1	9,405	9,360	440	2,195
2	15,295	14,975	2,145	255
3	9,360	10,185	3,445	4,300
4	14,985	15,360	4,300	5,125
5	13,540	44,820	37,340	30,480
6	10,180	7,205	32,015	23,300
7	14,880	6,570	28,635	26,685

601 California Street **Condition #:** 1 **Existing Conditions** **AM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	3	71	70	117	108	278	192	17
TH	376	877	319	531	648	125	190	16
RT	81	4	51	84	45	47	218	15
TOTAL	**460**	**952**	**440**	**732**	**801**	**450**	**600**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	16	3	84	158	359	11	11	9
TH	339	473	318	353	295	71	163	8
RT	8	31	41	46	755	107	33	7
TOTAL	**363**	**507**	**443**	**557**	**1,409**	**189**	**207**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	45	10	36	798	196	115	5
TH	0	0	26	50	786	878	620	4
RT	0	52	11	75	36	330	195	3
TOTAL	**0**	**97**	**47**	**161**	**1,620**	**1,404**	**930**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	3	34	24	31	42	255	13
TH	21	2	27	19	431	793	490	12
RT	64	8	121	86	715	26	51	11
TOTAL	**104**	**13**	**182**	**129**	**1,177**	**861**	**796**	
WEST LINK (Total)	**818**	**1,480**	**803**	**1,184**	**1,163**	**893**	**1,213**	
-WB (Leave)	358	528	363	452	362	443	613	
-EB (Approach)	460	952	440	732	801	450	600	
EAST LINK (Total)	**803**	**1,437**	**893**	**1,210**	**3,570**	**536**	**563**	
-EB (Leave)	440	930	450	653	2,161	347	356	
-WB (Approach)	363	507	443	557	1,409	189	207	
NORTH LINK (Total)	**32**	**201**	**185**	**343**	**2,914**	**2,582**	**1,645**	
-NB (Leave)	32	104	138	182	1,294	1,178	715	
-SB (Approach)	0	97	47	161	1,620	1,404	930	
SOUTH LINK (Total)	**201**	**20**	**343**	**421**	**2,367**	**1,797**	**1,645**	
-SB (Leave)	97	7	161	292	1,190	936	849	
-NB (Approach)	104	13	182	129	1,177	861	796	
	1	**2**	**3**	**4**	**5**	**6**	**7**	
100% = Vehicle Percentage								
Total Intersection Volume	**1,854**	**3,138**	**2,224**	**3,158**	**10,014**	**5,808**	**5,066**	

601 California Street **Condition #:** 1 **Existing Conditions** **PM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	6	29	42	101	127	252	267	17
TH	223	480	202	487	319	88	164	16
RT	59	4	11	26	36	73	223	15
TOTAL	**288**	**513**	**255**	**614**	**482**	**413**	**654**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	23	2	18	80	508	34	20	9
TH	462	524	363	524	648	96	232	8
RT	19	38	15	67	1,055	188	58	7
TOTAL	**504**	**564**	**396**	**671**	**2,211**	**318**	**310**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	30	90	37	642	233	74	5
TH	0	0	143	22	774	1,095	764	4
RT	0	52	79	113	58	224	175	3
TOTAL	**0**	**82**	**312**	**172**	**1,474**	**1,552**	**1,013**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	8	62	90	58	76	230	13
TH	17	1	28	43	666	821	697	12
RT	32	8	121	183	599	44	30	11
TOTAL	**68**	**17**	**211**	**316**	**1,323**	**941**	**957**	
WEST LINK (Total)	**769**	**1,097**	**759**	**1,341**	**1,246**	**809**	**1,291**	
-WB (Leave)	481	584	504	727	764	396	637	
-EB (Approach)	288	513	255	614	482	413	654	
EAST LINK (Total)	**759**	**1,082**	**809**	**1,378**	**3,771**	**683**	**578**	
-EB (Leave)	255	518	413	707	1,560	365	268	
-WB (Approach)	504	564	396	671	2,211	318	310	
NORTH LINK (Total)	**42**	**150**	**397**	**383**	**3,322**	**2,813**	**2,035**	
-NB (Leave)	42	68	85	211	1,848	1,261	1,022	
-SB (Approach)	0	82	312	172	1,474	1,552	1,013	
SOUTH LINK (Total)	**150**	**23**	**383**	**444**	**2,641**	**2,143**	**1,964**	
-SB (Leave)	82	6	172	128	1,318	1,202	1,007	
-NB (Approach)	68	17	211	316	1,323	941	957	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**1,720**	**2,352**	**2,348**	**3,546**	**10,980**	**6,448**	**5,868**	

601 California Street Condition #: 3 Existing + Project Conditions AM

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	3	69	71	117	108	293	192	17
TH	376	877	334	538	648	125	190	16
RT	80	4	51	84	45	47	225	15
TOTAL	**459**	**950**	**456**	**739**	**801**	**465**	**607**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	7	3	84	158	354	11	11	9
TH	339	473	310	349	295	71	163	8
RT	8	27	41	46	755	107	33	7
TOTAL	**354**	**503**	**435**	**553**	**1,404**	**189**	**207**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	52	10	36	798	196	115	5
TH	0	0	26	50	783	878	620	4
RT	0	55	10	75	36	322	195	3
TOTAL	**0**	**107**	**46**	**161**	**1,617**	**1,396**	**930**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	20	3	34	24	31	42	251	13
TH	21	2	27	19	437	793	490	12
RT	81	8	121	86	725	26	51	11
TOTAL	**122**	**13**	**182**	**129**	**1,193**	**861**	**792**	
WEST LINK (Total)	**818**	**1,481**	**810**	**1,187**	**1,163**	**900**	**1,216**	
-WB (Leave)	359	531	354	448	362	435	609	
-EB (Approach)	459	950	456	739	801	465	607	
EAST LINK (Total)	**811**	**1,440**	**900**	**1,213**	**3,575**	**536**	**563**	
-EB (Leave)	457	937	465	660	2,171	347	356	
-WB (Approach)	354	503	435	553	1,404	189	207	
NORTH LINK (Total)	**32**	**205**	**185**	**343**	**2,917**	**2,589**	**1,645**	
-NB (Leave)	32	98	139	182	1,300	1,193	715	
-SB (Approach)	0	107	46	161	1,617	1,396	930	
SOUTH LINK (Total)	**209**	**20**	**343**	**421**	**2,375**	**1,797**	**1,648**	
-SB (Leave)	87	7	161	292	1,182	936	856	
-NB (Approach)	122	13	182	129	1,193	861	792	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**1,870**	**3,146**	**2,238**	**3,164**	**10,030**	**5,822**	**5,072**	

601 California Street Condition #: 3 Existing + Project Conditions PM

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	6	32	42	101	127	250	267	17
TH	223	480	200	486	319	88	164	16
RT	60	4	11	26	36	73	222	15
TOTAL	**289**	**516**	**253**	**613**	**482**	**411**	**653**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	39	2	18	80	517	34	20	9
TH	462	524	378	531	648	96	232	8
RT	19	45	15	67	1,055	188	58	7
TOTAL	**520**	**571**	**411**	**678**	**2,220**	**318**	**310**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	29	90	37	642	233	74	5
TH	0	0	143	22	779	1,095	764	4
RT	0	52	80	113	58	239	175	3
TOTAL	**0**	**81**	**313**	**172**	**1,479**	**1,567**	**1,013**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	8	62	90	58	76	237	13
TH	17	1	28	43	665	821	697	12
RT	30	8	121	183	598	44	30	11
TOTAL	**66**	**17**	**211**	**316**	**1,321**	**941**	**964**	
WEST LINK (Total)	**770**	**1,100**	**773**	**1,347**	**1,246**	**822**	**1,297**	
-WB (Leave)	481	584	520	734	764	411	644	
-EB (Approach)	289	516	253	613	482	411	653	
EAST LINK (Total)	**773**	**1,088**	**822**	**1,384**	**3,779**	**683**	**578**	
-EB (Leave)	253	517	411	706	1,559	365	268	
-WB (Approach)	520	571	411	678	2,220	318	310	
NORTH LINK (Total)	**42**	**159**	**398**	**383**	**3,326**	**2,826**	**2,035**	
-NB (Leave)	42	78	85	211	1,847	1,259	1,022	
-SB (Approach)	0	81	313	172	1,479	1,567	1,013	
SOUTH LINK (Total)	**165**	**23**	**383**	**444**	**2,653**	**2,143**	**1,970**	
-SB (Leave)	99	6	172	128	1,332	1,202	1,006	
-NB (Approach)	66	17	211	316	1,321	941	964	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**1,750**	**2,370**	**2,376**	**3,558**	**11,004**	**6,474**	**5,880**	

601 California Street **Condition #:** 2 **Background Conditions** AM

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	3	71	70	117	115	292	220	17
TH	394	910	330	568	663	128	196	16
RT	81	4	51	84	45	47	222	15
TOTAL	**478**	**985**	**451**	**769**	**823**	**467**	**638**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	16	3	95	158	443	17	19	9
TH	350	494	325	388	313	73	166	8
RT	8	31	41	46	892	151	33	7
TOTAL	**374**	**528**	**461**	**592**	**1,648**	**241**	**218**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	45	10	36	913	239	115	5
TH	0	0	26	50	806	932	656	4
RT	0	52	11	75	40	339	218	3
TOTAL	**0**	**97**	**47**	**161**	**1,759**	**1,510**	**989**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	3	34	24	31	42	263	13
TH	21	2	27	19	454	865	544	12
RT	64	8	121	86	822	36	64	11
TOTAL	**104**	**13**	**182**	**129**	**1,307**	**943**	**871**	
WEST LINK (Total)	**847**	**1,534**	**821**	**1,256**	**1,207**	**921**	**1,285**	
-WB (Leave)	369	549	370	487	384	454	647	
-EB (Approach)	478	985	451	769	823	467	638	
EAST LINK (Total)	**832**	**1,491**	**922**	**1,282**	**4,046**	**644**	**593**	
-EB (Leave)	458	963	461	690	2,398	403	375	
-WB (Approach)	374	528	461	592	1,648	241	218	
NORTH LINK (Total)	**32**	**201**	**185**	**343**	**3,220**	**2,818**	**1,786**	
-NB (Leave)	32	104	138	182	1,461	1,308	797	
-SB (Approach)	0	97	47	161	1,759	1,510	989	
SOUTH LINK (Total)	**201**	**20**	**354**	**421**	**2,601**	**1,939**	**1,768**	
-SB (Leave)	97	7	172	292	1,294	996	897	
-NB (Approach)	104	13	182	129	1,307	943	871	
	1	2	3	4	5	6	7	

601 California Street | **Condition #:** 2 | **Background Conditions** | **PM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	6	29	42	101	132	263	296	17
TH	237	506	211	530	339	90	168	16
RT	59	4	11	26	36	73	233	15
TOTAL	**302**	**539**	**264**	**657**	**507**	**426**	**697**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	23	2	31	80	604	46	36	9
TH	481	561	374	568	666	100	239	8
RT	19	38	15	67	1,193	266	58	7
TOTAL	**523**	**601**	**420**	**715**	**2,463**	**412**	**333**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	30	90	37	784	268	74	5
TH	0	0	143	22	803	1,171	821	4
RT	0	52	79	113	66	239	206	3
TOTAL	**0**	**82**	**312**	**172**	**1,653**	**1,678**	**1,101**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	8	62	90	58	76	236	13
TH	17	1	28	43	690	887	741	12
RT	32	8	121	183	730	51	40	11
TOTAL	**68**	**17**	**211**	**316**	**1,478**	**1,014**	**1,017**	
WEST LINK (Total)	**802**	**1,160**	**779**	**1,428**	**1,297**	**841**	**1,378**	
-WB (Leave)	500	621	515	771	790	415	681	
-EB (Approach)	302	539	264	657	507	426	697	
EAST LINK (Total)	**792**	**1,145**	**842**	**1,465**	**4,316**	**821**	**615**	
-EB (Leave)	269	544	422	750	1,853	409	282	
-WB (Approach)	523	601	420	715	2,463	412	333	
NORTH LINK (Total)	**42**	**150**	**397**	**383**	**3,668**	**3,094**	**2,196**	
-NB (Leave)	42	68	85	211	2,015	1,416	1,095	
-SB (Approach)	0	82	312	172	1,653	1,678	1,101	
SOUTH LINK (Total)	**150**	**23**	**396**	**444**	**2,921**	**2,304**	**2,107**	
-SB (Leave)	82	6	185	128	1,443	1,290	1,090	
-NB (Approach)	68	17	211	316	1,478	1,014	1,017	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**1,786**	**2,478**	**2,414**	**3,720**	**12,202**	**7,060**	**6,296**	

601 California Street **Condition #:** 4 **Background + Project Conditions** **AM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	3	69	71	117	115	307	220	17
TH	394	910	345	575	663	128	196	16
RT	80	4	51	84	45	47	229	15
TOTAL	**477**	**983**	**467**	**776**	**823**	**482**	**645**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	7	3	95	158	438	17	19	9
TH	350	494	317	384	313	73	166	8
RT	8	27	41	46	892	151	33	7
TOTAL	**365**	**524**	**453**	**588**	**1,643**	**241**	**218**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	52	10	36	913	239	115	5
TH	0	0	26	50	803	932	656	4
RT	0	55	10	75	40	331	218	3
TOTAL	**0**	**107**	**46**	**161**	**1,756**	**1,502**	**989**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	20	3	34	24	31	42	259	13
TH	21	2	27	19	460	865	544	12
RT	81	8	121	86	832	36	64	11
TOTAL	**122**	**13**	**182**	**129**	**1,323**	**943**	**867**	
WEST LINK (Total)	**847**	**1,535**	**828**	**1,259**	**1,207**	**928**	**1,288**	
-WB (Leave)	370	552	361	483	384	446	643	
-EB (Approach)	477	983	467	776	823	482	645	
EAST LINK (Total)	**840**	**1,494**	**929**	**1,285**	**4,051**	**644**	**593**	
-EB (Leave)	475	970	476	697	2,408	403	375	
-WB (Approach)	365	524	453	588	1,643	241	218	
NORTH LINK (Total)	**32**	**205**	**185**	**343**	**3,223**	**2,825**	**1,786**	
-NB (Leave)	32	98	139	182	1,467	1,323	797	
-SB (Approach)	0	107	46	161	1,756	1,502	989	
SOUTH LINK (Total)	**209**	**20**	**354**	**421**	**2,609**	**1,939**	**1,771**	
-SB (Leave)	87	7	172	292	1,286	996	904	
-NB (Approach)	122	13	182	129	1,323	943	867	
	1	**2**	**3**	**4**	**5**	**6**	**7**	
100% = Vehicle Percentage								
Total Intersection Volume	**1,928**	**3,254**	**2,296**	**3,308**	**11,090**	**6,336**	**5,438**	

601 California Street **Condition #:** 4 **Background + Project Conditions** **PM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	6	32	42	101	132	261	296	17
TH	237	506	209	529	339	90	168	16
RT	60	4	11	26	36	73	232	15
TOTAL	**303**	**542**	**262**	**656**	**507**	**424**	**696**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	39	2	31	80	613	46	36	9
TH	481	561	389	575	666	100	239	8
RT	19	45	15	67	1,193	266	58	7
TOTAL	**539**	**608**	**435**	**722**	**2,472**	**412**	**333**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	29	90	37	784	268	74	5
TH	0	0	143	22	808	1,171	821	4
RT	0	52	80	113	66	254	206	3
TOTAL	**0**	**81**	**313**	**172**	**1,658**	**1,693**	**1,101**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	19	8	62	90	58	76	243	13
TH	17	1	28	43	689	887	741	12
RT	30	8	121	183	729	51	40	11
TOTAL	**66**	**17**	**211**	**316**	**1,476**	**1,014**	**1,024**	
WEST LINK (Total)	**803**	**1,163**	**793**	**1,434**	**1,297**	**854**	**1,384**	
-WB (Leave)	500	621	531	778	790	430	688	
-EB (Approach)	303	542	262	656	507	424	696	
EAST LINK (Total)	**806**	**1,151**	**855**	**1,471**	**4,324**	**821**	**615**	
-EB (Leave)	267	543	420	749	1,852	409	282	
-WB (Approach)	539	608	435	722	2,472	412	333	
NORTH LINK (Total)	**42**	**159**	**398**	**383**	**3,672**	**3,107**	**2,196**	
-NB (Leave)	42	78	85	211	2,014	1,414	1,095	
-SB (Approach)	0	81	313	172	1,658	1,693	1,101	
SOUTH LINK (Total)	**165**	**23**	**396**	**444**	**2,933**	**2,304**	**2,113**	
-SB (Leave)	99	6	185	128	1,457	1,290	1,089	
-NB (Approach)	66	17	211	316	1,476	1,014	1,024	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**1,816**	**2,496**	**2,442**	**3,732**	**12,226**	**7,086**	**6,308**	

601 California Street **Condition #:** 5 **Cumulative No Project Conditions** AM

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	4	85	84	140	125	332	282	17
TH	449	1,047	381	634	749	149	220	16
RT	97	5	61	100	47	56	231	15
TOTAL	**550**	**1,137**	**526**	**874**	**921**	**537**	**733**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	19	4	100	189	504	13	11	9
TH	405	565	380	422	336	85	196	8
RT	10	37	49	55	945	128	27	7
TOTAL	**434**	**606**	**529**	**666**	**1,785**	**226**	**234**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	54	12	43	996	234	124	5
TH	0	0	31	60	921	1,049	889	4
RT	0	62	13	90	43	394	323	3
TOTAL	**0**	**116**	**56**	**193**	**1,960**	**1,677**	**1,336**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	23	4	41	29	38	50	269	13
TH	25	2	32	23	548	947	1,094	12
RT	76	10	145	103	897	31	49	11
TOTAL	**124**	**16**	**218**	**155**	**1,483**	**1,028**	**1,412**	
WEST LINK (Total)	**978**	**1,768**	**960**	**1,415**	**1,338**	**1,066**	**1,521**	
-WB (Leave)	428	631	434	541	417	529	788	
-EB (Approach)	550	1,137	526	874	921	537	733	
EAST LINK (Total)	**959**	**1,717**	**1,067**	**1,446**	**4,427**	**640**	**627**	
-EB (Leave)	525	1,111	538	780	2,642	414	393	
-WB (Approach)	434	606	529	666	1,785	226	234	
NORTH LINK (Total)	**39**	**240**	**221**	**411**	**3,578**	**3,084**	**2,739**	
-NB (Leave)	39	124	165	218	1,618	1,407	1,403	
-SB (Approach)	0	116	56	193	1,960	1,677	1,336	
SOUTH LINK (Total)	**240**	**25**	**410**	**504**	**2,955**	**2,146**	**2,543**	
-SB (Leave)	116	9	192	349	1,472	1,118	1,131	
-NB (Approach)	124	16	218	155	1,483	1,028	1,412	
	1	**2**	**3**	**4**	**5**	**6**	**7**	

100% = Vehicle Percentage

Total Intersection Volume	1	2	3	4	5	6	7
	2,216	**3,750**	**2,658**	**3,776**	**12,298**	**6,936**	**7,430**

601 California Street **Condition #:** 5 **Cumulative No Project Conditions** **PM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	7	34	49	118	137	296	250	17
TH	262	563	237	571	355	103	184	16
RT	69	5	13	30	40	86	239	15
TOTAL	**338**	**602**	**299**	**719**	**532**	**485**	**673**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	27	2	21	94	641	40	22	9
TH	542	615	426	615	702	113	229	8
RT	22	45	18	79	1,245	220	115	7
TOTAL	**591**	**662**	**465**	**788**	**2,588**	**373**	**366**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	35	106	43	819	273	113	5
TH	0	0	168	26	871	1,284	1,247	4
RT	0	61	93	133	70	263	277	3
TOTAL	**0**	**96**	**367**	**202**	**1,760**	**1,820**	**1,637**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	22	9	73	106	66	89	267	13
TH	20	1	33	50	741	963	986	12
RT	38	9	142	215	762	52	24	11
TOTAL	**80**	**19**	**248**	**371**	**1,569**	**1,104**	**1,277**	
WEST LINK (Total)	**902**	**1,287**	**891**	**1,573**	**1,370**	**950**	**1,446**	
-WB (Leave)	564	685	592	854	838	465	773	
-EB (Approach)	338	602	299	719	532	485	673	
EAST LINK (Total)	**891**	**1,269**	**950**	**1,617**	**4,524**	**801**	**687**	
-EB (Leave)	300	607	485	829	1,936	428	321	
-WB (Approach)	591	662	465	788	2,588	373	366	
NORTH LINK (Total)	**49**	**176**	**467**	**449**	**3,883**	**3,299**	**2,988**	
-NB (Leave)	49	80	100	247	2,123	1,479	1,351	
-SB (Approach)	0	96	367	202	1,760	1,820	1,637	
SOUTH LINK (Total)	**176**	**26**	**450**	**521**	**3,121**	**2,514**	**2,785**	
-SB (Leave)	96	7	202	150	1,552	1,410	1,508	
-NB (Approach)	80	19	248	371	1,569	1,104	1,277	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**2,018**	**2,758**	**2,758**	**4,160**	**12,898**	**7,564**	**7,906**	

601 California Street **Condition #:** 6 **Cumulative + Project Conditions** **AM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	4	83	85	140	125	347	282	17
TH	449	1,047	396	641	749	149	220	16
RT	96	5	61	100	47	56	238	15
TOTAL	**549**	**1,135**	**542**	**881**	**921**	**552**	**740**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	10	4	100	189	499	13	11	9
TH	405	565	372	418	336	85	196	8
RT	10	33	49	55	945	128	27	7
TOTAL	**425**	**602**	**521**	**662**	**1,780**	**226**	**234**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	61	12	43	996	234	124	5
TH	0	0	31	60	918	1,049	889	4
RT	0	65	12	90	43	386	323	3
TOTAL	**0**	**126**	**55**	**193**	**1,957**	**1,669**	**1,336**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	24	4	41	29	38	50	265	13
TH	25	2	32	23	554	947	1,094	12
RT	93	10	145	103	907	31	49	11
TOTAL	**142**	**16**	**218**	**155**	**1,499**	**1,028**	**1,408**	
WEST LINK (Total)	**978**	**1,769**	**967**	**1,418**	**1,338**	**1,073**	**1,524**	
-WB (Leave)	429	634	425	537	417	521	784	
-EB (Approach)	549	1,135	542	881	921	552	740	
EAST LINK (Total)	**967**	**1,720**	**1,074**	**1,449**	**4,432**	**640**	**627**	
-EB (Leave)	542	1,118	553	787	2,652	414	393	
-WB (Approach)	425	602	521	662	1,780	226	234	
NORTH LINK (Total)	**39**	**244**	**221**	**411**	**3,581**	**3,091**	**2,739**	
-NB (Leave)	39	118	166	218	1,624	1,422	1,403	
-SB (Approach)	0	126	55	193	1,957	1,669	1,336	
SOUTH LINK (Total)	**248**	**25**	**410**	**504**	**2,963**	**2,146**	**2,546**	
-SB (Leave)	106	9	192	349	1,464	1,118	1,138	
-NB (Approach)	142	16	218	155	1,499	1,028	1,408	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**2,232**	**3,758**	**2,672**	**3,782**	**12,314**	**6,950**	**7,436**	

601 California Street **Condition #:** 6 **Cumulative + Project Conditions** **PM**

	1	2	3	4	5	6	7	
INTERSECTION								
North Link	N/A	Ogden Drive	Magnolia Avenue	Magnolia Avenue	El Camino Real	El Camino Real	El Camino Real	
South Link	Ogden Drive	School District Lot	Magnolia Avenue	Hospital	El Camino Real	El Camino Real	El Camino Real	
West Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
East Link	Murchison Drive	Trousdale Drive	Murchison Drive	Trousdale Drive	Millbrae Avenue	Murchison Drive	Trousdale Drive	
TIME	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**	
Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	Eastbound	
UT								
LT	7	37	49	118	137	294	250	17
TH	262	563	235	570	355	103	184	16
RT	70	5	13	30	40	86	238	15
TOTAL	**339**	**605**	**297**	**718**	**532**	**483**	**672**	
Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	Westbound	
UT								
LT	43	2	21	94	650	40	22	9
TH	542	615	441	622	702	113	229	8
RT	22	52	18	79	1,245	220	115	7
TOTAL	**607**	**669**	**480**	**795**	**2,597**	**373**	**366**	
Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	Southbound	
UT								
LT	0	34	106	43	819	273	113	5
TH	0	0	168	26	876	1,284	1,247	4
RT	0	61	94	133	70	278	277	3
TOTAL	**0**	**95**	**368**	**202**	**1,765**	**1,835**	**1,637**	
Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	Northbound	
UT								
LT	22	9	73	106	66	89	274	13
TH	20	1	33	50	740	963	986	12
RT	36	9	142	215	761	52	24	11
TOTAL	**78**	**19**	**248**	**371**	**1,567**	**1,104**	**1,284**	
WEST LINK (Total)	**903**	**1,290**	**905**	**1,579**	**1,370**	**963**	**1,452**	
-WB (Leave)	564	685	608	861	838	480	780	
-EB (Approach)	339	605	297	718	532	483	672	
EAST LINK (Total)	**905**	**1,275**	**963**	**1,623**	**4,532**	**801**	**687**	
-EB (Leave)	298	606	483	828	1,935	428	321	
-WB (Approach)	607	669	480	795	2,597	373	366	
NORTH LINK (Total)	**49**	**185**	**468**	**449**	**3,887**	**3,312**	**2,988**	
-NB (Leave)	49	90	100	247	2,122	1,477	1,351	
-SB (Approach)	0	95	368	202	1,765	1,835	1,637	
SOUTH LINK (Total)	**191**	**26**	**450**	**521**	**3,133**	**2,514**	**2,791**	
-SB (Leave)	113	7	202	150	1,566	1,410	1,507	
-NB (Approach)	78	19	248	371	1,567	1,104	1,284	
	1	2	3	4	5	6	7	
100% = Vehicle Percentage								
Total Intersection Volume	**2,048**	**2,776**	**2,786**	**4,172**	**12,922**	**7,590**	**7,918**	