DRAFT

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

EL PESCADERO PARK &
MULTI-GENERATIONAL RECREATION CENTER PROJECT

TRACY, CALIFORNIA

LSA

July 2023

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MITIGATED NEGATIVE DECLARATION

EL PESCADERO PARK &
MULTI-GENERATIONAL RECREATION CENTER PROJECT

TRACY, CALIFORNIA

Submitted to:

LPA Design Studios
60 South Market Street, Suite 1250
San Jose, California 95113

Prepared by:

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Project No. LPX2204

LSA

July 2023

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/m^3	Micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
AC	asphalt concrete
ADT	average daily trips
AFY	acre-feet per year
AOU	American Ornithologists' Union
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Water Quality Control Plan
BMPs	Best Management Practices
BPS	Best Performance Standards
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen Code	California Green Building Standards Code
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CBC	California Building Code

CCaIC	Central California Information Center
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
City	City of Tracy
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Cortese List	Cal/EPA Hazardous Waste and Substances Sites List
CVP	Central Valley Project
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel(s)
DOC	California Department of Conservation
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control

DWR	California Department of Water Resources
EFZ	Earthquake Fault Zone
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan
EQ Zapp	California Earthquake Hazards Zone Application
EV	Electric vehicle
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	FEMA Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
gpd	gallons per day
GSAs	Groundwater Sustainability Agencies
GWP	global warming potential
HCM	Highway Capacity Manual
HVAC	heating, ventilation and air conditioning
I-205	Interstate 205
I-5	Interstate 5
I-580	Interstate 580
in/sec	Inches per second
IPaC	(USFWS) Information for Planning and Consultation

IS/MND	Initial Study/Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
LDR	Low Density Residential
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent continuous sound level
LID	Low Impact Development
L_{max}	maximum A-weighted sound level
LOS	Level of Service
LRA	Local Responsibility Area
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	Most Likely Descendant
mpg	miles per gallon
MRF	Tracy Material Recovery Facility
MS4	Small Municipal Separate Storm Sewer System
MUTCD	California Manual on Uniform Traffic Control Devices
NAHC	Native American Heritage Commission
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Services
NWIC	Northwest Information Center

OES	Solano County Office of Emergency Services
OPR	(California) Governor's Office of Planning and Research)
OSHA	Occupational Health and Safety Administration
PCC	Portland cement concrete pavement
PG&E	Pacific Gas & Electric
Phase II MS4 Permit	Water Board Phase II Small Municipal Separate Storm Sewer System Permit
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
ppb	parts per billion
PPV	peak particle velocity
PRC	California Public Resources Code
project	El Pescadero Park & Multi-Generational Recreation Center Project
project site	El Pescadero Park
RCRA	(Federal) Resource Conservation and Recovery Act
RMS	root mean square
ROGs	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCWSP	South County Water Supply Project
SDSs	Safety Data Sheets
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District

SLF	Sacred Lands File
SO_2	sulfur dioxide
SRAs	State Responsibility Areas
SSJCFA	South San Joaquin County Fire Authority
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDLs	Total Maximum Daily Loads
TPD	Tracy Police Department
Tracy Disposal	Tracy Delta Solid Waste Management, Inc.
TUSD	Tracy Unified School District
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration velocity decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
Water Board	Central Valley Regional Water Quality Control Board
WWTP	Wastewater Treatment Plant
ZNC	Zero Net Carbon

1.0 PROJECT INFORMATION

1. **Project Title:**

   El Pescadero Park & Multi-Generational Recreation Center Project

2. **Lead Agency Name and Address:**

   City of Tracy Parks & Recreation Department
   333 Civic Center Plaza
   Tracy, CA 95376

3. **Contact Person and Phone Number:**

   Richard Joaquin, RLA, ASLA, Parks Planning & Development Manager
   (209) 831-6235

4. **Project Location:**

   The project site is located within El Pescadero Park in the northern portion of Tracy, San Joaquin County, California. The approximately 13.9-acre project site (Assessor's Parcel Number [APN] 214-50-001) is located at 250 Kavanagh Avenue.

5. **Project Sponsor's Name and Address:**

   City of Tracy Parks & Recreation Department
   333 Civic Center Plaza
   Tracy, CA 95376

6. **General Plan Designation:**

   Park

7. **Zoning:**

   Low Density Residential (LDR)

8. **Description of Project:**

   The proposed project is the redevelopment of the existing El Pescadero Park (project site) to create a new multi-generational recreation center on West Grant Line Road in Tracy. A detailed project description is provided in Chapter 2.0, Project Description.

9. **Surrounding Land Uses and Setting:**

   The project site is bound by West Kavanagh Avenue to the north, residential uses and North Elementary to the east, West Grant Line Road to the south, and residential and commercial uses to the west. A detailed description of the surrounding land uses and setting is provided in Chapter 2.0, Project Description.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):

- San Joaquin County Fire Authority
- San Joaquin County Health Department
- Pacific Gas and Electric Company (PG&E)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The Native American Heritage Commission (NAHC) provided a list of tribal representatives to be contacted pursuant to the consultation requirements of Assembly Bill (AB) 52 on February 28, 2023. In May 2023, the City of Tracy sent outreach letters via certified mail to the tribal contacts; the letters described the project, provided maps of the project site, and invited the tribes to request consultation should they have any concerns.

On May 24, 2023, Corrina Gould, Tribal Chair of the Confederated Villages of Lisjan Nation responded by email that the Tribe had no further information to supply about the project site and requested that the Tribe be contacted if any resources were found during project development. No additional responses were received.

2.0 PROJECT DESCRIPTION

The following describes the proposed El Pescadero Park & Multi-Generational Recreation Center Project (project) that is the subject of this Initial Study/Mitigated Negative Declaration (IS/MND) prepared pursuant to the California Environmental Quality Act (CEQA). The proposed project is the redevelopment of the existing El Pescadero Park to create a new multi-generational recreation center on West Grant Line Road in Tracy, California.

2.1 PROJECT SITE

The following section describes the project location, existing conditions, parking circulation and access, and the regulatory setting.

2.1.1 Project Location

The project site consists of the existing El Pescadero Park in the northern portion of the City of Tracy in San Joaquin County. The approximately 13.9-acre project site (Assessor's Parcel Number [APN] 214-50-001) is located at 250 Kavanagh Avenue and is bound by West Kavanagh Avenue to the north, residential uses and North Elementary to the east, West Grant Line Road to the south, and residential and commercial uses to the west. The project's location and regional vicinity are shown on Figure 2-1, and an aerial photograph of the project site and its surrounding land uses is shown on Figure 2-2.

2.1.2 Existing Conditions

The project site is currently developed with the existing El Pescadero Park, which includes the Cora K-9 Dog Park, the El Pescadero Skate Park, a playground, basketball courts, restrooms and a drinking fountain, parking, and an open lawn area. The Cora K-9 Dog Park occupies approximately 0.5-acre of the site and includes a running area, benches, a fountain, an entryway area, and dog waste disposal. The 13,000-square-foot skate park includes a bowl, a halfpipe, pine ramp, a bank, a roll-in platform, curbs, and a quarter bowl. An existing drainage swale runs through the center of the site. The site currently supports approximately 140 trees. Tracy Interfaith Ministries is located in the southwestern portion of the project site. A building owned by the City of Tracy (City) is located in the southwestern corner of the project site and is used by City of Tracy Fire Support Services.

As shown on Figure 2-2, a variety of land uses are located within the vicinity of the project site. Immediately north of the project site is West Kavanagh Avenue and single-family residential uses, which also make up the land uses farther north. The project site is bounded to the east by North Elementary School and multi-family residential uses. Farther east are multi-family and single-family residential uses and commercial uses along West Grant Line Road. West Grant Line Road bounds the project site to the south, across which are commercial uses as well as single- and multi-family residential uses. The Brookdale Tracy Assisted Living Facility, North Park Post-Acute Nursing Home, and a single-family residential development bound the site to the west. Farther west is additional commercial and multi-family residential development.

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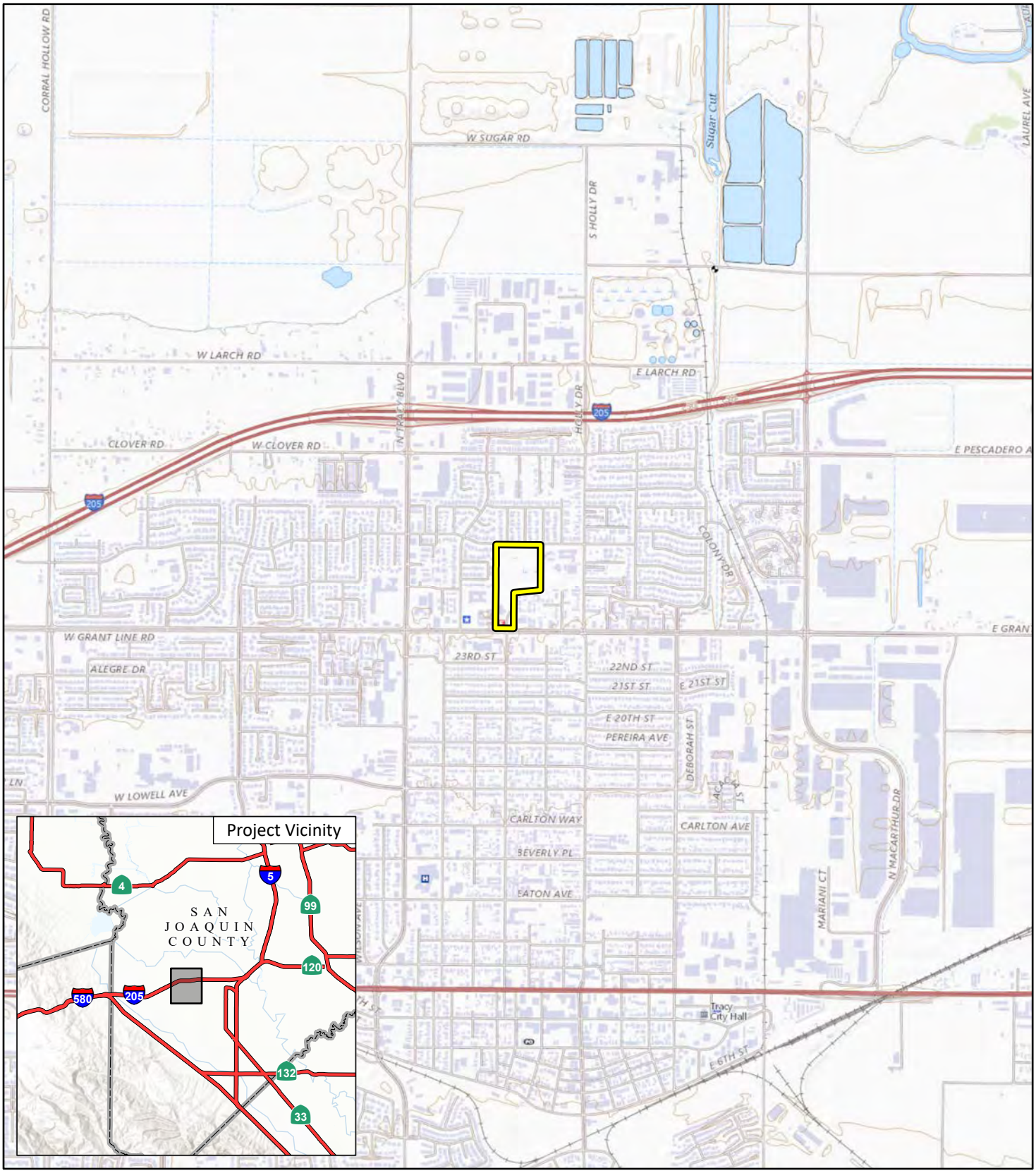

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Project Location

FIGURE 2-1

N

0 1000 2000
FEET

SOURCE: USGS The National Map (2017)

El Pescadero Park & Multi-Generational Recreation Center Project

Project Location

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LSA

Project Site Boundary

FIGURE 2-2

N

0 150 300
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SOURCES: Google Earth, 4/6/2022; LSA, 2022

El Pescadero Park and Multi-Generational Recreation Center Project
Aerial Photograph of the Project Site and Surrounding Land Uses

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2.1.3 Parking, Circulation, and Access

A surface parking lot on the southern portion of the project site provides approximately 58 standard parking spaces. The existing site is currently not equipped with electric vehicle (EV) chargers; however, the proposed parking lot would include eight EV chargers for park visitors. The parking lot is also used by visitors to the Tracy Interfaith Ministries. Automobile access to the parking lot is via a driveway off West Grant Line Road. On-street parking is also provided along West Kavanagh Avenue along the northern boundary of the project site. Regional access to the project site is provided by the West Grant Line Road on- and off-ramps of State Route 205 (SR-205). Local access to the project site is provided by West Kavanagh Avenue to the north and West Grant Line Road to the south. Pedestrian access to and throughout the project site is provided by sidewalks and concrete pathways.

2.1.4 Regulatory Setting

The project site is designated as Park on the City's General Plan Land Use Map[1] and is within the Low Density Residential (LDR) zoning district on the City's Zoning Map.[2]

The Park land use designation refers to established public and private open spaces and recreational facilities (e.g., playing fields, miniparks, and neighborhood and community parks). Currently there are approximately 241 acres of park land, 221 of which occur within the city limits. Parks are typically moderately sized and distributed throughout Tracy, often in the context of playing fields associated with schools.

The LDR Zone is intended to be utilized in the areas designated as low-medium density residential with a density range from 2.0 to 5.8 dwelling units per gross acre by the General Plan. Permitted uses within the LDR Zone include single-family dwellings, accessory dwelling units, mobile homes on an individual lots, crop and tree farming, and public parks, buildings, or schools.

2.2 PROJECT BACKGROUND AND OBJECTIVES

In 2013, the *Citywide Public Facilities Master Plan*[3] identified the need for one indoor multi-purpose recreation center to address increasing demands for indoor recreation programming (for all ages) and to meet future needs for gymnasium space within Tracy. The *Citywide Public Facilities Master Plan* recommended a new multi-purpose recreation center of approximately 45,000 square feet with dividable gym space, specialized indoor courts, fitness/exercise rooms, a multi-purpose room, social space, and dedicated spaces for seniors, teens, youth, and pre-school children. In 2016, City of Tracy voters passed Measure V, which enacted a half-cent sales tax to fund City services, including park repair and maintenance and building facilities (e.g., parks and sports fields).

1 City of Tracy. 2011. City of Tracy General Plan Land Use Map. February 1.
2 City of Tracy. 2022. City of Tracy GIS Viewer. Website: https://www.cityoftracy.org/our-city/about-us/city-maps/gis-web-mapping-application (accessed December 20, 2022).
3 City of Tracy. 2013. *Final Report Citywide Public Facilities Master Plan City of Tracy, California*. January 15.

In 2022, the City adopted the *Parks, Recreation and Trails Master Plan Update*[4] and the *Citywide Public Facilities Master Plan Update*.[5] Policy 8.E. in the *Parks, Recreation and Trails Master Plan Update* states that the "City will continue to work toward the creation of a high-quality indoor recreation space. This may be in the form of a single multi-generational recreation center, or multiple facilities that provide the desired amenities including a gymnasium, a library and educational spaces, a teaching kitchen, administration spaces, multi-purpose rooms, and a lobby and lounge space." Further, the multi-generational recreation center is identified as one of the eight new Capital Improvement Projects to be constructed over the next 10 years.

In early 2022, the City worked with LPA, the design consultant, to conduct a community-based design process for the proposed multi-generational recreation center. The planning process included numerous meetings with stakeholders and local community organizations, three community workshops, and presentations at public meetings of the City of Tracy City Council. Expressed priorities for the multi-generational recreation center include a gymnasium, outdoor amenities, a library and education space, a lobby/lounge space, and a teaching kitchen. After consideration of several different options for the proposed park improvements and recreation center facility, the City Council selected a preferred site and master plan concept to proceed through final design.

The multi-generational recreation center is intended to supplement the existing Community Center and Senior Center with increased space for community recreation and gathering opportunities.

2.3 PROPOSED PROJECT

The proposed project comprises three components: (1) construction of a multi-generational recreation center; (2) renovation of El Pescadero Park; and (3) and associated improvements. Each of these components is described below and shown on Figure 2-3.

2.3.1 Multi-Generational Recreation Center

The proposed multi-generational recreation center would consist of an approximately 52,244-square-foot, two-story building with a maximum height of approximately 35 feet that would be located in the southeastern portion of the project site. The ground floor would include a three-court gymnasium, two multi-purpose rooms, a food preparation area/catering kitchen, an entry lobby, a bouldering wall, a teen lounge and technology area, a makers space, and a restroom facility. Various offices for recreation and other City staff would also be provided. An outdoor courtyard would connect the north and south wings of the building. An elevated running track, which would encircle the outdoor courtyard, would be provided on the second floor along with a functional fitness area, additional offices, conference rooms, and restrooms. The second floor would also have an outdoor deck facing west to the park.

[4] City of Tracy. 2022. *City of Tracy Citywide Parks, Recreation & Trails Master Plan Update*. August.
[5] City of Tracy. 2022. *City of Tracy Citywide Public Facilities Master Plan Update.* July.

LSA

FIGURE 2-3

N

0 80 160
FEET

SOURCE: LPA, 2022

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El Pescadero Park and Multi-Generational Recreation Center Project
Conceptual Site Plan

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2.3.2 Renovation of El Pescadero Park

As part of the proposed project, the existing dog park, which is located in the northeastern corner of the park site, would be relocated to the western portion of the site. The approximately 0.67-acre (29,300-square-foot) dog park would be enclosed with 4-foot-high wire mesh fencing to allow voice control for dogs that are off leash. Fencing would also divide the dog park into two distinct areas, one for large dogs and another for small dogs. Each area of the dog park would include a paved walkway and synthetic turf area surrounded by decomposed granite and sod. Agility courses, a water fountain, and other elements would be added to enhance use of the dog park.

A series of decomposed gravel trails would be installed in the northwestern corner of the project site that would weave through a natural area with existing and newly planted trees and shrubs. Site furnishings, including benches and trash receptacles, would be provided along the proposed pathways.

The existing skate park would be relocated from its current location just north of Tracy Interfaith Ministries to the northeastern corner of the site. The basketball court would also be moved from its current location within the park to the eastern side of the park and adjacent to the proposed skate park. Light standards would be installed around the proposed basketball court to accommodate evening use. Additional site furnishings, including picnic tables, trash receptacles, and benches, would also be installed around the proposed basketball court and skate park.

The existing playground and restroom facility along West Kavanagh Avenue would remain in its current location, with a new splash pad added just north of the existing playground.

2.3.2.1 Operation

Similar to existing conditions, El Pescadero Park would be open daily to informal use, including walking, biking, picnicking, pick-up sports, and the general use of park facilities. The park hours are from dawn to 10:00 p.m. Maintenance activities would be similar to existing conditions and would be performed by existing Parks and Recreation staff and maintenance contractors hired by the City. Maintenance activities include mowing, facility cleaning, vegetation management, tree care, and general maintenance of the recreation facilities.

2.3.3 Associated Improvements

In addition to the elements described above, the proposed project would result in the construction of related improvements to enhance the existing park and complement the new recreation center, including parking, landscaping, lighting, and utilities. These improvements are described below.

2.3.3.1 Parking

Existing parking at the project site consists of approximately 58 on-site parking stalls in the dedicated parking area off of West Grant Line Road. Approximately 25 on-street parking spaces are available along West Kavanagh Avenue. As part of the proposed project, the existing parking lot would be reconfigured and new parking stalls added to expand the overall parking capacity to approximately 190 on-site parking stalls. The existing access road/driveway from West Grant Line Road would be extended through the existing parking lot and along the southern and eastern boundaries of the site,

connecting to West Kavanagh Avenue at the northern boundary of the project site. The project would also result in the construction of additional bike/pedestrian paths to enhance activity within the park and to provide connectivity to other adjacent residential neighborhoods. Bike racks would also be provided within the park as part of the proposed project.

2.3.3.2 Landscaping

Existing landscaping in the park includes 147 existing trees. The existing mature tree canopy at the park is a significant contributor to the park's character, and the project proposes to retain approximately 83 of the park's existing trees. As part of the proposed project, approximately 64 trees would be removed to accommodate planned amenities, road realignments, and parking lots. However, the proposed project would include installation of new landscaping, including trees, shrubs, grasses, and groundcovers throughout the park. Landscaping would consist of native or drought-tolerant species for water conservation. The turf grass areas would require typical maintenance such as fertilizer and irrigation. An automatic irrigation system would be designed to minimize water use and be adapted to weather conditions.

2.3.3.3 Lighting

Additional LED pathway safety lighting, fixtures, and poles would be installed along pathways and parking lots for security lighting. New lights at the relocated basketball court would also be installed to accommodate use during the early evening hours.

2.3.3.4 Drainage and Utilities

The new recreation center would connect to existing utility infrastructure located within and in the immediate vicinity of the site. The proposed project includes the installation of a new 8-inch-diameter wastewater line that would connect to the existing 8-inch-diameter main line within West Kavanagh Avenue. The proposed project would also include the installation of new water lines connecting to the existing 6-inch-diameter water service line that currently traverses the site from north to south.

The proposed storm drainage infrastructure would discharge into an existing underground storm drain at the northeastern edge of the project site. Stormwater treatment is proposed using a combination of bioretention basins and modular wetlands. The number of drainage management areas would be determined as part of the final design. The bioretention basins would be vegetated with a layer of special soil and a layer of permeable rock. Overflow would be discharged from the stormwater treatment areas to the on-site storm drain system, which would connect to an existing 12-inch-diameter storm drain pipe at the northeast corner of the site.

2.3.3.5 Sustainability Features

The multi-generational recreation center would achieve Leadership in Energy and Environmental Design (LEED) certified at the Gold Level. The design of the building would maximize sustainable approaches (e.g., implementation of Zero Net Carbon [ZNC], use of solar energy, and/or use of battery storage) to meet peak demands. All project elements would be designed and constructed in compliance with the current version of the California Building Code (CBC). Proposed design features would include:

- Replacement of nearly 60 percent of the existing water-intensive turf grass planting with a drought-tolerant plant palette with drip irrigation and a weather-sensing smart controller;
- Biodiverse plantings to create pollinator pathways, seasonal interest, and long-term soil health;
- On-site stormwater run-off capture and treatment through biofiltration media;
- Planting of an additional 209 trees to manage stormwater, sequester carbon, provide shade, and support habitat for endemic species;
- LED outdoor lighting; and
- Use of high albedo paving materials to reduce the heat island effect.

2.3.4 Construction

Construction of the proposed project would commence in December 2023 and would extend for approximately 24 months. Construction hours would occur during daylight hours, from approximately 7:00 a.m. to 7:00 p.m. daily consistent with Policy P4. Under objective N-1.2 in the Noise Element of the City of Tracy General Plan. Construction staging would occur on the project site in areas not proposed to support planned improvements. Construction workers, equipment, and deliveries would access the site via West Grant Line Road.

The proposed recreation center at the site would be supported by conventional shallow foundations with interior concrete slabs on-grade. Pavements would likely consist of asphalt concrete (AC) and/or rigid Portland cement concrete (PCC) pavement. Project construction would require approximately 39,800 cubic yards of cut and approximately 24,600 cubic yards of fill, for a net export of approximately 15,200 cubic yards. It is anticipated that the maximum depth of construction-related excavations would be approximately 8 feet below surface for utility trenching and 5 feet below surface across the remainder of the project site.

2.4 PROJECT APPROVALS

A number of permits and approvals would be required for the proposed project. While the City is the Lead Agency for the project, other agencies also have discretionary authority related to the project and approvals. A list of these agencies and potential permits and approvals that may be required is provided in Table 2.4.A.

Table 2.4.A: Potential Permits and Approvals

Lead Agency	Potential Permits/Approvals
City of Tracy	● Project approval ● IS/MND adoption ● Provision of grading, demolition, construction, tree removal, parking, traffic, erosion, and Storm Water Pollution Prevention Plan permits and approvals ● Approval of water lines, water hookups, wastewater lines, wastewater hookups
Other Agencies	
San Joaquin County Fire Authority	Review/Approve fire truck access and site fire flow design
San Joaquin County Health Department	Review/Approve multi-generational kitchen facilities
Pacific Gas and Electric Company (PG&E)	Connection of electricity

Source Compiled by LSA Associates, Inc. (2023).
IS/MND = Initial Study/Mitigated Negative Declaration

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 3.0.

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

3.1 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Richard Joaquin
Signature

07/26/2023
Date

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4.0 CEQA ENVIRONMENTAL CHECKLIST

4.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a. Would the project have a substantial effect on a scenic vista? ***(Less Than Significant Impact)***

A scenic vista is generally defined as a public vantage point with an expansive view of a significant landscape feature. The project site is not designated as a scenic vista in the City of Tracy General Plan[6] or the San Joaquin County General Plan.[7] Although the City of Tracy General Plan does not specifically designate any scenic viewsheds within the city, as indicated in the General Plan Draft Environmental Impact Report (EIR), scenic vistas and views consist primarily of surrounding natural hillsides in the western portion of Tracy as well as views of agricultural land from highways and other roadways.[8]

The project site is located in an urban area, is surrounded by urban uses, and is currently developed with existing park facilities, which include a dog park, skate park, and children's play area. Due to the relative flat topography of the site and the surrounding urban development, the project site offers limited views of the surrounding landscape. The proposed project would renovate and relocate existing park features and construct a new, two-story multi-generational recreation center.

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6 City of Tracy. 2011. *City of Tracy General Plan.* February 1. Website: https://www.cityoftracy.org/our-city/departments/planning/general-plan-zoning-ordinance (accessed December 2022).

7 County of San Joaquin. 2016. *San Joaquin County General Plan.* December. Website: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/General%20Plan%202035/GENERAL%20PLAN%202035.pdf (accessed May 15, 2023).

8 City of Tracy. 2005. *City of Tracy General Plan Draft Environmental Impact Report*. Website: https://www.cityoftracy.org/our-city/departments/planning/general-plan-zoning-ordinance (accessed January 2023).

Implementation of the project would result in construction of a new two-story building on the site. The building height would be 34 feet and 8 inches to the top of the parapet, which is within the 35 foot height limit of two and one-half stories established in the City of Tracy Municipal Code.[9] With the photovoltaic array, the height would extend to 36 feet and 10 inches to the top of the support steel. However, the City of Tracy Municipal Code allows for mechanical equipment (e.g., photovoltaic panels, elevators, etc.) to exceed the building height limits. Therefore, the proposed building would be consistent with the maximum height limits established in the City's Municipal Code and would be generally consistent with surrounding urban development, which includes 1- to 2-story single-family and multi-family residential development, and 1-2-sotry commercial development. The existing park is primarily open with mature trees along the perimeter. The proposed project would not be readily visible from any scenic vista, nor would the project block existing public views of a scenic vista. Therefore, the proposed project would have a less-than-significant impact on publicly accessible scenic vistas.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ***(Less Than Significant Impact)***

There are two officially designated Scenic Highway segments in Tracy that are located approximately 5 miles and 12 miles, respectively, from the project site: (1) portions of Interstate 580 (I-580) between Interstate 205 (I-205) and Interstate 5 (I-5), and (2) I-5 between I-205 and the Stanislaus County border.[10] The project site is not visible from these roadways due to the distance from the site and intervening topography. Therefore, the proposed project would have no impact related to proximity to a State-designated scenic highway.

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ***(Less Than Significant Impact)***

The visual character of the project area is characterized by urban development. As outlined in Chapter 2.0, Project Description, the project site consists of the existing El Pescadero Park, which includes the Cora K-9 Dog Park, the El Pescadero Skate Park, a playground, basketball courts, parking, and an open lawn area. Under current conditions, areas of the park are occupied by homeless tents, their occupants, and dogs and sections of the project site, where the homeless tents had previously been situated, have been fenced off to allow vegetation to recover. Tracy Interfaith Ministries is located in the southwestern portion of the project site. A building owned by the City that is located in the southwestern corner of the project site is used for the City of Tracy Fire Support Services. The

9 City of Tracy. 2023. City of Tracy Code of Ordinances. Website: https://library.municode.com/ca/tracy/codes/code_of_ordinances (accessed May 2023).

10 California Department of Transportation (Caltrans). 2018. California State Scenic Highway Mapping System. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed May 2023).

project site is bound by West Kavanagh Avenue to the north, residential uses and North Elementary School to the east, West Grant Line Road to the south, and residential and commercial uses to the west.

The project site is located within an urbanized area. As noted in Chapter 2.0, Project Description, the project site is designated as Park on the City's General Plan Land Use Map[11] and is within the Low Density Residential (LDR) zoning district on the City's Zoning Map.[12] Development of the proposed project would consist of a 52,244 square-foot, two-story, multi-generational recreation center with a maximum height of approximately 35 feet, which would be located in the southeastern portion of the project site. In addition, existing park facilities (e.g., dog park, skate park, basketball courts) would be renovated and relocated. Additional improvements, including walkways, picnic areas, recreation facilities (e.g., courts, play areas), and landscaping, would be provided and would enhance the visual character of the project site, by providing newly renovated facilities and eliminating existing homeless encampments and associated refuse.

The Park land use designation refers to established public and private open spaces and recreational facilities (e.g., playing fields, miniparks, and neighborhood and community parks). The LDR Zone is intended to be utilized in the areas designated as low-medium density residential with a density range of 2.0 to 5.8 dwelling units per gross acre by the General Plan. Permitted uses within the LDR zone include single-family dwellings, accessory dwelling units, mobile homes on individual lots, crop and tree farming, and public parks, buildings, or schools. The proposed project would undergo Development Review consistent with Section 10.08.1260 of the City of Tracy Municipal Code. These existing requirements would include review of the physical improvements to the project site (e.g., overall building scale, massing, and design) to ensure compatibility and compliance with City requirements governing scenic quality. Compliance with the design standards and guidelines outlined for the Park land use designation and LDR Zone would ensure that the proposed project would preserve and enhance the desired character of the existing surrounding residential neighborhoods. Therefore, the proposed project would not conflict with applicable zoning or other regulations governing scenic quality, and this impact would be less than significant.

*d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? **(Less Than Significant Impact)***

The project site is located in a developed area. Streetlights, vehicle head and taillights on area roadways, and lighting associated with adjacent development are the existing sources of light and glare in the project area. As part of the proposed project, lighting would be installed for safety and night use (e.g., light-emitting diodes, fixtures, and poles) along pathways and parking lots. Additionally, new lighting would be installed for the relocated basketball court to accommodate early evening use.

Title 10.08.4000 of the Tracy Municipal Code requires that the site plan and final architectural design include the existing lighting standards and devices and be reviewed by the Development and

[11] City of Tracy. 2011. City of Tracy General Plan Land Use Map. February 1.

[12] City of Tracy. 2022. City of Tracy GIS Viewer. Website: https://www.cityoftracy.org/our-city/about-us/city-maps/gis-web-mapping-application (accessed December 20, 2022).

Engineering Services Department. Consistent with the policies outlined in the City's Municipal Code, each light fixture would be directed downward and away from adjoining properties and public right-of-way, so that no on-site light fixture would directly illuminate any off-site areas. With adherence to these requirements, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. This impact would be less than significant.

4.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
e. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
f. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
g. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
h. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
i. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ***(No Impact)***

The project site is currently developed and located within an urbanized area of Tracy. No agricultural uses are located within or adjacent to the project site. Additionally, the project area is classified as "Urban and Built-Up Land" by the State Department of Conservation;[13] therefore, the proposed project would not involve the conversion of agricultural land to a non-agricultural use. The proposed

[13] State of California, Department of Conservation. 2022. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/dlrp/ciff (accessed January 2023).

project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. No impact would occur.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The project site is zoned as LDR with a density range of 2.0 to 5.8 dwelling units per gross acre. In addition, the project site is not subject to a Williamson Act contract. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? ***(No Impact)***

The project site is currently developed with an existing park. Land use surrounding the project site is primarily residential with some lands zoned for commercial use. The project site is zoned as LDR, which does not allow development of the project site for timberland use. No parcels adjacent to or near the project site are zoned for forest land, timberland, or timberland production. The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland, nor would it result in the loss of forest land or conversion of forest land to non-forest uses. As such, **no impact** to forest land or timberland would occur.

d. Would the project result in the loss of forest land or conversion of forestland to non-forest use? ***(No Impact)***

Refer to Section 4.2.c above. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest uses. Therefore, the proposed project would have no impact related to loss of forest land or conversion of forest land.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ***(No Impact)***

Refer to Sections 4.2.a and 4.2.c above. The proposed project would not involve any other changes to the existing environment which, due to their location or nature, could result in conversion of Farmland to a non-agricultural use, or conversion of forest land to a non-forest use. No impact would occur.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a. Would the project conflict with or obstruct implementation of the applicable air quality plan? ***(Less Than Significant with Mitigation Incorporated)***

The City of Tracy is part of the San Joaquin Valley Air Basin (SJVAB), which is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD is responsible for air quality regulation within the eight-county San Joaquin Valley region. Both the State and the federal government have established health-based Ambient Air Quality Standards (AAQS) for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and suspended particulate matter ($PM_{2.5}$ and PM_{10}). The SJVAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards.

CEQA requires that certain proposed projects be analyzed for consistency with the applicable air quality plan. An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. To bring the SJVAB into attainment, the SJVAPCD adopted the 2022 Plan for the 2015 8-Hour Ozone Standard in December 2022 to satisfy Clean Air Act requirements and ensure attainment of the 70 parts per billion (ppb) 8-hour ozone standard.

To ensure the SJVAB's continued attainment of the U.S. Environmental Protection Agency (USEPA) PM_{10} standard, the SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007. SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) is designed to reduce PM_{10} emissions generated by human activity. The SJVAPCD adopted the 2018 plan for the 1997, 2006, and 2012 $PM_{2.5}$ standards to address the USEPA federal annual $PM_{2.5}$ standard of 12 µg/m^3, established in 2012.

For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In

addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. Implementation of Mitigation Measure AIR-1, described in Section 4.3.b. would further reduce construction dust impacts. As discussed below, long-term operational emissions associated with the proposed project, including area, energy, and mobile source emissions, would also not exceed SJVAPCD established significance thresholds. Therefore, impacts related to the proposed project's potential to conflict with or obstruct implementation of the applicable air quality plan would be less than significant with mitigation incorporated.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? ***(Less Than Significant with Mitigation Incorporated)***

The SJVAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SJVAPCD's non-attainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Short-Term Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, reactive organic gases (ROGs), directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Project construction activities would include site preparation, grading, building construction, paving, and architectural coating activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment.

Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SJVAPCD has implemented Regulation VIII measures for reducing fugitive dust emissions (PM_{10}). With the implementation of Regulation VIII measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROG, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

The SJVAPCD has established construction emissions thresholds on an annual basis as shown in Table 4.3.A below. Construction emissions for the proposed project were analyzed using the California Emissions Estimator Model (CalEEMod) version 2022.1. Construction of the proposed project is anticipated to begin in December 2023 and continue for a period of 24 months, ending in 2025. Based on the proposed project grading plans, approximately 39,800 cubic yards of soil would be cut and approximately 24,600 cubic yards of soil would be fill, for a net total of 15,200 cubic yards of soil cut, which was included in CalEEMod. Other precise details of construction activities are unknown at this time; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used. Construction-related emissions are presented in Table 4.3.A. CalEEMod output sheets are included in Appendix A.

Table 4.3.A: Project Construction Emissions (Tons per Year)

Construction Year	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023	<0.1	0.4	0.3	<0.1	0.1	0.1
2024	0.1	3.1	2.5	<0.1	0.3	0.1
2025	0.1	2.4	2.1	<0.1	0.2	0.1
Maximum Annual Construction Emissions	**0.1**	**3.1**	**2.5**	**<0.1**	**0.3**	**0.1**
SJVAPCD Significance Threshold	10.0	10.0	100.0	27.0	15.0	15.0
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (May 2023).
CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gas
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxides

As shown in Table 4.3.A, construction emissions would not exceed the SJVAPCD threshold for annual construction emissions for the proposed project. In addition to the construction period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction to reduce construction fugitive dust impacts to a less than significant level. These measures are required by Mitigation Measure AIR-1, as follows:

Mitigation Measure AIR-1: Consistent with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden).
- Following the addition of materials to, or the removal of materials from, the surface of out-door storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.

Implementation of the fugitive dust control measures outlined in Mitigation Measure AIR-1 would ensure that the proposed project complies with Regulation VIII and further reduces the short-term construction period air quality impacts. Therefore, with implementation of Mitigation Measure AIR-1, construction of the proposed project would result in a less-than-significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State AAQS.

Long-Term Operational Emissions. Long-term air pollutant emission impacts associated with the proposed project are those related to mobile sources (e.g., vehicle trips), energy sources (e.g.,

natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment).

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The proposed recreational center would be designed to maximize sustainable approaches, such as the implementation of Zero Net Carbon (ZNC), the use of solar energy and/or the use of battery storage to meet peak demands. The proposed recreational center would also be Gold LEED certified, which would help reduce energy consumption associated with the project by implementing best practices for energy use, water use, indoor environmental quality, material selection, and site and location within the surrounding community. However, no reductions were accounted for in the analysis to reflect LEED certification since the precise features and associated energy savings have not yet been determined.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment and the use of consumer products.

Emission estimates for operation of the proposed project were calculated using CalEEMod. Model results are shown in Table 4.3.B. Trip generation rates for the proposed project were based on the project's trip generation estimate, as identified in Section 4.17, Transportation. As discussed in Section 4.17, Transportation, the proposed project would generate approximately 1,760 average daily trips.

The primary emissions associated with the proposed project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the proposed project; emissions are released in other areas of the Air Basin. The annual emissions associated with project operational trip generation and area sources are identified in Table 4.3.B.

Table 4.3.B: Project Operation Emissions (Tons per Year)

	ROG	NO_X	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source Emissions	1.2	1.1	7.8	<0.1	0.6	0.1
Area Source Emissions	0.3	<0.1	0.5	<0.1	<0.1	<0.1
Energy Source Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Operation Emissions	**1.5**	**1.1**	**8.3**	**<0.1**	**0.6**	**0.1**
SJVAPCD Significance Threshold	10.0	10.0	100.0	27.0	15.0	15.0
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (May 2023).
CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gas
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxides

The results shown in Table 4.3.B indicate the proposed project's operational emissions would not exceed the significance criteria for annual CO, NO_x, ROG, SO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the proposed project region is in non-attainment under an applicable federal or State AAQS. As a result, impacts would be less than significant with mitigation incorporated.

c. Would the project expose sensitive receptors to substantial pollutant concentrations? ***(Less Than Significant Impact)***

Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. The closest sensitive receptors are the residences located west and southeast, approximately 10 feet from the project site boundary.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following the Regulation VIII, Fugitive PM_{10} Prohibitions as required by Mitigation Measure AIR-1. Project construction emissions would be below the SJVAPCD significance thresholds. Once the proposed project is constructed, the proposed project would not be a significant source of long-term operational emissions. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during project operation. This impact would be less than significant.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? **(Less Than Significant Impact)**

During construction, the various diesel-powered vehicles and equipment in use on the site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore

considered less than significant. In addition, the proposed uses that would be developed within the project site are not expected to produce any offensive odors that would result in frequent odor complaints. The proposed project would not create objectionable odors affecting a substantial number of people during project construction or operation, and this impact would be less than significant.

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Most of the project site consists of grass fields, playground structures, parking lots, and landscaping, including trees. Trees observed include mostly ornamental trees, such as lodgepole pine (*Pinus contorta*), deodar cedar (*Cedrus deodara*), and black locust (*Robinia pseudoacacia*). Nonnative grasses and forbs were growing in the centrally located field and in patches underneath the trees.

The project site is located within a developed area with planted trees, grass fields, and patches of ruderal vegetation. Trees on the project site provide nesting habitat for bird species, such as California scrub-jay (*Aphelocoma californica*) and Anna's hummingbird (*Calypte anna*). Some birds could also nest in the eaves of the buildings. The terra cotta roofing of the existing Tracy Interfaith Ministries building provides suitable nesting habitat for house sparrow (*Passer domesticus*).

Wildlife observed during the field survey consists of mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), northern mockingbird (*Mimus polyglottos*), western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), house sparrow (*Passer domesticus*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), dark-eyed junco (*Junco hyemalis*), white-crowned sparrow (*Zonotrichia leucophrys*), and yellow-rumped warbler (*Setophaga*

coronate). Bats could roost in the trees and buildings, but no bats or sign of roosting bats were observed during the field survey. The following analysis assumes many additional species are likely to occur on the project site throughout the year.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(Less Than Significant with Mitigation Incorporated)***

Special-status species are defined as follows:

- Species that are listed, formally proposed for listing, or designated as candidates for listing as threatened or endangered under the Federal Endangered Species Act;
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act;
- Plant species on California Rare Plant Rank Lists 1A, 1B, and 2 in the CNPS Inventory of Rare and Endangered Plants;
- Animal species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW);
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the *CEQA Guidelines*; and
- Species considered being a taxon of special concern by the relevant local agencies.

To identify special-status plant and wildlife species known to occur or potentially occurring in the project site vicinity, the following resources were queried: (1) California Department of Fish and Wildlife California, Natural Diversity Database (CNDDB[14]) for species records in the project vicinity; (2) California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California[15] for records of special-status plant species in the United States Geological Survey (USGS) *Union Island* 7.5-minute quadrangle; and (3) United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) on-line system.[16]

A reconnaissance-level field survey was conducted at the project site on February 21, 2023. During this survey, preliminary information on vegetation types, wildlife habitat, and potential jurisdictional features (e.g., wetlands) was collected.

14 California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database, commercial version. February.

15 California Native Plant Society (CNPS). 2023. Rare Plant Program, Rare Plant Inventory (online edition, v9.5). Website: https://www.rareplants.cnps.org (accessed February 20, 2023).

16 United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). February 20.

The scientific and vernacular nomenclature for the plant and wildlife species used in this analysis are from the following standard sources: (a) Plants[17] and updates listed on the Jepson Herbarium website,[18] (b) amphibians and reptiles,[19] (c) birds through 2022,[20] and (d) mammals.[21]

Special-Status Plants. The project site is completely developed, does not contain any natural habitat, and therefore does not provide suitable habitat for any special-status plants.

Special-Status Wildlife. Based on the results of the database search and literature review and as shown in Table 4.4.A, four special-status species were evaluated for the proposed project: Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia*), Townsend's western big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). Based on the results of the reconnaissance-level field survey, two of the four aforementioned special-status wildlife species were determined to be potentially present on the project site due to the presence of suitable habitat: Townsend's western big-eared bat (a California Species of Special Concern) and pallid bat (also a California Species of Special Concern).

17 Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley.

18 University of California, Berkeley. 2023. Jepson Herbarium website: https://ucjeps.berkeley.edu/eflora/ (accessed February 28, 2022).

19 Crother, B.I. (ed.). 2017. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, pp. 1-102. SSAR Herpetological Circular No. 43.

20 American Ornithologists' Union (AOU). 1998. Checklist of North American Birds. 7th Edition. American Ornithologists' Union, Washington, D.C.

21 Bradley, R.D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A. Cook, R.C. Dowler, D.J. Schmidly, F.B. Stangl, Jr., R.A. Van Den Bussche, and B. Würsig. 2014. Revised Checklist of North American Mammals North of Mexico, 2014. Occasional Papers, Museum of Texas Tech University No. 237.

Table 4.4.A: Special-Status Species Evaluated for the Project

Species	Status[1]	Habitat/Blooming Period	Discussion
Birds			
Swainson's hawk *Buteo swainsoni*	ST	Open grasslands, meadows, or agriculture fields. Requires tall lone trees for nesting and perching.	No suitable nesting habitat is present on the project site. Trees are relatively close together.
Western burrowing owl *Athene cunicularia*	SSC	Dry open grasslands and meadows. Requires mammal ground burrows for nesting.	No suitable habitat or ground burrows observed on the project site.
Mammals			
Townsend's western big-eared bat *Corynorhinus townsendii*	SSC	Found in wooded areas with caves or old buildings for roost sites.	Suitable roosting and hibernating habitat may be present in buildings along the southwest corner of the project site; could forage over the site.
Pallid bat *Antrozous pallidus*	SSC	Roosts in caves, tunnels, buildings, under bridges, and in tree hollows; forages over variety of habitats.	Suitable roosting habitat may present in buildings along the southwest corner of the project site; this bat species could occasionally occur as a transient while foraging at night. No trees with large hollows observed during the field survey.

Source: Compiled by LSA Associates Inc. (2023).

[1] Status Codes:
SSC = California Species of Special Concern
ST = State Listed as Threatened

Two special-status wildlife species are known to occur or have the potential to occur at the project site (see Table 4.4.A). This section describes the types of impacts that could affect these special-status wildlife species and the associated mitigation measures that would be implemented to minimize and mitigate impacts. Special-status wildlife species could be impacted both directly and indirectly during construction activities. The potential for protected resources to be impacted by construction of the proposed project are a function of the likelihood the species is present when the project is constructed, as well as the type and duration of construction activities. Another factor is the sensitivity of the species or resource to disturbance. For example, roosting bats may not react to construction activities near its roost during the day, whereas a raptor may abandon its nest if construction is within 100 feet from the nest.

Nesting Birds. The site contains a few large mature trees or shrubs that may provide some shelter and nesting habitat for resident and migratory bird species occurring in the region (e.g., scrub jay, northern mocking bird, American crow, collared dove, and mourning dove). Although the species likely to use the project site are considered common and widespread, their active nests are protected from removal by a variety of State and federal laws, including California Fish and Game Code Sections 3503, 3503.5, and 3513 and the Migratory Bird Treaty Act (MBTA).

If construction would be conducted during the nesting season, potential disturbance or loss of nesting birds protected under California Fish and Game Code Sections 3503, 3503.5, and 3513 and the MBTA could occur as a result of construction activity. This impact would be considered significant. Implementation of Mitigation Measure BIO-1 would reduce this impact to nesting and breeding birds to less than significant by avoiding the nesting season, identifying the presence or absence of active migratory bird nests, and if present, preventing the loss of eggs or young. With implementation of Mitigation Measure BIO-1, this impact would be less than significant.

Mitigation Measure BIO-1: Prior to construction activities occurring during the nesting bird season (February 1 through August 31), pre-construction activity surveys for nesting birds shall be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. Surveys shall be conducted no more than 7 days prior to the initiation of construction activities. During this survey, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ground, and structures) in the impact area plus a surrounding 300-foot buffer for nests. If removal of potential nesting substrate or project grading will occur during more than one nesting season, or in different parts of the project site in phases over the course of a single season, then additional pre-activity surveys must be performed within 7 days prior to initiation of work in any particular area. If the pre-construction activity survey does not identify the presence of any active nests on or within 300 feet of the site, construction activities may proceed.

If nests known to have eggs or young, or that cannot be confirmed to be inactive or to lack eggs or young, are found, or adults are demonstrating nesting behavior, a qualified biologist shall establish an appropriate construction-free buffer around each nest. Generally, a buffer of 300 feet for raptors or 100 feet for songbirds is adequate to avoid causing nest abandonment. The buffer shall remain in place until the qualified biologist has confirmed that the nest is no longer active.

If less than a 100-foot nest buffer is necessary and determined to be appropriate for a particular nest or nests, a qualified biologist shall monitor the nest(s) before construction to document baseline nesting behavior, and then monitor the nest during construction to ensure nesting birds are not exhibiting signs of stress and territorial behavior. If signs of stress are observed during the monitoring, construction activities shall cease or the buffer shall be increased, as determined by a qualified biologist, to a sufficient distance such that the nesting birds are no longer exhibiting signs of stress.

To prevent encroachment, the buffer shall be clearly marked for avoidance. The established buffer shall remain in effect until the young have fledged or the nest is no longer active as confirmed by the biologist.

Implementation of Mitigation Measure BIO-1 requires avoiding tree removal and other work activities during the nesting season and, if possible, conducting pre-construction surveys for nesting migratory birds prior to any work during the nesting season, as well as additional measures to ensure avoidance of any “take”. Implementation of Mitigation Measure BIO-1 would reduce potential

construction-related impacts, both permanent and temporary in nature, on nesting migratory birds to a less-than-significant level with mitigation incorporated.

Pallid Bat and Roosting Bats. The pallid bat is a California Species of Special Concern that could roost and/or forage within the site. Pallid bats roost in caves, tunnels, and occasionally buildings and hollow trees. Suitable roosting habitat may be present in the structures and larger trees on and adjacent to the site. No bat roosts or signs of roosting bats were observed in the on-site structure or trees during the reconnaissance-level survey.

Bats, including special-status bats such as the pallid bat, could roost in the structures and large trees in the project area and forage on the project site. Roosting bats could be disturbed, killed, or injured by tree removal and/or building demolition activities, if present in construction areas. Disturbance of roosting special-status bats would be a potentially significant impact.Implementation of the following mitigation measure would reduce potential impacts to roosting bats to a less-than-significant level. **Mitigation Measure BIO-2:** Prior to any tree removal, a qualified biologist shall conduct a habitat assessment for bats within the project site. The habitat assessment shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark for colonial species, and suitable canopy for foliage roosting species). If suitable habitat trees are found, they shall be flagged or otherwise clearly marked and tree trimming or removal shall not proceed unless the following occur:

In trees with suitable habitat, presence of bats is presumed, or documented during the surveys described below and removal using a two-step removal process detailed below occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15; or

After a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establish absence of roosting bats.

Two-step tree removal shall be conducted over two consecutive days as follows:

- The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices, and deep bark fissures shall be avoided.

- The second day the entire tree shall be removed.

Implementation of Mitigation Measure BIO-2 would require a focused habitat assessment, pre-construction survey, tree and structure removal (as needed), and measures for bat exclusion (as needed). Implementation of Mitigation Measure BIO-2 would reduce potential construction-related

impacts, both permanent and temporary in nature, on special-status bats to a less-than-significant level with mitigation incorporated.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(No Impact)***

The CDFW tracks the occurrences of natural plant communities that are of limited distribution Statewide or within a county or region and that are often vulnerable to environmental effects of projects. *A Manual of California Vegetation, Second Edition*,[22] lists vegetation alliances with State rarity rankings of S1-S3 as considered "highly imperiled" and project impacts to "high-quality occurrences" of these alliances could be considered significant under CEQA. Most types of wetlands, including alkali wetlands, and riparian communities are also considered sensitive natural communities due to their limited distribution in California. The CNDDB does not identify any sensitive natural communities on the site,[23] and no sensitive plant communities were observed during the reconnaissance-level survey. No riparian habitat or other sensitive natural communities occur at the project site. Therefore, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community**.** No impact would occur.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ***(No Impact)***

The project site does not contain any wetlands or other potential jurisdictional features. Therefore, the proposed project would not have a substantial adverse effect on State or federally protected wetlands. No impact would occur.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(Less Than Significant Impact)***

Wildlife Movement Corridors. Wildlife movement includes migration (i.e., usually annual roundtrip), inter-population movement (i.e., long-term genetic flow), and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations. Landscape elements that facilitate local and/or regional wildlife movement include stream drainages, canyons, ridges, or other prominent natural or man-made landscape features.

The project site is currently developed with an existing park and is surrounded by urban development. Wildlife that currently move through or around the project site would likely continue

[22] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*. Second edition. California Native Plant Society Press, Sacramento.

[23] California Department of Fish and Wildlife. 2023. op. cit.

to move through or around the site during and after construction of the project since most of the species that likely occur in the area are generalists that are adept at moving through urban landscapes. Therefore, impacts to wildlife movement corridors would be less than significant.

Nursery Sites. The project site does not contain native wildlife nursery sites (e.g., heron rookeries or salmonid spawning areas). Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce potential impacts to any bat roosts or bird nests, if present, to a less-than-significant level.

Given that the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, related impacts would be less than significant.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(No Impact)***

Chapter 7.08 of the City Municipal Code protects trees and shrubs growing within the City's public right-of-way. The City right-of-way refers to the portion of the public street right-of-way between the curb, or curb line, and the adjacent property line used for the purpose of planting and maintaining City street trees. A permit from the City would be required for the removal of any trees and shrubs within the City right-of-way. Since the proposed project would not impact any street trees within the City right-of-way, no permits would be required. The proposed project would not conflict with any local policies or ordinances protecting biological resources. No impact would occur.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ***(No Impact)***

The proposed project is not located within any approved local, regional, or State conservation plan. Therefore, the project would not conflict with any approved local, regional, or State habitat conservation plan. No impact would occur.

4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

*a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? **(Less Than Significant with Mitigation Incorporated)***

CEQA defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources (California Register);
- Listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k);
- Identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or
- Determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and *CEQA Guidelines* Section 15064.5[a]).

The California Register defines a "historical resource" as a resource that meets one or more of the following criteria: (1) associated with events that have made a significant contribution to the broad patterns or local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or (4) has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation. Under CEQA, historical resources can include pre-contact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, and historic districts.

A Cultural Resources Study[24] was conducted for the proposed project that consisted of background research and a field survey. The results of the study are summarized below.

[24] LSA Associates, Inc. 2023. Cultural Resource Study for the El Pescadero Park & Multi-Generational Recreation Center Project, Tracy, San Joaquin County, California (LSA Project No. LPX2204). April.

On January 24, 2023, the staff of the Central California Information Center (CCaIC) conducted a records search (#12423L) of the project site and vicinity. The CCalC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resource records and reports for San Joaquin County. As part of the background research, local and State inventories for cultural resources were also reviewed, and the Native American Heritage Commission (NAHC) was contacted. No recorded cultural resources were identified within the project site or within a 0.5-mile radius of the project site.

LSA submitted a request to the NAHC to search the Sacred Lands File (SLF) for Native American cultural resources that may be impacted by the proposed project. The NAHC maintains the SLF database and is the official State repository of Native American sacred-site location records in California. Pricilla Torres-Fuentes, NAHC Cultural Resources Analyst, responded to the SLF search request on February 28, 2023, stating that the results were negative and that there were no known Native American cultural resources in the project site.

A pedestrian survey of the project site was conducted on February 21, 2023. No archaeological evidence was observed during the field survey.

No archaeological resources were identified within the project site during the course of the Cultural Resources Study. Background research indicated that development of the project site began in the late 1960s or early 1970s after the project site was designated as El Pescadero Park. By 1974, the extant park entrance road and parking lot had been constructed, as well as an intermittent pond and an unidentified structure in the center of the park, and a pathway extending through the center and along the eastern side of the park that connected the parking lot and West Kavanagh Avenue. The pond, structure, and early pathway were removed between 1993 and 2005 and replaced by the current configuration of park elements.

Although the Cultural Resources Study did not yield historically significant resources, there is a possibility that construction of the proposed project could impact as-yet-unrecorded subsurface deposits on the project site. Should archaeological deposits be encountered during project ground disturbance, a substantial adverse change in the significance of a historical resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired (*CEQA Guidelines* Section 15064.5(b)(1)). Implementation of Mitigation Measure CULT-1 would reduce potential impacts to historical resources to a less-than-significant level.

Mitigation Measure CULT-1: If deposits of pre-contact or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected, and the qualified archaeologist should assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological materials can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and

charcoal, shellfish remains, bones, and other cultural materials); and stone-milling equipment (e.g., mortars, pestles, and handstones). Pre-contact archaeological sites often contain human remains. Historic-period materials can include wood, stone, concrete, or adobe footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.

Impacts to archaeological cultural resources shall be avoided by project activities. If such deposits cannot be avoided, the City of Tracy (City) should, in consultation with local California tribal groups, evaluate the significance of the find under the California Environmental Quality Act (CEQA). If the find is determined to qualify as a historical resource (Public Resources Code [PRC] Section 21084.1) or unique archaeological resource (PRC Section 21083.2), impacts to the deposit will need to be avoided or such impacts must be treated. If treatment is required, a plan shall be developed to mitigate, avoid, or minimize impacts to cultural resources. Treatments may consist of, but are not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparing a report of findings; accessioning recovered archaeological materials at an appropriate curation facility; and community outreach. All reports produced as part of the evaluation and treatment of cultural resources identified during the project shall be submitted to the City for review and comment. All final documents shall be submitted to the Central California Information Center (CCaIC).

With implementation of Mitigation Measure CULT-1, which requires work stoppage in the event of an archaeological discovery, potential impacts to archaeological historical resources would be reduced to a less-than-significant level with mitigation incorporated.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ***(Less Than Significant with Mitigation Incorporated)***

According to the *CEQA Guidelines*, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (*CEQA Guidelines* Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if they qualify as "unique archaeological resources" (California PRC Section 21083.2).

Archaeological deposits identified during project construction would be treated by the City—in consultation with a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology—in accordance with Mitigation Measure CULT-1. With implementation of Mitigation Measure CULT-1, identified above, impacts to archaeological resources would be reduced to a less-than-significant level with mitigation incorporated.

c. Would the project disturb any humans remains, including those interred outside of formal cemeteries? ***(Less Than Significant Impact)***

Based on previous archaeological investigation and analysis, there is a low potential for the disturbance of archaeological cultural resources or human remains at the project site. However, if human remains are encountered at the project site, State Health and Safety Code Section 7050.5 and *CEQA Guidelines* Section 15064.5(e)(1) state that no further disturbance shall occur to the area of the find until the County Coroner has made a determination of origin and disposition of the human bone pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately and shall make a determination within two working days of being notified. If the remains are determined to be Native American, the County Coroner shall notify the NAHC by phone within 24 hours, and the NAHC shall then immediately determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment of the remains within 48 hours of being granted access to the site. MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

Compliance with Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98 regarding the treatment of human remains would ensure that potential impacts to human remains would be less than significant.

4.6 ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

*a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? **(Less Than Significant Impact)***

The discussion and analysis provided below is based on data included in the CalEEMod output, which is included in Appendix A.

Construction-Period Energy Use. The anticipated construction schedule assumes that the proposed project would be built over approximately 24 months. The proposed project would require grading, site preparation, and building activities during construction.

Construction of the proposed project would require energy for the manufacture and transportation of construction materials, preparation of the site for demolition and grading activities, and construction of the residences. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. Construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Therefore, the proposed project would result in a less-than-significant impact during project construction.

Operational Energy Use. Operational energy usage is typically associated with natural gas use, electricity consumption, and fuel used for vehicle trips. As described in Chapter 2.0, Project Description, the proposed project would include the construction of a new recreation center and the renovation of El Pescadero park and dog park.

The proposed multi-generational recreation center would be designed to Gold LEED Standards, which would further reduce energy associated with the project by implementing best practices for energy use, water use, indoor environmental quality, material selection, and site and location within the surrounding community. However, no reductions were accounted for in the analysis to reflect LEED since the precise features and associated energy savings have not yet been determined. In addition, the proposed project would maximize sustainable approaches, such as Zero Net Carbon, solar energy and/or battery storage, which was included in CalEEMod. The proposed project would be constructed using energy efficient modern building materials and construction practices, and the

proposed project would also use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). The proposed project would also be constructed to meet the 2022 Title 24 standards. Therefore, based on the nature of the proposed project and the building design features, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

In addition, the proposed project would result in energy usage associated with gasoline to fuel project-related trips. Based on the CalEEMod analysis, the proposed project would result in approximately 4,175,094 vehicle miles traveled (VMT) per year. The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2020, the year for which the most recent data is available.[25] Therefore, using the average fuel economy estimates for 2020 the proposed project would result in the consumption of approximately 144,646 gallons of gasoline per year and approximately 104,593 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 92 million gallons of diesel and approximately 286 million gallons of gasoline will be consumed from vehicle trips in San Joaquin County in 2023. Therefore, gasoline and diesel fuel demand generated by vehicle trips associated with the proposed project would increase the annual fuel use in San Joaquin County by approximately 0.05 percent for gasoline fuel usage and 0.1 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Therefore, the proposed project would result in a less-than-significant impact during project operation. As such, the proposed project would not result in a potential significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Impacts would be less than significant.

*b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? **(Less Than Significant Impact)***

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

[25] U.S. Department of Transportation (DOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles (accessed May 2023).

The most recently CEC adopted energy reports are the 2021 Integrated Energy Policy Report[26] and 2022 Integrated Energy Policy Report Update.[27] The Integrated Energy Policy Reports provide the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The Integrated Energy Policy Reports cover a broad range of topics, including implementation of Senate Bill 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to Senate Bill 1383), updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency.

As indicated above, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the CEC's Integrated Energy Policy Reports. Impacts would be less than significant, and no mitigation is required.

[26] California Energy Commission, 2021. *2021 Integrated Energy Policy Report.* California Energy Commission. Docket # 21-IEPR-01. (accessed May 2023)

[27] California Energy Commission, 2022. 2022 Integrated Energy Policy Report Update. California Energy Commission. Docket # 22-IEPR-01.

4.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

*i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. **(No Impact)***

The State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972, requiring the State Geologist to delineate Earthquake Fault Zones (EFZs) along known active faults that have high potential for fault rupture. Active faults are defined as a fault that has surface displacement within the last 11,000 years.[28] State regulations prohibit habitable structures from being sited within 50 feet of an active fault. The project site is not located within or adjacent to an Alquist-Priolo Earthquake

[28] State of California. 2023. Department of Conservation. Alquist-Priolo Earthquake Fault Zones. Website: https://www.conservation.ca.gov/cgs/alquist-priolo (accessed January 19, 2023).

Fault Zone.[29] Therefore, fault rupture through the site is not anticipated, and the proposed project would not directly or indirectly cause substantial adverse effects related to fault rupture. No impact would occur.

ii. Strong seismic ground shaking? ***(Less Than Significant Impact)***

The project site is located in an area of low to moderate seismicity and there are no known active faults that cross the project site. The nearest earthquake fault zoned as active by the State of California Geological Survey is the Vernalis Fault, which is located approximately 2.7 miles northeast of the project site. Other faults capable of producing ground shaking at the project site include the Black Butte Fault (5.6 miles southwest of the site), Midway Fault (7.0 miles southwest of the site), San Joaquin Fault (8.7 miles southwest of the site), Corral Hollow-Carnegie Fault (14.2 miles southwest of the site), and Greenville Fault (15.5 miles southwest of the site). Any one of these faults could generate an earthquake capable of causing strong ground shaking at the subject site. While this area is not within an area of high seismic activity, relatively large earthquakes are known to occur nearby along the margins of the Central Valley; the greatest potential for significant ground shaking would occur along the Calaveras, Hayward, San Andreas, and Greenville Faults.

Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity (MMI) scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.[30]

The most significant adverse impact associated with strong seismic shaking is potential damage to structures and improvements and possible injury or loss of life. The proposed project would renovate and relocate existing park features and construct a new, two-story multi-generational recreation center. Implementation of the proposed project would increase the use of the project site and result in the construction of improvements in areas subject to seismic shaking. The risk of ground shaking impacts is reduced through adherence to the design and materials standards set forth in building codes. The City of Tracy has adopted the 2022 California Building Code (CBC) (Title 24, Part 2 of the California Code of Regulations [CCR]), which provides for stringent construction requirements on projects in areas of high seismic risk. The design and construction for the proposed project would be required to conform with, or exceed, current best standards for earthquake-resistant construction in accordance with the most recent CBC adopted by the City and with the generally accepted standards of geotechnical practice for seismic design in Northern California.

[29] California Geological Survey. 2021. California Earthquake Hazards Zone Application. Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed January 19, 2023).

[30] United States Geological Survey (USGS). n.d. The Modified Mercalli Intensity Scale. Website: https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale (accessed January 19, 2023).

Adherence to the 2022 CBC requires a site-specific geotechnical investigation to be performed for the proposed project to evaluate soil stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness, as well as a geotechnical report prepared to provide recommendations on foundation type and design criteria.

In addition, the Safety Element of the City of Tracy General Plan includes several goals, objectives, and policies to reduce the risks to the community from earthquakes and other geologic hazards. In particular, the following policies would apply to the project site:

- **SA-1.1, Policy P2:** Geotechnical reports shall be required for development in areas where potentially serious geologic risks exist. These reports should address the degree of hazard, design parameters for the project based on the hazard, and appropriate mitigation measures.

- **SA-1.2, Policy P1:** All construction in Tracy shall conform to the California Building Code and the Tracy Municipal Code, including provisions addressing unreinforced masonry buildings.

Compliance with the requirements of the CBC and the City of Tracy General Plan policies identified above would ensure that impacts associated with seismic hazards would be less than significant.

iii. Seismic-related ground failure, including liquefaction? ***(Less Than Significant Impact)***

Liquefaction is the transformation of loose, fine-grained sediment to a fluid-like state similar to quicksand. This phenomenon occurs due to strong seismic activity and lessens the soil's ability to support a structural foundation. The primary factors affecting the possibility of liquefaction in soil are: (1) intensity and duration of earthquake shaking; (2) soil type and relative density; (3) overburden pressures; and (4) depth to groundwater. Soil most susceptible to liquefaction is clean, loose, fine-grained sands and non-plastic silts that are saturated.

The California Geological Survey (CGS) has mapped Seismic Hazard Zones that delineate areas susceptible to liquefaction and/or landslides for which proposed new developments are required to conduct additional investigations to determine the extent and magnitude of potential ground failure. According to CGS data, the project site is located in an area that has not been evaluated for liquefaction hazards. The proposed project would be designed and constructed consistent with the most current earthquake resistance standards for Seismic Zone 3 in the CBC, which includes specifications for site preparation (e.g., compaction requirements for foundations). The potential for substantial adverse effects to the project due to seismic-related ground failure, including liquefaction, would therefore be less than significant.

iv. Landslides? ***(Less Than Significant Impact)***

The project site is relatively flat, does not have any substantial slopes, and is not adjacent to an area with substantial slopes. The project site is not located along riverbanks, foothills, or mountain terrain that would make it susceptible to landslides. As such, the project site is exposed to little or no risk from landslides. This impact would be less than significant.

b. Would the project result in substantial soil erosion or the loss of topsoil? ***(Less Than Significant Impact)***

Grading and earthmoving during project construction has the potential to result in erosion and loss of topsoil. The potential for soil erosion exists during the period of earthwork activities between the time when earthwork is completed and new vegetation is established or hardscape is installed. Exposed soils could be entrained in stormwater runoff and transported off the project site. Because the proposed project would involve over 1 acre of land disturbance, it would be required to comply with the Construction General Permit,[31] which requires preparation and implementation of a Stormwater Pollution and Prevention Plan (SWPPP) prior to any ground-disturbance activities. Although designed primarily to protect stormwater quality, the SWPPP would provide the details of the erosion control measures to be applied on the project site during the construction period, including Best Management Practices (BMPs) for erosion control that are recognized by the Regional Water Quality Control Board (RWQCB). Additional details regarding the SWPPP are provided in Section 4.10, Hydrology and Water Quality. Compliance with the requirements of the Construction General Permit would ensure that the proposed project would result in less-than-significant impacts related to soil erosion or the loss of topsoil.

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ***(Less Than Significant Impact)***

The proposed project would be designed and constructed in accordance with standard engineering practices and the CBC. The project site is not anticipated to become unstable as a result of the proposed project, or potentially result in on- or off-site landslides, liquefaction, or lateral spreading. Further, compliance with the CBC and City of Tracy General Plan policies, which require preparation of a site-specific geotechnical evaluation and implementation of proposed geotechnical recommendations, would ensure that the proposed project would not result in a geologic hazard from landslide, lateral spreading, subsidence, liquefaction, or collapse. This impact would be less than significant.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? ***(Less Than Significant Impact)***

Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percentage of change in the soil volume. Soils underlying the project site are composed of Capay-Urban land complex, 0 percent

[31] State Water Resources Control Board (SWRCB), Division of Water Quality. 2022. National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order WQ 2022-0057-DWQ, NPDES No. CAS000002 Website: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0057-dwq.pdf (accessed February 2023).

slopes, according to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey.[32]

The Capay series consists of very deep, moderately well and somewhat poorly drained soils that formed in fine-textured alluvium derived from mostly sandstone and shale. According to the San Joaquin County District Viewer, soils on the project are classified as having very high soil expansion potential. As described above, the proposed project would be required to comply with the CBC and the geotechnical recommendations identified in the site-specific geotechnical investigation, as required by the CBC and the City of Tracy General Plan. Compliance with geotechnical recommendations and the CBC during design and construction would ensure that the potential impacts associated with expansive soils would be less than significant.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ***(No Impact)***

The proposed project would connect to the existing wastewater conveyance system. On-site treatment and disposal of wastewater is not proposed for the project; therefore, the proposed project would have no impacts associated with soils incapable of supporting alternative wastewater disposal systems.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***(Less Than Significant with Mitigation Incorporated)***

There are no known paleontological resources located in the project area. However, development of the proposed project could result in the discovery and disturbance of previously unknown or undiscovered paleontological resources. While fossils are not expected to be discovered during construction, it is possible that significant fossils could be discovered during excavation activities. Even in areas with a low likelihood of occurrence, fossils encountered during excavation could be inadvertently damaged.

If a unique paleontological resource is discovered, the impact to the resource could be substantial. Mitigation Measure GEO-1 would require that a qualified paleontologist monitor grading and excavation activities, and a paleontologist be notified if paleontological resources are found. If any scientifically important large fossil remains are uncovered, the paleontologist would have the authority to divert heavy equipment away from the fossil site. With implementation of Mitigation Measure GEO-1 and consistency with City ordinances, policies, and goals, impacts associated with paleontological resources would be less than significant.

Mitigation Measure GEO-1: **Paleontological Resources.** If paleontological resources are encountered during the course of ground disturbance, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for scientific significance.

[32] United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). n.d. Web Soil Survey. Website: websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed February 2023).

If determined to be significant, the fossil shall be collected from the field. The paleontologist may also make recommendations regarding additional mitigation measures, such as paleontological monitoring. Scientifically significant resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. If scientifically significant paleontological resources are collected, a report of findings shall be prepared to document the collection.

Implementation of Mitigation Measure GEO-1 would reduce the level of the potential impact through the identification of paleontological resources during construction; the evaluation of unanticipated discoveries; and the recovery of significant paleontological data from those resources that warrant such investigation. This process would recover scientifically consequential information from at-risk resources to offset their potential loss. Therefore, with implementation of Mitigation Measure GEO-1, this impact would be less than significant with mitigation incorporated.

4.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Greenhouse gas emissions (GHGs) are present in the atmosphere naturally, and are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. However, over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global climate change. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons
- Perfluorocarbons
- Sulfur Hexafluoride

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Section 15064.4 of the State CEQA Guidelines states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Neither the City of Tracy, nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, this analysis evaluates the GHG emissions based on the project's design elements consistent with the Bay Area Air Quality Management District (BAAQMD) GHG thresholds. The BAAQMD GHG thresholds would be applicable to projects in the SJVAPCD because the thresholds were developed using the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife (2015) (62 Cal.4th 204),* which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals.[33] As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223). Applying this approach, the BAAQMD has analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045.[34] As such, since the BAAQMD's GHG thresholds are based on the State's GHG reduction goals, these thresholds would be applicable to the proposed project.

[33] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

[34] Ibid.

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***(Less Than Significant with Mitigation Incorporated)***

The following includes a discussion of the project's potential impact related to the release of GHG emissions for both construction and project operation.

Construction Emissions. Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The City of Tracy does not have an adopted threshold of significance for construction related GHG emissions. As mentioned above, emissions that would occur during construction were quantified and are disclosed for informational purposes. Using CalEEMod, it is estimated that construction of the proposed project would generate approximately 953.0 metric tons of CO_2e. Details are provided in the CalEEMod output in Appendix A.

Even though the City of Tracy does not have any adopted GHG emission thresholds, the emission results would be temporary in nature, and would only occur for the duration construction. Therefore, impacts would be less than significant.

Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks, and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project site. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. The proposed recreational center would be designed to maximize sustainable approaches, such as the implementation of Zero Net Carbon, the use of solar energy, and/or the use of battery storage to meet peak demands. The proposed recreational center would also be Gold LEED certified, which would help reduce energy consumption. However, no reductions were accounted for in the analysis to reflect LEED certification since the precise features and associated energy savings have not yet been determined. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

The SJVAPCD has not established a numeric threshold for GHG emissions. As such, emission estimates for operation of the proposed project are quantified and disclosed for informational purposes. Table 3 shows the emissions sources by category; mobile source emissions are the largest

category, at approximately 86 percent of total CO_2e emissions, followed by energy source emissions at approximately 6 percent of the total, waste source emissions at approximately 5 percent of the total, water source emissions at approximately 3 percent of the total emissions, and area source emissions at less than 1 percent of the total. As shown in Table 4.8.A, the proposed project would generate approximately 1,901.2 metric tons of CO_2e annually. CalEEMod output sheets are included in Appendix A.

Table 4.8.A: Operational Greenhouse Gas Emissions

Emissions Category	Operational Emissions (Metric Tons per Year)				
	CO_2	CH_4	N_2O	CO_2e	Percent of Total
Mobile Source	1,605.0	0.1	0.1	1,636.0	86
Area Source	1.9	<0.1	<0.1	1.9	<1
Energy Source	106.0	<0.1	<0.1	108.0	6
Water Source	18.7	1.4	<0.1	62.1	3
Waste Source	26.6	2.7	0.0	93.2	5
Total Operational				**1,901.2**	**100.0**

Source: Compiled by LSA (May 2023).
Note = Some values may not appear to add up correctly due to rounding.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

As discussed above, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither the City of Tracy, nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, the proposed project was evaluated for consistency with the BAAQMD's GHG thresholds. The BAAQMD adopted the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans[35] document which identifies applicable GHG significance thresholds, which would be applicable for the proposed project. These thresholds evaluate a project based on its effect on achieving California's long-term climate goal of carbon neutrality by 2045. Based on this research, the BAAQMD has determined that new land use development projects must incorporate specified design elements to contribute the "fair share" towards implementation of the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the identified design elements, then it would contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change. The document concludes that if a project does not incorporate these design elements, then it should be found to result in a significant climate impact because it would hinder California's efforts to address climate change. A project would have a less than significant impact related to GHG emissions if it would:

a. Include, at a minimum, the following project design elements:

[35] Bay Area Air Quality Management District (BAAQMD). 2022. op. cit.

1. Buildings

    a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

    b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. Transportation

    a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's *Technical Advisory on Evaluating Transportation Impacts in CEQA*:

        1. Residential projects: 15 percent below the existing VMT per capita

        2. Office projects: 15 percent below the existing VMT per employee

        3. Retail projects: no net increase in existing VMT

    b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

b. Or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Therefore, this section evaluates the proposed project's consistency with these project design elements.

Natural Gas Usage. A less than significant GHG impact would occur if the project does not include natural gas appliances or natural gas plumbing. Electricity and gas service is currently provided to the project site by Pacific Gas & Electric Company (PG&E). The proposed project would not include the use of natural gas. Therefore, the proposed project would be consistent with this design element.

Energy Usage. The project must not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under Section 21100(b)(3) and Section 15126.2(b) of the *State CEQA Guidelines*. Energy use consumed by the proposed project would be associated with fuel used for vehicle trips associated with the project. Energy consumption was estimated for the project using default energy intensities by land use type in the CalEEMod output, which is included in Appendix A.

As discussed in Section 4.6, Energy, the proposed project would be designed to Gold LEED Standards, which would reduce energy usage associated with the project by implementing best practices for

energy use, water use, indoor environmental quality, material selection, and site and location within the surrounding community. In addition, the proposed project would maximize sustainable approaches, such as the implementation of ZNC, solar energy and/or battery storage. The proposed project would be constructed using energy efficient modern building materials and construction practices, and the proposed project would also use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). The proposed project would also be constructed to meet the 2022 Title 24 standards. Therefore, based on the nature of the proposed project and the building design features, the proposed project would not be expected to generate energy emissions during operation of the proposed project.

In addition, the proposed project would result in energy usage associated with gasoline to fuel project-related trips. As discussed in Section 4.6, Energy, vehicle trips associated with the proposed project would result in the consumption of approximately 144,646 gallons of gasoline per year and approximately 104,593 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 92 million gallons of diesel and approximately 286 million gallons of gasoline will be consumed from vehicle trips in San Joaquin County in 2023. Therefore, gasoline and diesel fuel demand generated by vehicle trips associated with the proposed project would increase the annual fuel use in San Joaquin County by approximately 0.05 percent for gasoline fuel usage and 0.1 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

As such, based on this analysis, as required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the *State CEQA Guidelines*, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy and energy efficiency measures into the building design, equipment use, and transportation. As such, the proposed project would be consistent with this design element.

Vehicle Miles Traveled. To meet the BAAQMD's VMT threshold, the project must achieve a reduction in project generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA. As discussed in Section 4.17, Transportation, the proposed project would have a less-than-significant VMT impact. As such, the proposed project would be consistent with this design element.

Electric Vehicle Requirements. This criterion requires that the project achieve compliance with off-street electric vehicle requirements in the most recently adopted version of the California Green Building Standards Code (CALGreen) Tier 2 measures. It is not yet known whether the proposed project would include electric vehicle charging; therefore, implementation of Mitigation Measure GHG-1 would be required to ensure the proposed project would provide electric vehicle charging.

Mitigation Measure GHG-1 In order to meet the Bay Area Air Quality Management District (BAAQMD) greenhouse gas (GHG) threshold requirements, the proposed project shall provide electric vehicle charging capabilities

consistent with the most recently adopted version of the California Green Building Standards Code (CALGreen) Tier 2 measures.

With implementation of Mitigation Measure GHG-1, the proposed project would be consistent with the project design elements that would achieve California's long-term climate goals. As such, the proposed project would not generate significant GHG emissions that would have a significant effect on the environment, and this impact would be less than significant with mitigation incorporated.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***(Less Than Significant Impact)***

The SJVAPCD has adopted a Climate Change Action Plan (CCAP), which includes suggested best performance standards (BPS) for proposed development projects. However, the SJVAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2019 California Green Building Code) and the 2030 GHG targets, established in SB 32. As such, the proposed project was analyzed for consistency with the goals of the 2022 Scoping Plan. The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, Executive Order (EO) B-30-15, SB 32, and Assembly Bill (AB) 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[36] to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality set by AB 1279 no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new

[36] California Air Resources Board (CARB). 2017. *California's 2017 Climate Change Scoping Plan*. November.

passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emissions as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As mentioned above, the proposed project would be designed to Gold LEED Standards and would implement ZNC, solar energy and/or battery storage. In addition, the proposed project would also comply with the CALGreen Code, regarding energy conservation and green building standards. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would comply with the CALGreen Code, which includes a variety of different measures, including the reduction of wastewater and water use. The proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance. In addition, the proposed project would also include drought tolerant landscape and implement drip irrigation systems. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions. This impact would be less than significant.

4.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***(Less Than Significant Impact)***

Small quantities of commercially available hazardous materials (e.g., paint, cleaning supplies) would be routinely used at the project site and in the new community center during operation. However, the City would be required to comply with existing government regulations[37] regarding the use of such materials and their disposal, and those materials would not be used in sufficient strength or quantity to create a substantial risk to human or environmental health. Therefore, the proposed project would have a less-than-significant impact related to the routine transport, use, or disposal of hazardous materials.

[37] The United States Environmental Protection Agency regulates "small-quantity generators" (SQGs) of hazardous wastes, which are defined as facilities that generate more than 100 kg (approximately 220 lbs), but less than 1,000 kg (2,200 lbs), of hazardous waste per month.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***(Less Than Significant Impact)***

As described above, small quantities of common hazardous materials would be used at the project site during construction and operation of the proposed project. Improper use, storage, or handling could result in a release of hazardous materials into the environment that could pose a risk to construction workers and the public. However, the City would be required to comply with existing government regulations regarding the use and disposal of those materials, and such materials would not be used in sufficient strength or quantity to create a substantial risk to human or environmental health.

Construction of the proposed project would involve the transport, use, and disposal of chemical agents, solvents, paints, fuel and oil for construction equipment, and other hazardous materials that are commonly associated with construction activities. The routine handling and use of hazardous materials by construction workers would be performed in accordance with Occupational Safety and Health Administration (OSHA) regulations, which include training requirements for construction workers and a requirement that hazardous materials be accompanied by manufacturers' Safety Data Sheets (SDSs). California Occupational Safety and Health Administration (Cal/OSHA) regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. Compliance with these existing regulations would ensure that construction workers are protected from exposure to hazardous materials that may be used on site.

Because the proposed project would result in soil disturbance greater than 1 acre, management of hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit, which requires preparation and implementation of an SWPPP that includes hazardous materials storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed that is completely enclosed.

In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The Department of Transportation (DOT) developed hazardous materials regulations that govern the classification, packaging, communication, transportation, and handling of hazardous materials as well as employee training and incident reporting. The transportation of hazardous materials is subject to both federal Resource Conservation and Recovery Act (RCRA) and DOT regulations. The California Highway Patrol, California Department of Transportation (Caltrans), and the Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

The proposed project would comply with existing government regulations (federal, State, regional, and local) regarding the transport, use, and disposal of hazardous materials. Therefore, the proposed project would have a less-than-significant impact related to the potential release of hazardous materials commonly associated with construction activities into the environment.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***(Less Than Significant Impact)***

Schools nearest the project site include North Elementary School (2875 Holly Drive), which borders the project site to the east; Millennium Charter School (51 East Beverly Place), which is approximately 0.6 mile southeast of the project site; and Monte Vista Middle School (751 West Lowell Avenue), which is approximately 0.5 mile southwest of the project site. The City would be required to comply with all applicable local, State, and federal regulations and standards related to hazardous emissions and materials. As noted above, compliance with all applicable regulations would reduce any significant hazards to the public or the environment related to hazardous materials, and the proposed project would have a less-than-significant impact.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ***(Less Than Significant Impact)***

The project site does not include any active storage sites listed on the State Water Resources Control Board (SWRCB) Leaking Underground Storage Tanks (LUST) database or the SWRCB's site cleanup program database,[38] which are two of the component databases that comprise the Cal/EPA Hazardous Waste and Substances Sites List (Cortese List) of known hazardous materials compiled pursuant to Government Code Section 65962.5. Active sites are not listed for the project on other components of the Cortese List, including the DTSC hazardous waste and substance list.[39] Therefore, no impacts associated with locating a project on a site included on a list of hazardous materials is expected to occur.

The project site and a 0.5-mile radius around the project site were reviewed via the State Water Resources Control Board (SWRCB) GeoTracker database,[40] the DTSC EnviroStor database,[41] and the Cortese List[42] for the purposes of identifying recognized environmental conditions or historical recognized environmental conditions. A total of 13 properties with recognized environmental conditions or historical recognized environmental conditions were identified within 1 mile of the project site, as detailed in Table 4.9.A.

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38 State Water Resources Control Board (SWRCB). 2023. GeoTracker. Website: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=301+West+Grant+Line+Road (accessed May 15, 2023).

39 State of California, Department of Toxic Substances Control (DTSC). 2023a. Hazardous Waste and Substances Site List (Cortese). Website: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29 (accessed May 15, 2023).

40 State Water Resources Control Board (SWRCB). 2023. op. cit.

41 State of California, Department of Toxic Substances Control (DTSC). 2023b. EnviroStar Database. Website: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=301+WEst+Grant+Line+Road%2C+Tracy%2C+CA (accessed January 24, 2023).

42 State of California, Department of Toxic Substances Control (DTSC). 2023a. op. cit.

Table 4.9.A: Hazardous Materials Database Search

Property	Historical Recognized Environmental Condition	Location Relative to the Project Site	Status of the Property
7-11 at 455 West Grant Line Road	LUST – Contamination of groundwater used for drinking water supply.	Approximately 910 feet southwest	Completed – Case closed as of 9/23/99.
California Highway Patrol at 385 West Grant Line Road	LUST – Contamination of groundwater used for drinking water supply.	Approximately 700 feet southwest	Completed – Case closed as of 1/30/2006.
Chevron #9-8632 at 575 West Grant Line Road	LUST – Contamination of groundwater used for drinking water supply	Approximately 1,350 feet southwest	Completed – Case closed as of 3/19/2019.
Food & Liquor located at 15 East Grant Line Road	LUST – Contamination of groundwater used for drinking water supply	Approximately 1,270 feet southeast	Completed – Case closed as of 1/27/2014.
Former BP 11194 located at 2375 North Tracy Boulevard	LUST – Contamination of groundwater used for drinking water supply	Approximately 1,270 feet southwest	Completed – Case closed as of 3/20/2013.
Jordan, WT at 298 West Grant Line Road	LUST – Contamination of groundwater used for drinking water supply	Approximately 560 feet south	Completed – Case closed as of 1/6/2000.
Palladin Mileage Center at 2421 Holly Drive	LUST – Contamination of groundwater used for drinking water supply	Approximately 1,275 feet southeast	Completed – Case closed as of 8/27/2002.
Quality Meats at 301 West Grant Line Road	LUST – Contamination of soil	Approximately 500 feet south	Completed – Case closed as of 9/26/1991.
Steve's Rentals at 275 East Grant Line Road	LUST – Contamination of soil	Approximately 2,600 feet southeast	Completed – Case closed as of 11/19/1997.
Tosco c/o ConocoPhillips at 2375 Tracy Boulevard	LUST – Contamination of groundwater used for drinking water supply	Approximately 2,600 feet southeast	Completed – Case closed as of 3/20/2013.
Unocal at 574 West Grant Line Road	LUST – Contamination of groundwater used for drinking water supply	Approximately 1,423 feet southwest.	Completed – Case closed as of 12/22/2011.
Wheel Country at 474 West Grant Line Road	LUST – Contamination of soil	Approximately 1,000 feet southwest	Completed – Case closed as of 7/8/1997.

Source 1: State Water Resources Control Board, 2023. op. cit.
Source 2: California Department of Toxic Substances Control, 2023a. op. cit.
Source 3: California Department of Toxic Substances, 2023b. op. cit.
LUST = Leaking Underground Storage Tank
REC = Recognized Environmental Condition

As shown in Table 4.9.A, the status of listed sites within 1 mile of the project site is closed. A closed site indicates that regulatory requirements for response actions (e.g., site assessment and remediation) have either been completed or were not necessary; therefore, potential migration of residual contaminants in groundwater beneath the project site does not likely pose a risk to human health and the environment. This impact would be less than significant.

e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? ***(Less Than Significant Impact)***

The project site is not located within an Airport Land Use Plan, or within 2 miles of a public airport or public use airport. The Tracy Municipal Airport, located approximately 4.5 miles to the south, is the closest airport to the project site. The airport overflight and approach zones do not cross the project site, nor are there any airport-related land use or height restrictions that apply to the project site. The proposed project would include development of a new recreation center and renovation of the existing public park. The proposed project would not increase residential density, would not be an incompatible land use, would not increase the height such that it would create a hazard or obstruction, and would not result in the addition of a characteristic that would create a hazard to air navigation. Therefore, the proposed project would have a less-than-significant impact related to airport safety hazards.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***(Less Than Significant Impact)***

The San Joaquin County Office of Emergency Services (OES) coordinates county-wide emergency response efforts, including the preparation and implementation of the Alameda County Emergency Operations Plan (EOP)[43] and the *San Joaquin County Local Hazard Mitigation Plan*.[44] The City of Tracy also has an adopted Local Hazard Mitigation Plan. None of these plans identify specific evacuation routes within the City or the County.

The proposed project would be consistent with the policies outlined in the City of Tracy General Plan Safety Element. The proposed project would not alter or block adjacent roadways, and implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. In addition, operation of the proposed project would not cause permanent alterations to vehicle circulation routes and patterns or impede public access or travel upon public rights-of-way. Prior to approval of final maps and improvement plans for any development project within Tracy, plan review and approval by the South San Joaquin Fire Authority is required. Internal roadways and ingress/egress points would be required to meet State and local standards regarding turning radius, road width, and emergency vehicle access. Therefore, potential impacts to an adopted emergency response plan or emergency evacuation plan would be less than significant.

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43 County of San Joaquin. 2022. *County of San Joaquin Emergency Operations Plan*. February 17. Website: https://www.sjgov.org/docs/default-source/office-of-emergency-services-documents/emergency-plans/2022-sjc-emergency-operations-plan.pdf?sfvrsn=6fdd3c17_3 (accessed May 2023).

44 County of San Joaquin County. 2023. *San Joaquin County Local Hazard Mitigation Plan.* April. Website: https://www.sjgov.org/docs/default-source/covid-19/2023-lhmp-final-.pdf?Status=Master&sfvrsn=62a3c44d_3 (accessed May 2023).

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ***(Less Than Significant Impact)***

According to the California Department of Forestry and Fire Protection (CAL FIRE), the project site is within a Local Responsibility Area (LRA), meaning the local government is financially responsible for wildland fire protection, but the project site is not considered to be within a Very High Fire Hazard Severity Zone (VHFHSZ).[45]

Construction of the proposed project would involve the use of some flammable materials such as gasoline, diesel fuel, hydraulic oils, paints, solvents, or other wastes. During construction, there would be increased human activity and ignition sources, including equipment that could create spark, be a source of heat, or leak flammable materials on the project site. However, all construction equipment is required to have fire suppression equipment (such as a fire extinguisher) on board or at the work site, secondary containment would be required for fuel-powered equipment, and a spill kit would be required to be kept on site during construction for use in case of any leaks or spills of flammable materials. These existing requirements would reduce the potential exacerbation of wildfire risks related to construction activities.

The operation of the proposed project would be similar to existing conditions on the site. The proposed project would be subject to the design standards and guidelines as outlined in the City of Tracy Municipal Code and would undergo development review to ensure that proposed structures conform with all applicable regulations.

The proposed project would also be subject to requirements in Section 13000 et seq. of the California Health and Safety Code, the CBC, and the California State Fire Code, which include regulations concerning the following: building standards for fire protection; fire protection and notification systems such as extinguishers and smoke alarms; safety for firefighters and emergency responders during emergency operations; minimum standards for hazardous vegetation and fuel management, defensible space, and building construction; and minimum standards for emergency access and water supply for fire response.

Compliance with these existing regulatory requirements would ensure that the proposed project would not exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

[45] California Department of Forestry and Fire Protection (CAL FIRE). 2023. Fire Hazard Severity Zone (FHSZ) Viewer. Website https://egis.fire.ca.gov/FHSZ/ (accessed May 2023).

4.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☐	☒
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? ***(Less Than Significant Impact)***

The SWRCB and nine RWQCBs regulate water quality of surface water and groundwater bodies throughout California. In San Joaquin County, including the project site, the Central Valley RWQCB is responsible for implementation of the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses and water quality objectives for waterways and water bodies within the region. Section 303(d) of the federal Clean Water Act (CWA) requires that states identify water bodies (including bays, rivers, streams, creeks, and coastal areas) that do not meet water quality standards as well as the pollutants that are causing the impairment. Total Maximum Daily Loads (TMDLs) describe the maximum amount of a pollutant that a water body can receive while still meeting established water quality standards. A TMDL establishes limits for pollutant discharges into impaired water bodies. Stormwater from the project site ultimately discharges to Old River.[46] Sections 303(d) and 305(b) of the SWRCB Surface Water Quality Assessment 2020-2022 Integrated

[46] City of Tracy. 2005. *City of Tracy General Plan Draft Environmental Impact Report*. October 4.

Report for Clean Water Act lists Old River as impaired for indicator bacteria, manganese, dissolved oxygen, specific conductivity, chlorpyrifos, and total dissolved solids.[47]

Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal CWA). The NPDES Program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Central Valley Regional Water Quality Control Board (Water Board). According to the water quality control plans of the Water Board, any construction activities, including grading, that would result in the disturbance of 1 acre or more would require compliance with the SWRCB's Construction General Permit,[48] which requires preparation of an SWPPP and implementation of Construction BMPs during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs, which are designed to minimize erosion and retain sediment on site, and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. The project site is approximately 13.9 acres and, as such, would be required to comply with the Construction General Permit.

The proposed project would be subject to the Water Board Phase II Small Municipal Separate Storm Sewer System (MS4) Permit (Phase II MS4 Permit), implemented in February 2013 by Order 2013-0001-DWQ.[49] Provision E.12 of the Phase II MS4 Permit requires all projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects) to implement measures for site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification management. Consistent with Provision E.12 and the *Multi-Agency Post-Construction Stormwater Standards Manual*,[50] the preparation and submittal of a Project Stormwater Plan would be required for the project site. The purpose of a Project Stormwater Plan is to detail the design elements and implementation measures necessary to meet the post-construction stormwater control requirements of the Phase II MS4. In particular, the Project Stormwater Plan must include Low Impact Development (LID) design measures, which reduce water quality impacts by preserving and recreating natural landscape features, minimizing imperviousness, and using stormwater as a resource rather than a waste product.

Construction. The proposed project includes the renovation of an existing City park and development of a new recreation center with associated landscaping and parking improvements. Construction of the proposed project would result in the disturbance of approximately 13 acres of

47 State Water Resources Control Board (SWRCB). 2023. *2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)*. Website: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html (accessed May 6, 2023).

48 State Water Resources Control Board (SWRCB), Division of Water Quality. 2022.op. cit.

49 State Water Resources Control Board (SWRCB). 2019. Small MS4 General Permit WQ Order 2013-0001-DWQ as amended by Orders WQ 2015-0133-EXEC, WQ 2016-0069-EXEC, WQ 2018-0001-EXEC, and WQ 2018-0007-EXEC. January 1. Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/remediated_phase2ms4permit_v2.pdf (accessed May 6, 2023).

50 Larry Walker Associates. 2015. *Multi-Agency Post-Construction Stormwater Standards Manual.* June. Website: https://www.cityoftracy.org/home/showpublisheddocument/3158/637522653643300000 (accessed May 6, 2023).

land. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked, and they have the potential to be transported via stormwater runoff into receiving waters.

Because construction of the proposed project would disturb greater than 1 acre of soil, the project is subject to the requirements of the Construction General Permit, which requires preparation of an SWPPP and implementation of construction BMPs during construction activities. Construction BMPs would include but are not limited to Erosion Control and Sediment Control BMPs, which are designed to minimize erosion and retain sediment on site, and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association (CASQA) *Stormwater Best Management Handbook: Construction*. The SWPPP would also include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations and, as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner will be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.

Additionally, the preparation and implementation of erosion and sediment control plans would be required per Chapter 11.34 of the City of Tracy Municipal Code, which would include measures to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion and detailed cross-referencing to each element of the SWPPP, including the planned BMPs and descriptions of the required monitoring programs. Erosion and sediment control plans shall include an effective revegetation program to stabilize all disturbed areas that will not be otherwise protected.

Construction of the proposed project would require excavation for utility lines, storm drains, shade structures, playground equipment footings, and bioretention basins. Therefore, dewatering of groundwater may be required during construction activities involving excavation. Release of dewatered groundwater to surface waters can introduce total dissolved solids and other constituents to surface waters and could cause degradation of the receiving water quality. In the event that groundwater is encountered during construction and groundwater dewatering is necessary, any groundwater dewatering during excavation would be conducted in accordance with the requirements of the Construction General Permit, which allows the discharge of dewatering effluent if the source of the water is uncontaminated groundwater and is properly filtered or treated using appropriate technology.

Adherence with the Construction General Permit (including implementation of the required SWPPP, Construction BMPs, and dewatering requirements) as well as compliance with the City of Tracy Municipal Code, which includes preparation of erosion and sediment control plans, would ensure

construction impacts related to surface water quality standards, waste discharge requirements, and surface water quality would be less than significant.

Operation. Pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, motor vehicle lubricants, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. The City of Tracy is under the purview of the Phase II MS4 Permit. Therefore, the proposed project would be subject to the requirements of Provision E.12 of the Phase II MS4 Permit because the project would develop more than 5,000 square feet of impervious surfaces. In compliance with Provision E.12 of the Phase II MS4 Permit, the City would be required to prepare and implement a Stormwater Plan. The Stormwater Plan would act as the overall program document designed to provide measures to mitigate potential water quality impacts associated with the operation of the proposed project. The Project Stormwater Plan will be prepared in accordance with the requirements and guidelines set forth in the *Multi-Agency Post-Construction Stormwater Standards Manual*.[51]

The proposed project would include bioretention basins and modular wetlands that would be used for stormwater control, infiltration, and treatment to reduce pollutants of concern in stormwater prior to release into the storm drain system. Therefore, compliance with the requirements of the Phase II MS4 Permit and City of Tracy Municipal Code would ensure that operational impacts to water quality would be less than significant.

Overall, because the proposed project would be required to comply with existing regulations, including the Construction General Permit, Phase II MS4 Permit, and City of Tracy Municipal Code requirements, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ***(Less Than Significant Impact)***

The City of Tracy overlies the Tracy Subbasin of the San Joaquin Valley Groundwater Basin. The Tracy Subbasin covers an area of approximately 373 square miles.

Temporary dewatering from isolated areas of deeper excavation may be necessary during construction. However, such dewatering would be localized and temporary and would not result in the lowering of surrounding groundwater levels.Water supply to the proposed project would be provided by the City of Tracy water system, which is supplied from both surface and groundwater sources. [52] Although a portion of the City's water supply comes from groundwater, approximately 6 percent of the City's water supply was from local groundwater supply wells during 2020.[53] Because

[51] Larry Walker Associates. 2015. *Multi-Agency Post-Construction Stormwater Standards Manual.* June. Website: https://www.cityoftracy.org/home/showpublisheddocument/3158/637522653643300000 (accessed May 6, 2023).

[52] City of Tracy. 2021. *City of Tracy Urban Water Management Plan 2020*. June.

[53] Ibid.

such a limited portion of the City's municipal water supply comes from groundwater, water use during operation of the proposed project would not affect groundwater.

Development of the proposed project would result in an increase in impervious surfaces on the project site, which could reduce groundwater recharge compared to existing conditions. However, in compliance with the Phase II MS4 Permit and City of Tracy Municipal Code, the proposed project would include bioretention basins and modular wetlands that would be used for stormwater control, infiltration, and treatment. Due to the incorporation of bioretention basins and modular wetlands and the implementation of LID techniques as required by the Phase II MS4 Permit and City of Tracy Municipal Code, the proposed project would not result in a significant decrease in groundwater recharge that would result in a net deficit in aquifer volume or a lowering of the local groundwater table level. Therefore, the proposed project would not interfere with groundwater recharge.

For the reasons listed above, impacts related to the decrease of groundwater supplies or interference with groundwater recharge would be less than significant.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site? ***(Less Than Significant Impact)***

During construction activities, more than 1 acre of soil would be disturbed. Soil would be exposed and drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. Compliance with the Construction General Permit requires the preparation of an SWPPP to identify construction BMPs to be implemented as part of the proposed project to reduce impacts on water quality during construction, including those impacts associated with soil erosion and siltation. Additionally, the preparation and implementation of erosion and sediment control plans would be required per Chapter 11.34 of the City of Tracy Municipal Code, which would include measures to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion. With compliance with the requirements in the Construction General Permit, City of Tracy Municipal Code, and implementation of construction BMPs, construction impacts related to on- or off-site erosion or siltation would be less than significant.

After the completion of project construction, operation of the proposed project would result in an increase in impervious surfaces on the project site that would result in a net increase in stormwater runoff that can lead to downstream erosion in receiving waters. However, as discussed above, the bioretention basins and modular wetlands included in the project's design in compliance with the Phase II MS4 Permit would be used for stormwater control, infiltration, and treatment. Due to the incorporation of bioretention basins and modular wetlands and the implementation of LID techniques as required by the Phase II MS4 Permit and City of Tracy Municipal Code, operational impacts related to on- or off-site erosion or siltation would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? ***(Less Than Significant Impact)***

Development of the proposed project would result in an increase in impervious surfaces on the project site that could have the potential to increase the volume and rate of stormwater runoff discharged from the project site. However, as previously discussed, the bioretention basins and modular wetlands included in the project's design in compliance with the Phase II MS4 Permit would be used for stormwater control, infiltration, and treatment. The proposed drainage facilities and BMPs needed to accommodate stormwater runoff would be appropriately sized so that on-site flooding would not occur. Therefore, due to the implementation of LID techniques as required by the Phase II MS4 Permit and City of Tracy Municipal Code, the proposed project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site. Impacts would be less than significant.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ***(Less Than Significant Impact)***

The proposed storm drainage infrastructure would discharge into an existing underground storm drain at the northeastern edge of the project site. Stormwater treatment is proposed using a combination of bioretention basins and modular wetlands. The number of drainage management areas would be determined as part of the final design. The bioretention basins would be vegetated with a layer of special soil and a layer of permeable rock. Overflow would be discharged from the stormwater treatment areas to the on-site storm drain system, which would connect to an existing 12-inch-diameter storm drain pipe at the northeast corner of the site.

The proposed project would be required to comply with the Phase II MS4 Permit and City of Tracy Municipal Code and would include the incorporation of LID design features. The proposed drainage facilities and BMPs needed to accommodate stormwater runoff would be appropriately sized such that drainage facility capacity would not be exceeded during a design storm. Therefore, the proposed project would not result in an exceedance of planned or existing stormwater drainage systems, and impacts would be less than significant.

As discussed in Section 4.10.a, pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals, and each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. Drainage patterns would be temporarily altered during grading and other construction activities, and construction-related pollutants could be spilled, leaked, or transported via storm runoff into adjacent drainages and downstream receiving waters. However, as previously discussed, the proposed project would be required to comply with the requirements set forth by the Construction General Permit and SWPPP, which would specify BMPs to be implemented to control the discharge of pollutants in stormwater runoff as a result of construction activities. Additionally, the preparation and implementation of erosion and sediment control plans would be required per Chapter 11.34 of the City of Tracy Municipal Code, which would include measures to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion. With compliance with the requirements in the Construction

General Permit, City of Tracy Municipal Code, and implementation of construction BMPs, construction impacts related to on- or off-site erosion or siltation would be less than significant.

Expected pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, motor vehicle lubricants, coolants, disc brake dust, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. As previously discussed, compliance with the Phase II MS4 Permit and City of Tracy Municipal Code and the implementation of LID techniques would ensure that the proposed project would not discharge substantial sources of polluted runoff from the project site. Operation-related impacts would be less than significant.

*iv. Impede or redirect flood flows? **(No Impact)***

The project site is not located within a Federal Emergency Management Agency (FEMA) designated 100-year or 500-year floodplain.[54] According to FEMA Flood Insurance Rate Map (FIRM) No. 06077C0595F, the project site is located within Zone X, which is defined as an area of minimal flood hazard.[55] Because the proposed project would not place improvements and structures directly within a 100-year floodplain, the project would not impede or redirect flood flows, and there would be no impact.

*d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? **(No Impact)***

The project site is not located within a FEMA-designated 100-year or 500-year floodplain.[56] According to FEMA FIRM No. 06001C0278G, the project site is located within Zone X, which is defined as an area of minimal flood hazard.[57] The project site is not located in an area mapped by the California Emergency Management Agency as being potentially inundated by a tsunami.[58] Seiches are waves that are created in an enclosed body of water such as a bay, lake, or harbor and go up and down or oscillate and do not progress forward like standard ocean waves. The nearest enclosed water bodies are the Clifton Court Forebay (approximately 8.87 miles northwest of the project site) and Oakwood Lake (approximately 6.5 miles east of the project site). Due to the distance between Oakwood Lake and the project site, the project site would not be inundated in the event of a seiche. Therefore, there would be no impacts related to the release of pollutants in the event of inundation due to flood hazard, tsunamis, or seiches.

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54 Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map (FIRM) No. 06001C0278G, effective October 16. Website: https://msc.fema.gov/portal/search?AddressQuery=301%20WEst%20Grant%20Lie%20Road%2C%20Tracy%2C%20Ca#searchresultsanchor (accessed May 6, 2023).

55 Ibid.

56 Ibid.

57 Ibid.

58 California Department of Conservation (DOC). 2023. *California Tsunami Maps.* Website: https://www.conservation.ca.gov/cgs/tsunami/maps (accessed May 6, 2023).

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ***(Less Than Significant Impact)***

In San Joaquin County, including the project site, the Water Board is responsible for implementation of the Basin Plan, which establishes beneficial water uses for waterways and water bodies within the region. As previously discussed, the proposed project would comply with existing NPDES permit requirements, including the Construction General Permit and Phase II MS4 Permit, and would implement construction and operational BMPs to reduce pollutants of concern in stormwater runoff. Compliance with these regulatory requirements would ensure that the proposed project would not degrade or alter water quality, thereby causing the receiving waters to exceed the water quality objectives or impair the beneficial use of receiving waters. As such, the proposed project would not result in water quality impacts that would conflict with the Basin Plan. Construction and operational impacts related to a conflict with the Basin Plan would be less than significant.

The project site is located within the Tracy Subbasin, a mapped Division of Water Rights (DWR) groundwater basin boundary. The Tracy Subbasin is designated as a medium priority basin under DWR's 2019 Phase 2 Basin Prioritization. As a DWR-designated medium priority basin, the Tracy Subbasin is subject to the requirements of the Sustainable Groundwater Management Act (SGMA). The City of Tracy, Byron-Bethany Irrigation District, Banta-Carbona Irrigation District, City of Lathrop, San Joaquin County, and Stewart Tract are the six Groundwater Sustainability Agencies (GSAs) formed in the Tracy Subbasin and are working cooperatively to develop a single Groundwater Sustainability Plan. Nevertheless, the proposed project would not interfere with groundwater recharge in the vicinity of the project site as discussed in Section 4.10.b. Therefore, the proposed project would not conflict with or obstruct the implementation of a sustainable groundwater management plan, and this impact would be less than significant.

4.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

*a. Would the project physically divide an established community? **(Less Than Significant Impact)***

The physical division of an established community typically refers to the construction of a feature (e.g., an interstate highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The project site is an existing City park that is located in an urban area and surrounded by commercial, residential, and public uses. The proposed project would result in the development of a new recreation center, the renovation of the existing El Pescadero Park, and construction of associated parking and landscaping improvements. Access to the project site would be via the existing signalized intersection at West Grant Line Road and Parker Avenue and a new connection off Kavanagh Avenue. The proposed project would not result in the realignment, widening, or closure of any existing roads. Therefore, the proposed project would not result in the physical division of an established community or adversely affect the continuity of land uses in the vicinity, and this impact would be less than significant.

*b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? **(Less Than Significant Impact)***

The project site is designated as Park on the City's General Plan Land Use Map[59] and is within the LDR zoning district on the City's Zoning Map.[60] Permitted uses established for the Park designation include: active playing fields, parks, and recreation facilities; urban parks and plazas; bicycle and walking trails; fountains; landscaped areas and corridors; natural open space and wildlife areas; and

[59] City of Tracy. 2011. City of Tracy General Plan Land Use Map. February 1.

[60] City of Tracy. n.d. City of Tracy GIS Viewer. Website: https://www.cityoftracy.org/our-city/about-us/city-maps/gis-web-mapping-application (accessed December 20, 2022).

water recharge and detention facilities. Permitted uses in the LDR zoning district include single-family dwellings, accessory dwelling units, crop and tree farming, public parks, and schools.[61]

Per *CEQA Guidelines*, policy conflicts do not, in and of themselves, constitute significant environmental impacts. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. As such, associated physical environmental impacts are discussed in this Initial Study under specific topical sections.

The project site is located in an urban area in the City of Tracy, within San Joaquin County. It is surrounded by single- and multi-family residential uses, commercial uses and public facilities. The proposed project would renovate and improve an existing City park to include a new recreational center. The proposed project would remain consistent with surrounding land uses. Therefore, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; impacts would be less than significant.

[61] City of Tracy. 2023. City of Tracy Municipal Code, Chapter 10.08 Zoning Regulations. Website: https://library.municode.com/ca/tracy/codes/code_of_ordinances?nodeId=TIT10PLZO_CH10.08ZORE (accessed March 22, 2023).

4.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

*a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? **(No Impact)***

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat, and oil-bearing rock but excluding geothermal resources, natural gas, and petroleum. Rock, sand, gravel, and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations. The project site is currently developed with an existing City park. It is not located in a designated mineral resource area. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. No impact would occur.

*b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? **(No Impact)***

Please refer to Section 4.12.a above. The proposed project would not result in the loss of availability of any known locally important mineral resource recovery site. Therefore, no impact related to the availability of mineral resources to a recovery site would occur.

4.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA), and this scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements which better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally

exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

A project would result in a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies, including, as appropriate, the City of Tracy.

Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is generally surrounded by residential uses. The closest sensitive receptors are the residences located west and southeast, approximately 10 feet from the project site boundary.

Existing noise sources at the project site are primarily associated with traffic on surrounding roadways, including Grant Line Road and West Kavanagh Avenue.

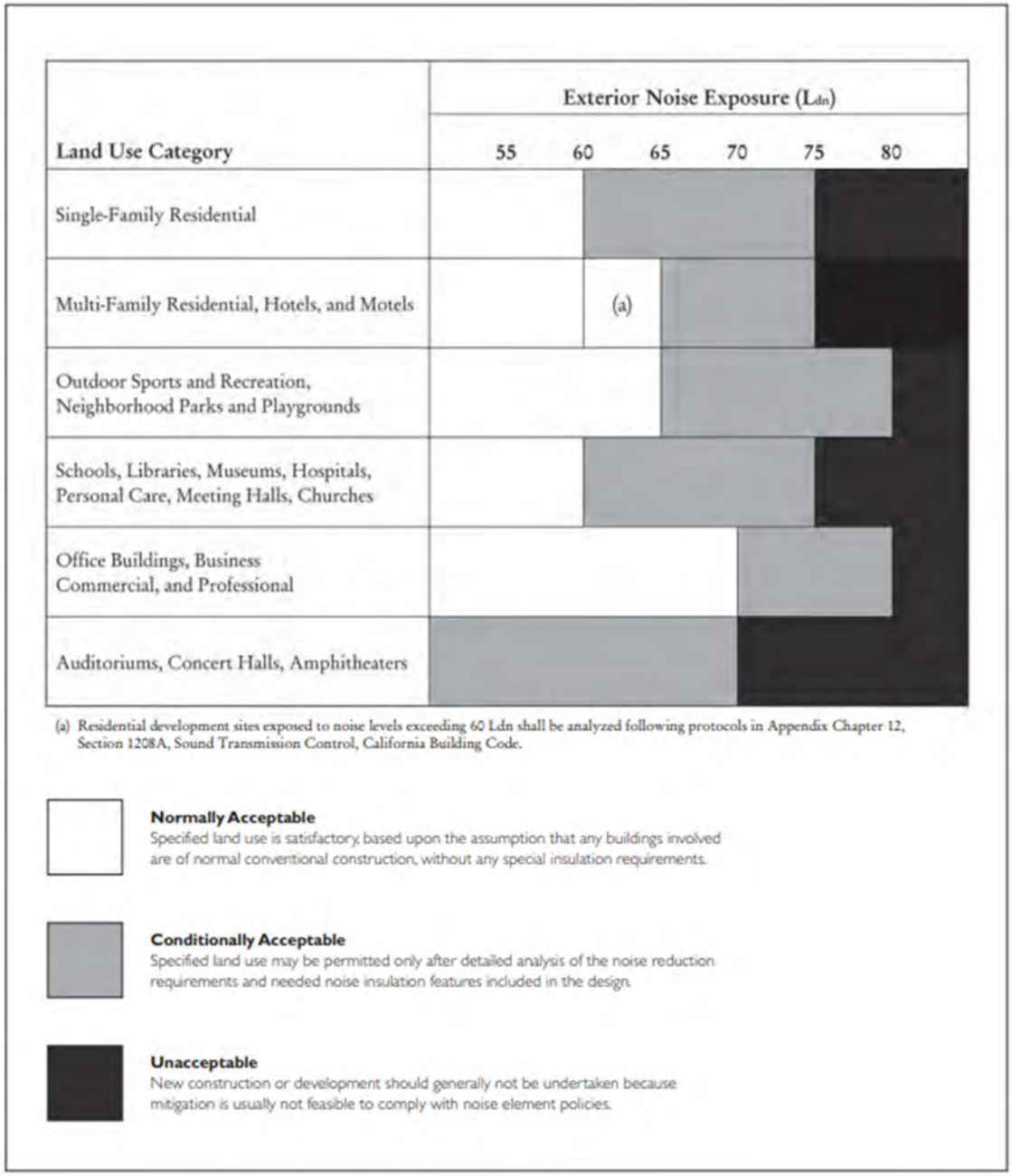
The City of Tracy General Plan addresses noise in the Noise Element. The Noise Element contains goals and policies for noise control and abatement in the City. The goals and policies contained in the Noise Element address noise in relation to land use planning, the noise environment, transportation noise, construction and industrial noise, population and housing noise, and public health and safety. General noise goals for Tracy aim to attain a healthier and quieter environment for all citizens while maintaining a reasonable level of economic progress and development.

The City has established land use compatibility guidelines for determining acceptable noise levels for specified land uses as shown in Table 4.13.A. The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. The Noise Element also limits noise generated by construction. Policy P4. under objective N-1.2, Control sources of excessive noise, states that all construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours of 7:00 a.m. to 7:00 p.m. In addition, the following construction noise control measures shall be included as requirements at construction sites to minimize construction noise impacts:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.

The City of Tracy addresses noise impacts in Article 9: Noise Control, of the Municipal Code. Article 9: Noise Control, establishes noise limits for the generation of sound within the City. The maximum noise levels vary based on the receiving land use type and the cumulative duration of noise. For residential districts, 55 dBA L_{eq} is the sound level limit.

Table 4.13.A: Community Noise Exposure L_{dn}



To assess existing noise levels, LSA conducted noise monitoring to establish the existing ambient noise environment at the project site. Four short-term (15-minute) and one long-term (24-hour) noise measurements were conducted at the project site from February 15, 2023 to February 16, 2023. Noise measurement data collected during the noise monitoring are summarized in Table 4.13.B. As shown in Table 4.13.B, the short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 51.6 dBA to 64.0 dBA L_{eq}. The long-term measurement resulted in a daily noise level of 65.5 dBA L_{dn}. Vehicle traffic on Grant Line Road and West Kavanagh Avenue was reported as the primary noise source. Noise measurement sheets are provided in Appendix B. Figure 4.13-1 shows the long-term noise monitoring locations.

Table 4.13.B: Short-Term Ambient Noise Monitoring Results, dBA

Location Number	Location Description	Start Time	L_{eq}/L_{dn} [a]	L_{max} [b]	L_{min} [c]	Primary Noise Sources
ST-1	Northwest area of park, approximately 30 ft from W Kavanagh Avenue centerline.	2:14 p.m.	60.0	72.3	49.1	Traffic on Kavanagh Ave
ST-2	Northeast area of park, approximately 30 ft from W Kavanagh Avenue centerline.	2:31 p.m.	64.0	82.8	47.9	Traffic on Kavanagh Ave
ST-3	Southeast area of park, approximately 50 ft north of residence property line.	2:52 p.m.	51.6	59.6	47.7	Background traffic noise from Grant Line Rd
ST-4	South side of project near entrance, approximately 150 ft from Grant Line Road centerline.	3:10 p.m.	59.4	74.3	46.0	Traffic on Grant Line Rd
LT-1	West side of project on a fence west of parking lot, by the gate entrance for Tracy interfaith Ministries.	2:00 p.m.	57.4/ 65.5	68.4	49.5	Background traffic and parking lot activities

Source: LSA (2023).

[a] L_{eq} represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements. L_{dn} is the day-night average level, represents the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.

[b] L_{max} is the highest sound level measured during the measurement time period.

[c] L_{min} is the lowest sound level measured during the measurement time period.

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the *Transit Noise and Vibration Impact Assessment Manual.*[62] Table 4.13.C shows the FTA's Detailed Analysist Construction Noise Criteria based on the composite noise levels per construction phase.

Table 4.13.C: Detailed Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)
Residential	80
Commercial	85
Industrial	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

Vibration standards included in the FTA Manual are used in this analysis for ground-borne vibration impacts on human annoyance. The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table 4.13.D provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table 4.13.D: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-Octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration
L_V = velocity in decibels
VdB = vibration velocity decibels
Max = maximum

Table 4.13.E lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.2 in/sec in PPV.

[62] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.

Table 4.13.E: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inch/inches per second

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ***(Less Than Significant with Mitigation Incorporated)***

Construction-Period Impacts. Construction of the proposed project could include construction activities that would result in a temporary increase in ambient noise levels in the project site vicinity. Maximum construction noise levels would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. Consistent with CalEEMod assumptions, project construction would occur for approximately 24 months. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during paving and site preparation activities. Table 4.13. lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site for the proposed project, which would incrementally increase noise levels on roads leading to the site. As shown in Table 4.13., there would be a relatively high single-event noise exposure potential at a maximum level of 85 dBA L_{max} with trucks passing from 50 feet.

The second type of short-term noise impact is related to noise generated during site preparation, excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Average maximum noise levels range up to 90 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation and grading phases, including excavation of the site, tend to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

As identified above, the project site is generally surrounded by residential uses. The closest sensitive receptors include the residences located southeast of the project site approximately 120 feet from the center of project site. The 120-foot distance would decrease the noise level by approximately 8 dBA compared to the noise level measured at 50 feet (88 dBA L_{eq}) from the construction activity.

Table 4.13.F: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

Therefore, the closest off-site receptors may be subject to short-term construction noise levels of 80 dBA L_{eq} when construction is occurring at the center of project site. These predicted noise levels would only occur when all construction equipment is operating simultaneously; and therefore, the noise levels are assumed to be rather conservative in nature. While construction-related short-term

noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed.

Compliance with the allowed construction hours in the City's Noise Ordinance would ensure that construction noise does not disturb residents during typical sleeping hours or during hours when ambient noise levels are likely to be lower (i.e., at night). In addition, the proposed project would implement several best practices for reducing construction noise, including, but not limited to, maximizing the distance between noise sources and sensitive receptors during construction activities, equipping construction equipment with properly operating and maintained noise mufflers, and establishing a noise disturbance coordinator for the proposed project. These best practices are included in Mitigation Measure NOI-1, provided below. Additionally, with the incorporation of Mitigation Measure NOI-1, all feasible and reasonable measures to reduce construction noise would be implemented, and a less than significant impact would occur.

Mitigation Measure NOI-1: **Construction Noise and Vibration.** Prior to issuance of grading permits, the City Engineer of the City of Tracy shall verify that grading and construction plans include the following requirements:

- Ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved.
- Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturers' standards.
- Construction staging areas shall be located away from off-site sensitive uses during the later phases of project development.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.
- The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.
- A sign, legible at a distance of 50 feet, shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number for the "noise disturbance coordinator."
- The Construction Manager shall be responsible for responding to any local complaints about construction noise. The Construction Manager shall determine the cause of the noise complaint (e.g.,

starting too early, bad muffler, etc.) and shall be required to implement reasonable measures to reduce noise levels. All signs posted at the construction site shall list the telephone number for the Construction Manager.

Implementation of Mitigation Measure NOI-1 would reduce the level of the potential impact by requiring that the project contractor implement best practices for reducing construction noise, including, but not limited to, maximizing the distance between noise sources and sensitive receptors during construction activities, equipping construction equipment with properly operating and maintained noise mufflers, and establishing a noise disturbance coordinator for the proposed project. Therefore, with implementation of Mitigation Measure NOI-1, this impact would be less than significant with mitigation incorporated.

Operational Noise Impacts. The project would generate long-term noise impacts from both traffic and stationary noise sources, as discussed below.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity. A characteristic of sound is that a doubling of a noise source is required in order to result in a perceptible (3 dBA or greater) increase in the resulting noise level.

Trip generation rates for the project were based on the trip generation analysis, which indicates that the project would generate approximately 1,760 net new trips. The adjacent Grant Line Road carries approximately 17,602 average daily trips. Project trips would represent a small increase in noise level, up to approximately 0.4 dBA CNEL based on the following equation:

$$Change\ in\ (dBA) = 10 * \log_{10}\left(\frac{Current\ Volume}{\text{Future Volume}}\right)$$

Therefore, project daily trips would not result in a perceptible noise increase along any roadway segment in the project vicinity; therefore, impacts associated with traffic noise would be less than significant.

Stationary Noise Impacts. The proposed project would renovate an existing community park, which could result in an increase in ambient noise levels in the vicinity of the project area associated with outdoor play, parking lot noise, and mechanical equipment at the Multi-Generational Recreation Center.

Outdoor Facilities. Implementation of the proposed project could result in the shifting of noise levels in the vicinity of the project site associated with the following adjusted facilities:

- Multi-functional lawn

- Playground and splash pad
- Dog Park
- Skate Park
- Basketball Court

The proposed uses are expected to be similar to those of the existing community park. The proposed project does not contain uses which are expected to utilize amplified speech or music and would not host sporting events. Any instances in which noise levels generated result in a disturbance, the City's Municipal Code would be utilized to minimize the operational impacts which are classified as nuisance issues.

Multi-Generational Recreation Center. It is expected that the proposed recreation center would install heating, ventilation, and air conditioning (HVAC) equipment. It is expected that the equipment installed would comply with the City's noise standards of 55 dBA L_{eq}. The specific design of onsite mechanical equipment associated with the proposed structure has not yet been determined. However, mechanical equipment systems would typically be shielded from direct public exposure and usually housed on rooftops, within equipment rooms, or within exterior enclosures. The use of building mechanical systems is typically intermittent, would likely be limited to the daytime hours of operation, and would be largely masked by ambient traffic noise levels.

In addition to building mechanical equipment, the proposed recreation center would include various noise-generating interior recreational uses, including gymnasiums, exercise rooms, and multi-purpose rooms. In general, noise generated by interior recreational activities would typically not be detectable within approximately 50 feet of the exterior of the structure. Predicted noise levels at the nearest noise-sensitive land uses would be largely masked by ambient traffic noise levels and would not be anticipated result in a significant increase in ambient noise levels that would exceed the City's noise standard of 55 dBA L_{eq}.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), rail activity, and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of older buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The roadways surrounding the project area, including Grant Line Road and West Kavanagh Avenue, are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur, and no vibration impact analysis of on-road vehicles is necessary.

The following vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for structural damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage.

Construction Vibration. Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The FTA Transit Noise and Vibration Impact Assessment guidelines indicate that a vibration level up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV.

Table 4. shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 4., bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels.

Table 4.13.G: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_V (VdB)[a]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2018).
[a] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = micro-inches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$
$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As shown in Table 4.13.D, above, the threshold at which vibration levels would result in annoyance would be 78 VdB for daytime residential uses. As shown in Table 4.13.E, the FTA guidelines indicate that for a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV. The reference distance for potential vibration annoyance impacts at nearest receptors is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses, while the reference distance for potential construction vibration damage impacts at nearest receptor is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.

For potential construction vibration annoyance, vibration levels are expected to approach 67 VdB at the closest residential uses located approximately 120 feet southeast of the center of construction activities, which is below the 78 VdB threshold for annoyance.

For potential construction vibration damage, the closest surrounding buildings to the project site include the existing residential uses located approximately 10 feet southeast of the project site boundary. At 10 feet, the structure would experience vibration levels of up to 0.352 PPV in/sec. This vibration level at the nearest building from construction equipment would exceed the 0.2 PPV in/sec damage threshold considered safe for non-engineered timber and masonry buildings, which would result in a potentially significant impact. Vibration levels at all other buildings would be lower. With

implementation of Mitigation Measure NOI-2, impacts associated with construction vibration would be less than significant.

Mitigation Measure NOI-2

Construction Vibration Damage. Due to the close proximity to surrounding structures, the City Engineer of the City of Tracy shall verify prior to issuance of demolition or grading permits, that the approved plans require that the construction contractor shall implement the following mitigation measures during project construction activities to ensure that damage does not occur at surrounding structures:

- A 15-foot buffer between existing structures and the Project site area shall be clearly delineated with stakes, fencing or other conspicuous boundary markings, to outline the area in which the use of heavy equipment shall be avoided.
- The use of heavy construction shall be avoided within 15 feet of existing surrounding structures.
- However, if the use of heavy equipment is required within 15 feet of surrounding structures, the following measures should be employed:
    - Identify structures that are located within 15 feet of heavy construction activities and that have the potential to be affected by ground-borne vibration. This task shall be conducted by a qualified structural engineer as approved by the City's Director of Community Development, or designee.
    - Develop a vibration monitoring and construction contingency plan for approval by the Director of Community Development, or designee, to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits.
    - At a minimum, monitor vibration during initial demolition activities. Monitoring results may indicate the need for more or less intensive measurements.
    - When vibration levels approach limits, suspend construction and implement contingencies as identified in the approved

vibration monitoring and construction contingency plan to either lower vibration levels or secure the affected structures.

Implementation of Mitigation Measure NOI-2 would reduce the level of the potential impact through the development and implementation of a vibration monitoring and construction contingency plan; monitoring of vibration during site preparation activities; and suspension of construction and implementation of contingencies, if needed. This process would ensure that damage does not occur at surrounding structures should heavy equipment be necessary within 15 feet of surrounding structures. Therefore, with implementation of Mitigation Measure NOI-2, this impact would be less than significant with mitigation incorporated.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ***(No Impact)***

The project area is not located within an airport land use plan, or within two miles of a public airport or public use airport. The closest airport to the project site is Tracy Municipal Airport, which is located approximately 4.6 miles south of the project site. Based on Figure 9-2 of the City's General Plan, the site does not lie within the 65 dBA CNEL noise contour or within the 2028 noise exposure contour-marginal effect. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels due to the proximity of a public airport and there would be no impact.

4.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

*a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? **(Less Than Significant Impact)***

The proposed project would develop a new recreation center and improve El Pescadero Park for use by existing residents of Tracy. No new housing, commercial, or industrial space would be developed as part of the proposed project. The proposed project would not result in the conversion of adjacent land uses or provide access to previously inaccessible areas. It would not provide additional major infrastructure or increase the capacity of the existing water system. Therefore, the proposed project would not directly or indirectly induce substantial population growth.

The proposed project would be undertaken to provide the residents of Tracy with a new recreation center and improved park facilities and parking. The proposed project does not include residential units and would not directly induce population growth on the project site. The proposed recreation center would provide employment for up to 25 [full-time employees. A fraction of these employees may move to the area solely for reasons of employment, although employees would likely commute from various locations in Tracy. Therefore, the proposed project would not directly or indirectly induce substantial population growth on the site or in the surrounding area through the increase in employment on the site. This impact would be less than significant.

*b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? **(No Impact)***

The project site is currently developed with park uses and public facilities, which do not include any residential units. Implementation of the proposed project would not result in the displacement of existing housing. Therefore, the proposed project would have no impact related to the displacement of homes.

4.15 PUBLIC SERVICES

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

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection? ***(Less Than Significant Impact)***

The South San Joaquin County Fire Authority (SSJCFA) provides fire protection and life and safety services to Tracy from seven fire stations and one Fire Administration building within a 170 square mile jurisdictional area. Four stations are located within the incorporated boundaries of Tracy while three additional fire stations are located within the boundaries of the Tracy Rural Fire Protection District. The SSJCFA is currently staffed with 102 employees and 5 civilian part-time staff. There were 876 total reported incidents in the month of November 2022. Incidents requiring emergency medical services comprised 65 percent of all calls for service.[63] The closest fire station to the project site is Fire Station 92 (1035 East Grant Line Road), which is located approximately 1 mile east of the project site.

The proposed project would construct a new recreation center that would provide programming to better serve the community, and thus could result in an increase in use and related daytime population of the project site, thereby incrementally increasing the demand for emergency fire service and emergency medical services compared to existing conditions. However, the proposed project would be required to comply with all applicable codes for fire safety and emergency access.

[63] South San Joaquin Fire Authority. 2022. Monthly Fire Chief Update. November. Website: https://www.sjcfire.org/home/showpublisheddocument/687/638059384614270000 (accessed January 24, 2023).

In addition, the SSJCFA would also review the project site plans to ensure that adequate emergency access is provided prior to issuance of building permits.

The SSJCFA would continue providing services to the project site and would not require additional firefighters to serve the proposed project. The construction of a new or expanded fire station would not be required because the proposed project would include the development of a recreation use within an existing park site and would not result in a permanent population increase within Tracy, as noted in Section 4.14, above. The proposed project would not result in a significant impact on the physical environment due to the increase in demand for fire protection and life safety services, and the potential increase in demand for services is not expected to adversely affect existing response times to the site or within Tracy. Therefore, construction and operation of the proposed project would have a less-than-significant impact on fire protection and safety services and facilities.

ii. Police protection? ***(Less Than Significant Impact)***

The Tracy Police Department (TPD) provides police protection services within the City. The TPD headquarters is located at 1000 Civic Center Drive, which is approximately 1.3 miles southeast of the project site. With a current population of 95,387,[64] the TPD employs 136 total law enforcement officers and 89 sworn-in officers.[65] Existing staffing levels for the TPD are approximately 0.89 sworn-in officers per 1,000 residents. The proposed project would not substantially result in a direct or indirect increase in population within Tracy. The proposed project would result in an increase in the daytime population of the project site and incrementally increase demand for emergency police services to the project site compared to existing conditions. However, the TPD would continue to provide services to the project site and would not require additional officers to serve the project site. The construction of new or expanded police facilities would not be required. In addition, it is anticipated that increased activity and use of the park site, resulting from development of the new recreation center would act as a deterrent to current illegally activity at the park (e.g., homeless encampments). Therefore, the proposed project would not result in a substantial adverse impact associated with the provision of additional police facilities or services, and impacts to police services represent a less-than-significant impact.

iii. Schools? ***(No Impact)***

The Tracy Unified School District (TUSD) comprises three comprehensive high schools, two alternative education high schools, one community school, two middle schools, four K-8 schools, and seven K-5 elementary schools. The TUSD currently serves approximately 16,000 students.[66] The proposed project does not include the construction of any new residential uses. As described in Section 4.14, Population and Housing, the proposed project would not substantially induce housing

64 United States Census Bureau. 2022. U.S. Census QuickFacts, City of Tracy Population Estimates. July 1. Website: https://www.census.gov/quickfacts/tracycitycalifornia (accessed January 24, 2022).

65 Federal Bureau of Investigation (FBI). 2018. California Full-Time Law Enforcement Employees by City. Website: https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/tables/table-78/table-78-state-cuts/california.xls (accessed January 24, 2023).

66 Tracy Unified School District. n.d. Schools. Website: https://www.tracy.k12.ca.us/schools (accessed January 24, 2023).

or population growth, either directly or indirectly, within Tracy. Therefore, the proposed project would not result in an increase in the number of school-age children in the area. As such, the proposed project would not increase demand for schools, and no impact would occur.

*iv. Parks? **(Less Than Significant Impact)***

The project site consists of the existing El Pescadero Park, which includes the Cora K-9 Dog Park, the El Pescadero Skate Park, a playground, basketball courts, a restroom and drinking fountain, parking, and an open lawn area. As a part of the proposed project, improvements would be made to El Pescadero Park, including the relocation and renovation of the skate park, dog park, and basketball courts as well as construction of a new recreation center within the project site. During construction, portions of El Pescadero Park would be inaccessible during construction of the proposed project; therefore, slightly increasing demand for other nearby parks. However, this impact would be temporary in nature and would subside after construction of the proposed project is complete. Therefore, the proposed project would have a less-than-significant impact related to the provision of park facilities.

*v. Other public facilities? **(No Impact)***

As noted above, the proposed project does not include the construction of any new residential uses and would not substantially induce housing or population growth, either directly or indirectly, within Tracy. The multi-generational recreation center is intended to supplement the existing Community Center and Senior Center with increased space for community recreation and gathering opportunities. Therefore, the proposed project would not result in increased demand for other public facilities (e.g., libraries or community centers), and no impact would occur.

4.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☒	☐	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ***(Less Than Significant Impact)***

The proposed project would temporarily increase the use of other parks and recreation facilities during a portion of the construction period because access to the existing park would be limited during this time. These parks and recreation facilities could include the Ritter Family Ball Park, Kenner Park, Dr. Powers Park, Lincoln Park, and other dog parks in the area, including Mossdale Landing Community Park in Lathrop and Manteca Dog Park in Manteca. The increased use at surrounding parks and recreational facilities would be temporary in nature and would subside after construction of the proposed project is complete. Additionally, the proposed multi-generational recreation center may decrease use at other parks and recreation facilities once the project is complete because the proposed project would provide additional recreational opportunities for the community. Therefore, the proposed project would have a less-than-significant impact on existing parks or other recreational facilities.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ***(Less Than Significant with Mitigation Incorporated)***

The proposed project would renovate and improve an existing City park. Proposed improvements include development of a new recreation center, the renovation and relocation of existing recreational facilities, and the construction of associated landscape and parking improvements. Potential adverse effects on the environment related to the development of the proposed project have been evaluated in this IS/MND. Implementation of the mitigation measures described in this IS/MND would ensure that proposed improvements would not have an adverse physical effect on the environment. With implementation of the mitigation measures described herein, environmental impacts associated with the construction of proposed recreational facilities would be less than significant with mitigation incorporated.

4.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

*a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? **(Less Than Significant Impact)***

The City of Tracy General Plan established Objective CIR-1.3, which determines that the City should adopt level of service (LOS) standards that provide a high level of mobility and accessibility for all modes, residents, and workers. Under this objective, Policy P1 strives to maintain LOS D or better on all streets and intersections with some exceptions such as allowing LOS E on streets and intersections within 0.25 mile of any freeway and within the Downtown and Bowtie areas. Based on an evaluation of LOS at intersections surrounding the project site, it was determined that the target LOS established by Objective CIR-1.3 Policy P1 is maintained with implementation of the proposed project.

Short-Term Construction Impacts. Construction is anticipated to require approximately 12 months. Construction would require use of typical construction equipment for preparation of the site and construction of the new recreation center. Construction would occur during daylight hours, from approximately 7:00 a.m. to 7:00 p.m., daily. Construction staging would occur on the project site. Construction workers, equipment and deliveries would access the site via Grant Line Road (at Parker Avenue) and Kavanagh Avenue. Given the size of the project site, it is anticipated that fewer than 100 construction workers would be required on any given day, resulting in fewer than 100 peak hour trips, which is less than the traffic generated during operation of the project. Therefore, the traffic effects during construction would be equal to or less than the operational effects analyzed below.

Operational Impacts. The project would improve El Pescadero Park by reconstructing two existing park elements (the dog park and skate park) in new locations, constructing a new 52,244-square-foot recreation center, expanding the existing parking lot from 58 spaces to approximately 190 spaces, and extending an internal roadway from the parking lot to Kavanagh Avenue. The only project element with potential new travel demand not present in the existing condition is the proposed recreation center. Trip generation rates provided in the Institute of Transportation

Engineers (ITE) *Trip Generation Manual*, Eleventh Edition[67] identify vehicle trips associated with various land uses based on surveys of similar sites around the country. Data for the trip generating characteristics of a recreational community center (similar to the proposed project) are available in this reference. As shown in Table 4.17.A, application of the ITE trip rates for a recreational community center result in an estimate of 1,506 new daily trips to and from El Pescadero Park including 100 that would occur in the AM peak hour and 131 that would occur in the PM peak hour.

Table 4.17.A: Trip Generation Summary

Land Use (Land Use Code)	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Recreational Community Center (495)		TSF	28.82	1.26	0.65	1.91	1.18	1.32	2.50
Trip Generation									
Multi-generational Recreation Center	52.244	TSF	1,506	66	34	100	62	69	131

[1] Trip rates referenced from the ITE *Trip Generation Manual*, 11th Edition
ADT = average daily trips
TSF = thousand square feet
ITE = Institute of Transportation Engineers

Roadway and intersection turn volume data was collected in the vicinity of the project. These data were collected on a typical weekday, Thursday, March 16, 2023. Traffic volume data is provided in Appendix C. Table 4.17.B shows the daily traffic volume currently using area roadways.

The proposed project includes the extension of a roadway accessing parking areas to Kavanagh Avenue. Approximately 25 of the total 190 parking spaces would be located along this internal roadway. Approximately 25 parallel parking spaces are located along the south side of Kavanagh Avenue adjacent to the park. It is anticipated that some patrons would park in these areas and approach the project site from Kavanagh Avenue. To further distribute the project traffic, existing traffic data and assigned turning movements were evaluated based on existing traffic patterns.

The resulting daily traffic volume on the surrounding roadways, without and with project traffic, is shown in Table 4.17.B. The traffic volumes are within the typical daily traffic volume for these classifications of roadway.

Table 4.17.B: Roadway Traffic Volume

	Existing Daily Traffic	Project Daily Traffic	Existing Plus Project Daily Traffic
Tracy Boulevard between Kavanagh Avenue and Grant Line Road	22,260	206	22,466
Kavanagh Avenue between Tracy Boulevard and Holly Drive	2,941	188	3,129
Holly Drive between Kavanagh Avenue and Grant Line Road	7,575	168	7,743
Grant Line Road between Tracy Boulevard and Holly Drive	17,602	678	18,280

[67] Institute of Transportation Engineers (ITE). 2021. *ITE Trip Generation*, Eleventh Edition.

The project would create a new intersection on Kavanagh Avenue created by the extension of an internal roadway from the parking area. This new intersection is close to the existing intersection of Elsinore Drive/Kavanagh Avenue. Although it is offset by approximately 40 feet, vehicles approaching from the north or the south would likely wait for each other to pass before entering Kavanagh Avenue and this analysis treats the offset legs as one intersection (Intersection #7).

This LOS analysis was conducted using Highway Capacity Manual (HCM)[68] methodology within Synchro traffic analysis software consistent with San Joaquin County standards. Existing intersection turn volume data was collected simultaneous with roadway traffic volume data. Project traffic volumes during the AM and PM peak hour were overlaid on the existing traffic volumes to develop the existing plus project condition. Intersection LOS worksheets are provided in Appendix B. Table 4.17.C summarizes the analysis results.

Table 4-17.C: Vehicle Level of Service Summary

Intersection	Existing No Project				Existing Plus Project				Change With Project	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	AM	PM
1. Tracy Blvd/Kavanagh Ave	12.0	B	13.4	B	12.1	B	13.5	B	0.1	0.1
2. Tracy Blvd/Grant Line Rd	31.7	C	41.3	D	32.5	C	43.4	D	0.8	2.1
3. Buthmann Ave/Kavanagh Ave[1]	8.4	A	8.1	A	8.5	A	8.1	A	0.1	0
4. Buthmann Ave/Grant Line Rd[1]	18.0	C	16.5	C	18.5	C	17.1	C	0.5	0.6
5. Coventry Dr/Kavanagh Ave[1]	9.5	A	9.1	A	9.5	A	9.1	A	0	0
6. Dovenshire Dr/Kavanagh Ave[1]	9.6	A	9.1	A	9.6	A	9.2	A	0	0.1
7. Elsinore Dr/Kavanagh Ave[1]	9.5	A	9.3	A	9.7	A	9.6	A	0.2	0.3
8. Parker Ave/Grant Line Rd	33.9	C	37.8	D	34.1	C	38.6	D	0.2	0.8
9. Holly Dr/Kavanagh Ave[1]	9.1	A	9.6	A	9.1	A	9.7	A	0	0.1
10. Holly Dr/Grant Line Rd	23.9	C	23.9	C	24.4	C	24.8	C	0.5	0.7

Source: Compiled by LSA (2023) using Synchro 11 modeling software.
[1] Unsignalized intersection
LOS = level of service sec = seconds

As Table 4.17.C shows, the analyzed intersections operate at satisfactory LOS in the existing condition and are anticipated to continue to operate at satisfactory LOS with the addition of project traffic.

Because the surrounding intersections would continue to operate consistent with Objective CIR-1.3, Policy P1 with the addition of project traffic and the project does not interfere with transit, bicycle, or pedestrian facilities, the project would have a less-than-significant impact related to conflict with

[68] Transportation Research Board of the National Academies. 2016. HCM Sixth Edition Highway Capacity Manual.

a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? ***(Less Than Significant Impact)***

CEQA Guidelines §15064.3, subdivision (b) seeks to evaluate a project's potential impact related to its vehicle miles traveled (VMT). The Draft Citywide Roadway and Transportation Master Plan[69] includes guidelines for analysis of VMT. The guidelines are consistent with the State of California Governor's Office of Planning and Research *Technical Advisory On Evaluating Transportation Impacts in CEQA* dated December 2018[70] (Technical Advisory).

The City's draft guidelines provide screening criteria for types of projects that would be anticipated to have a less than significant impact on VMT and not require further evaluation. These include small projects generating fewer than 110 trips per day, projects near high quality transit, local serving retail, affordable housing, local essential services, projects located in VMT efficient areas, and redevelopment projects with overall lower VMT.

Local Essential Services, including government uses with in-person services such as the proposed project, generate non-discretionary trips. Expanding these types of uses can shorten the trips by putting options for these uses closer to residents, thus resulting in an overall reduction in VMT. For example, the Larch Clover Community Center and the Tracy Community Center are located more than a mile from the project site. Residents currently using these facilities who are located closer to the existing facilities than the project site would continue to use the existing facilities. Residents located closer to the project site than the existing facilities would visit the proposed project resulting in a shorter trip and fewer VMT.

The draft guidelines suggest that a local essential service, such as the proposed project, could be presumed to cause a less-than-significant impact if it is less than 50,000 square feet, unless the nature of the service is regionally focused as determined by the City. The proposed 52,244-square-foot recreation center (as measured by the outside walls) would have an inside assignable area of 46,687 square feet, which is less than the size stated in the draft guidelines.

Furthermore, the proposed project would present an intervening use as described above and is anticipated to result in a redistribution of trips, resulting in shorter trips. Therefore, in accordance with the Technical Advisory description of improved destination proximity, the project impacts related to CEQA Guidelines section 15064.3, subdivision (b) would be less than significant.

69 City of Tracy. 2022. *DRAFT Citywide Roadway and Transportation Master Plan*. August.

70 State of California Governor's Office of Planning and Research. 2018. *Technical Advisory On Evaluating Transportation Impacts in CEQA.* April. Website: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf (accessed May 15, 2023).

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***(Less Than Significant Impact)***

As mentioned previously, the proposed project would expand the parking area, maintain vehicle access at the main entrance at Parker Avenue, and extend a new access point from the parking area to Kavanagh Avenue. This new access point would be offset with the existing intersection of Elsinore Drive with Kavanagh Avenue. Local bicycle/pedestrian access at Kavanagh Avenue roughly opposite Coventry Drive and Dovenshire Drive would be retained. The new access point at Kavanagh Avenue would be constructed consistent with City design standards with signing and striping consistent with the California Manual on Uniform Traffic Control Devices (MUTCD).[71] As shown in Table 4.17.C, the project access intersections are anticipated to operate at satisfactory LOS with the addition of project traffic. Therefore, the project would not create a hazard due to a geometric design feature or dangerous intersection. Travel modes to the proposed project, including pedestrian, bicycle, and automobile are compatible with the surrounding neighborhood and infrastructure. Therefore, the proposed project would result in a less-than-significant impact related to hazards associated with a design feature or incompatible uses.

d. Would the project result in inadequate emergency access? ***(Less Than Significant Impact)***

The proposed project would provide access for emergency vehicles from Kavanagh Avenue and Grant Line Road (at Parker Avenue). As shown in Table 4.17.B, the proposed project would add a modest amount of traffic to roadways that operate within the daily traffic volume anticipated for local roadways. Therefore, the project's impact would be less than significant.

[71] California State Transportation Agency and Department of Transportation. 2023. California Manual on Uniform Traffic Control Devices 2014 Revision 7. March.

4.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. ***(Less Than Significant with Mitigation Incorporated)***

Assembly Bill (AB) 52, which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process, and equates significant impacts to "tribal cultural resources" with significant environmental impacts. PRC Section 21074 states that "tribal cultural resources" are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:
    - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

A "historical resource" (PRC Section 21084.1), a "unique archaeological resource" (PRC Section 21083.2(g)), or a "nonunique archaeological resource" (PRC Section 21083.2(h)) may also be a tribal cultural resource if it is included or determined to be eligible for inclusion in the California Register.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency's notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency's notification list. California Native American tribes must be recognized by the NAHC as traditionally and culturally affiliated with the project site and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3).

Tribal Outreach and Consultation. The City sent letters describing the proposed project and maps depicting the project site to Native American tribes that the NAHC identified as traditionally and culturally affiliated with the project area in February 2023. To date, no California Native American tribes formally requested consultation with the City of Tracy, consistent with the requirements of PRC 21080.3.1.

Tribal Cultural Resources. As discussed in Section 4.5, Cultural Resources, a records search was conducted at the Northwest Information Center of the California Historical Resources Information System, which identified no archaeological or historical resources within the boundary of the project site.

The project site is currently developed with an existing park. No known significant archaeological or tribal cultural resources are located within the project site. Additionally, there are no tribal cultural

resources within the project site that have been determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource defined as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register or in a local register of historical resources as defined in PRC Section 5020.1(k). With implementation of Mitigation Measure CULT-1, as detailed in Section 4.5, Cultural Resources, and compliance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the PRC, the potential construction-period discovery of previously unidentified human remains, which may be of tribal origin, would be reduced to a less-than-significant level.

4.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? ***(Less Than Significant Impact)***

A variety of local and regional purveyors in this area provide and maintain utility and service system facilities associated with electricity, water, stormwater, wastewater, solid waste, and communications. These existing services and potential impacts to these services are discussed below.

Wastewater. The City of Tracy maintains existing sewer lines within the vicinity of the project site. The proposed project includes the installation of a new 8-inch-diameter wastewater line that would connect to the existing 8-inch-diameter main line within West Kavanagh Avenue. The new sanitary sewer line would be constructed in conformance with City standards, and its construction would not cause significant environmental effects.

Water. The City provides water service to all of its residents and to approximately 400 residents of the Larch-Clover County Services District.[72] The City also provides water service to the unincorporated Patterson Business Park. The City obtains water from both surface water and groundwater sources. The City purchases imported surface water from two wholesale water suppliers: the United States Bureau of Reclamation, which supplies the City with Central Valley Project (CVP) water via the Delta-Mendota Canal and the South San Joaquin Irrigation District, which

[72] City of Tracy. 2005. *City of Tracy General Plan Draft Environmental Impact Report*. October 4.

supplies Stanislaus River water through the South County Water Supply Project (SCWSP).[73] The City's purchases of surface water are supplemented by local groundwater. Approximately 6 percent of the City's water supply came from local groundwater supply wells during 2020.[74] The City of Tracy's existing water system facilities include a water treatment plant, pump stations, wells, water mains, and storage reservoirs.

As discussed in Section 4.19.b, below, the proposed project would not substantially increase demand for water and would therefore not exceed the capacity of existing water treatment facilities. The proposed project would not require the construction of new water treatment facilities or the expansion of existing facilities other than those already planned. The proposed project would include the installation of new water lines connecting to the existing 6-inch-diameter water service line that currently traverses the site from north to south. The proposed project would connect directly to existing mains, which have sufficient capacity to accommodate the proposed project. Therefore, the impact of the proposed project on water infrastructure would be less than significant.

Stormwater. The proposed storm drainage infrastructure would discharge into an existing underground storm drain at the northeastern edge of the project site. Stormwater treatment is proposed using a combination of bioretention basins and modular wetlands. The number of drainage management areas would be determined as part of the final design. The stormwater treatment area's bioretention basins would be vegetated with a layer of bioretention special soil and a layer of permeable rock. Overflow would be discharged from the stormwater treatment areas to the on-site storm drain system, which would connect to an existing 12-inch-diameter storm drain pipe at the northeast corner of the site. As discussed in Section 4.10, Hydrology and Water Quality, implementation of hydromodification management measures in compliance with Provision E.12 of the Phase II MS4 Permit would ensure that post-project runoff does not exceed estimated pre-project rates and durations. Therefore, the proposed project would not require the construction of any new or expanded stormwater infrastructure beyond that which is already analyzed as a part of the proposed project, and this impact would be less than significant.

Electricity. The project site is currently served by electrical, and telecommunications infrastructure. The proposed project would connect directly to existing infrastructure and therefore would not require any new or expanded facilities.

Because the proposed project would connect to existing utility services within or adjacent to the project site, the relocation or reconstruction of new or expanded water, wastewater system, stormwater drainage, electric power, or telecommunications facilities would not be required, and this impact would be less than significant.

[73] City of Tracy. 2021. *City of Tracy Urban Water Management Plan 2020*. June.
[74] Ibid.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? ***(Less Than Significant Impact)***

The City's current supply sources include purchased water from the CVP and SCWSP, as well as groundwater from the local Tracy Subbasin. The City's 2020 Urban Water Management Plan (UWMP) describes the existing and planned sources of water available in the water system service area in 5-year increments for the next 20 years. Total potable water demand in 2020 was 19,527 acre-feet (AF). During 2016 and 2020, the City's total supplies ranged from 15,360 acre-feet per year (AFY) to 19,527 AFY. On average, 95 percent of the supplies were from purchased water. The City estimates that approximately 33,868 AFY of potable water supply and 6,300 AFY of non-potable water supply will be available in 2045 under normal conditions.[75] The City is expected to have adequate water supplies during normal years to meet its projected demands through 2045 and has developed strategies and actions to address projected shortfalls during dry and multiple dry years.

At buildout, the proposed project would have an average water demand of approximately 19,865 gallons per day (gpd) including 4,500 gpd for the proposed recreation center, 14,927 gpd for proposed park irrigation, 160 gpd for the proposed splash pad and an additional 278 gpd for park facilities (e.g., restrooms and drinking fountains). This estimated water demand, which equates to 22 AFY represents approximately 0.05 percent of the City's anticipated water supply. The proposed project's incremental increase in water demand would be included in the anticipated growth within the City. Therefore, existing water entitlements are sufficient to serve the proposed project, and impacts related to water supply would be less than significant.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ***(Less Than Significant Impact)***

Wastewater service for the project site is provided by the City of Tracy. The City operates and maintains the wastewater collection system, which consists of approximately 210 miles of sanitary sewer pipelines ranging from 4 inches to 48 inches in diameter, as well as three wastewater lift stations, and the Wastewater Treatment Plant (WWTP).[76] The City has a municipal wastewater system handling both domestic and industrial wastewater. Wastewater flows toward the northern part of Tracy, where it is treated at the WWTP and then discharged into the Old River in the southern Sacramento-San Joaquin Delta.[77]

The WWTP, which is operated by the City, has a design capacity of 9.0 million gallons per day (mgd) and a corresponding NPDES permit that allows the City to discharge up to 9.0 mgd average dry weather flow of treated effluent to the Old River.[78] The WWTP currently treats approximately 7.35 mgd of average dry weather influent flows. The influent is comprised of both municipal and industrial waste streams, with the primary industrial contributor being Leprino Foods. The treatment

75 Ibid.
76 Carollo Engineers, Inc. 2022. *City of Tracy Wastewater Master Plan Update*. September.
77 City of Tracy. 2005. City of Tracy General Plan Draft Environmental Impact Report. October 4.
78 Ibid.

facility operates municipal, industrial, and solids treatment processes.[79] According to the Wastewater Master Plan, the current WWTP capacity is not sufficient for the existing flows, in particular the outfall and secondary treatment system. However, both the outfall pipeline and secondary treatment system are currently undergoing expansion, which will increase the capacity to meet current influent flows.[80]

The proposed project would include the redevelopment of the existing park site and construction of the proposed recreation center. In total, the proposed project would add approximately 52,244 square feet of new building space to the project site. The proposed project would generate additional domestic wastewater, which would be treated by the WWTP. The increase in daytime population during operation hours that would result from the proposed project would incrementally increase the amount of wastewater generated on the project site. Additional wastewater generated by the proposed project would be minimal when compared to the average daily flow from the city to the WWTP and would not exceed the capacity of the WWTP. Therefore, the proposed project would have a less-than-significant impact related to wastewater treatment requirements.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ***(Less Than Significant Impact)***

Solid waste and recycling pickup and disposal in the City is provided by Tracy Delta Solid Waste Management, Inc. (Tracy Disposal). Solid waste, recycling, and organics collected by Tracy Disposal are transported to the Tracy Material Recovery Facility (MRF) and Transfer Station on South MacArthur Drive. The Tracy MRF and Transfer Station has a maximum daily permitted throughput of 1,800 tons per day.[81] Solid waste is then transported to the Foothill Sanitary Landfill, which is 48 miles northeast of Tracy. Foothill Sanitary Landfill has a maximum daily permitted throughput of 1,500 tons per day and a remaining capacity of 125 million cubic yards. Foothill Sanitary Landfill's estimated closure date is currently January 2082.[82]

On average, public/institutional uses generate 0.007 pound per square foot or garbage per day.[83] Therefore, because the proposed project would result in the addition of 52,244 square feet of building space, the proposed project would result in the generation of 366 pounds of solid waste per day, or 0.18 ton. Therefore, the proposed project would reduce the maximum daily permitted throughput of the Tracy MRF and Transfer Station by 0.01 percent, and Foothill Sanitary Landfill by

79 Carollo Engineers, Inc. 2022. City of Tracy Wastewater Master Plan Update. September.

80 Ibid.

81 California Department of Resources Recycling and Recovery (CalRecycle). 2019. Solid Waste Information System Facility Detail: Tracy Material Recovery & T.S. (39-AA-0024). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1450?siteID=3115 (accessed May 6, 2023).

82 California Department of Resources Recycling and Recovery (CalRecycle). 2019. Facility/Site Summary Details: Foothill Sanitary Landfill (39-AA-0004). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1424?siteID=3097 (accessed May 6, 2023).

83 California Department of Resources Recycling and Recovery (CalRecycle). 2019. Estimated Solid Waste Generation Rates. Website: https://www2.calrecycle.ca.gov/wastecharacterization/general/rates (accessed May 6, 2023).

0.012 percent. As noted above, Foothill Sanitary Landfill has adequate capacity to serve the proposed project. As such, the proposed project would be not generate solid waste in excess of State or local standard, or in excess of the capacity of the local infrastructure, and impact associated with the disposition of solid waste would be less than significant.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ***(Less Than Significant Impact)***

The proposed project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste. Also refer to Section 4.19.d. Therefore, the proposed project would have a less-than-significant impact related to solid waste regulations.

4.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

*a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? **(Less Than Significant Impact)***

The project site and adjacent areas are not located in a VHFHSZ as mapped by CAL FIRE[84] or located within any State Responsibility Areas (SRAs) for fire service. Additionally, the project site is not located within an area identified by CAL FIRE as a community at risk for wildland fire. Due to the nature of the proposed project, no impairment or interference with emergency response or emergency evacuation plans would occur (as described in Section 4.9.f). Therefore, this impact would be less than significant.

*b. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? **(Less Than Significant Impact)***

The proposed project would consist of the development of a new recreation center and redevelopment of a neighborhood park within an existing residential neighborhood. The proposed project is located in a relatively flat urbanized area with some vegetation along the park perimeter and scattered within the park; however, the project site is not a wildland nor is it close to any wildlands that may pose a fire risk. Additionally, the proposed project would not involve the construction of residential structures. The construction of community structures such as the new

[84] California Department of Forestry and Fire (CAL FIRE). 2022. Fire Hazard Severity Zones in State Responsibility Area. November 21. Website: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildfire-preparedness/fire-hazard-severity-zones/ (accessed May 2023).

recreation center would be for a limited duration of time. Therefore, the proposed project would not exacerbate wildfire risks, and this impact would be less than significant.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? ***(Less Than Significant Impact)***

Refer to Sections 4.20.a and 4.20.b. The project site is located in a developed area within an existing neighborhood park. Construction and operation of the proposed project would not require the installation or operation/maintenance of infrastructure within undeveloped areas that may exacerbate wildfire risks. Therefore, this impact would be less than significant.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? ***(Less Than Significant Impact)***

Refer to Sections 4.20.a and 4.20.b. As described in Chapter 2.0, Project Description, the project site is relatively flat and is not located within an SRA for fire service or VHFHSZ. The proposed project would not expose people or structures to significant risks associated with downslope or downstream flooding or landslides as a result of increased fire hazards or post-fire conditions. This impact would be less than significant.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
(Less Than Significant with Mitigation Incorporated)

Implementation of Mitigation Measure CULT-1 would ensure that potential impacts to cultural resources that could be uncovered during construction activities would be reduced to a less than significant level. Implementation of Mitigation Measures BIO-1 and BIO-2 would ensure that potential impacts to special-status species (e.g., nesting birds and roosting bats) are reduced to a less than significant level. Therefore, with the incorporation of mitigation measures, development of the proposed project would not: (1) degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife species population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; (5) reduce the number or restrict the range of a rare or endangered plant or animal; or (6) eliminate important examples of the major periods of California history. With implementation of the mitigation measures identified herein, this impact would be less than significant with mitigation incorporated.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? ***(Less Than Significant with Mitigation Incorporated)***

The proposed project's impacts would be individually limited and not cumulatively considerable. The potentially significant impacts that can be reduced to a less-than-significant level with implementation of recommended mitigation measures include the topics of air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, and noise. For the topic of air quality, potentially significant impacts to air quality standards would be reduced to less-than-significant levels with implementation of Mitigation Measure AIR-1. For the topic of biological resources, implementation of Mitigation Measures BIO-1 and BIO-2 would ensure that impacts to special-status species are reduced to less-than-significant levels. For the topic of cultural resources, potentially significant impacts to archaeological resources and paleontological resources would be reduced to less-than-significant levels with implementation of Mitigation Measure CULT-1. For the topic of geology and soils, implementation of Mitigation Measure GEO-1 would ensure that impacts associated with paleontological resources would be less than significant. For the topic of greenhouse gas emissions, implementation of Mitigation Measure GHG-1 would ensure that impacts related to electric vehicle charging are reduced to less than significant levels. For the topic of noise, implementation of Mitigation Measures NOI-1 and NOI-2 would ensure that potentially significant impacts associated with construction noise and vibration are reduced to less-than-significant levels.

For the topics of aesthetics, agricultural and forestry resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and service systems, the project would have no impacts or less-than-significant impacts; therefore, the project would not substantially contribute to any potential cumulative impacts for these topics. All environmental impacts that could occur as a result of the proposed project would be reduced to less-than-significant levels through the implementation of the mitigation measures recommended in this document.

Implementation of these measures would ensure that the impacts of the project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of project development. Therefore, this impact would be less than significant with mitigation incorporated.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ***(No Impact)***

The proposed project would not result in any environmental effects that would cause substantial direct or indirect adverse effects to human beings. No impact would occur.

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APPENDIX A

CALEEMOD OUTPUT SHEETS

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Tracy Recreational center Project Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tracy Recreational center Project
Construction Start Date	12/4/2023
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	6.60
Location	301 W Grant Line Rd, Tracy, CA 95376, USA
County	San Joaquin
City	Tracy
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2136
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.11

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

City Park	9.90	Acre	9.90	0.00	431,244	431,244	—	—
Government (Civic Center)	52.2	1000sqft	2.50	52,244	0.00	—	—	—
Parking Lot	190	Space	1.50	76,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Energy	E-16	Require Zero Net Energy Buildings
Water	W-5	Design Water-Efficient Landscapes

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.94	20.9	18.6	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,666	0.14	0.13	3,712
Mit.	0.94	20.9	18.6	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,666	0.14	0.13	3,712
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.51	54.8	37.5	0.09	1.44	7.81	8.93	1.32	3.97	4.99	11,293	0.38	0.78	11,534
Mit.	1.51	54.8	37.5	0.09	1.44	7.81	8.93	1.32	3.97	4.99	11,293	0.38	0.78	11,534
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.66	17.2	13.8	0.03	0.56	0.83	1.40	0.52	0.27	0.79	3,109	0.11	0.14	3,156
Mit.	0.66	17.2	13.8	0.03	0.56	0.83	1.40	0.52	0.27	0.79	3,109	0.11	0.14	3,156
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	3.14	2.52	< 0.005	0.10	0.15	0.25	0.10	0.05	0.14	515	0.02	0.02	523
Mit.	0.12	3.14	2.52	< 0.005	0.10	0.15	0.25	0.10	0.05	0.14	515	0.02	0.02	523
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.87	19.8	17.3	0.03	0.70	0.57	1.27	0.65	0.14	0.79	3,463	0.13	0.13	3,508
2025	0.94	20.9	18.6	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,666	0.14	0.13	3,712
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.15	39.9	29.2	0.05	1.12	7.81	8.93	1.02	3.97	4.99	5,448	0.22	0.05	5,468
2024	1.51	54.8	37.5	0.09	1.44	7.81	8.93	1.32	3.97	4.99	11,293	0.38	0.78	11,534
2025	0.91	21.0	17.9	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,615	0.13	0.13	3,656
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	2.19	1.60	< 0.005	0.06	0.43	0.49	0.06	0.22	0.27	299	0.01	< 0.005	300
2024	0.66	17.2	13.8	0.03	0.56	0.83	1.40	0.52	0.27	0.79	3,109	0.11	0.14	3,156
2025	0.59	13.3	11.4	0.02	0.49	0.40	0.89	0.46	0.10	0.55	2,276	0.08	0.08	2,303

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.01	0.40	0.29	< 0.005	0.01	0.08	0.09	0.01	0.04	0.05	49.5	< 0.005	< 0.005	49.6
2024	0.12	3.14	2.52	< 0.005	0.10	0.15	0.25	0.10	0.05	0.14	515	0.02	0.02	523
2025	0.11	2.42	2.08	< 0.005	0.09	0.07	0.16	0.08	0.02	0.10	377	0.01	0.01	381

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.87	19.8	17.3	0.03	0.70	0.57	1.27	0.65	0.14	0.79	3,463	0.13	0.13	3,508
2025	0.94	20.9	18.6	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,666	0.14	0.13	3,712
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.15	39.9	29.2	0.05	1.12	7.81	8.93	1.02	3.97	4.99	5,448	0.22	0.05	5,468
2024	1.51	54.8	37.5	0.09	1.44	7.81	8.93	1.32	3.97	4.99	11,293	0.38	0.78	11,534
2025	0.91	21.0	17.9	0.03	0.76	0.65	1.41	0.71	0.16	0.87	3,615	0.13	0.13	3,656
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	2.19	1.60	< 0.005	0.06	0.43	0.49	0.06	0.22	0.27	299	0.01	< 0.005	300
2024	0.66	17.2	13.8	0.03	0.56	0.83	1.40	0.52	0.27	0.79	3,109	0.11	0.14	3,156
2025	0.59	13.3	11.4	0.02	0.49	0.40	0.89	0.46	0.10	0.55	2,276	0.08	0.08	2,303
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.01	0.40	0.29	< 0.005	0.01	0.08	0.09	0.01	0.04	0.05	49.5	< 0.005	< 0.005	49.6
2024	0.12	3.14	2.52	< 0.005	0.10	0.15	0.25	0.10	0.05	0.14	515	0.02	0.02	523
2025	0.11	2.42	2.08	< 0.005	0.09	0.07	0.16	0.08	0.02	0.10	377	0.01	0.01	381

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.34	5.42	53.3	0.10	0.09	3.22	3.32	0.09	0.58	0.67	11,264	24.9	0.71	12,135
Mit.	9.34	5.42	53.3	0.10	0.09	3.22	3.32	0.09	0.58	0.67	11,196	24.8	0.71	12,066
% Reduced	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.78	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	10,511	24.9	0.75	11,359
Mit.	7.78	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	10,442	24.9	0.75	11,291
% Reduced	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.26	5.88	45.4	0.10	0.09	3.22	3.31	0.09	0.58	0.67	10,692	24.9	0.73	11,549
Mit.	8.26	5.88	45.4	0.10	0.09	3.22	3.31	0.09	0.58	0.67	10,624	24.9	0.73	11,480
% Reduced	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.51	1.07	8.29	0.02	0.02	0.59	0.60	0.02	0.11	0.12	1,770	4.12	0.12	1,912
Mit.	1.51	1.07	8.29	0.02	0.02	0.59	0.60	0.02	0.11	0.12	1,759	4.12	0.12	1,901
% Reduced	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	1%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.05	5.38	47.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	10,256	0.49	0.50	10,456
Area	2.28	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	181	8.17	0.20	444
Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	9.34	5.42	53.3	0.10	0.09	3.22	3.32	0.09	0.58	0.67	11,264	24.9	0.71	12,135
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.41	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	9,525	0.57	0.54	9,703
Area	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	181	8.17	0.20	444
Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	7.78	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	10,511	24.9	0.75	11,359
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.44	5.85	42.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	9,695	0.53	0.52	9,881
Area	1.82	0.02	2.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.3	< 0.005	< 0.005	11.4
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	181	8.17	0.20	444
Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	8.26	5.88	45.4	0.10	0.09	3.22	3.31	0.09	0.58	0.67	10,692	24.9	0.73	11,549

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.18	1.07	7.79	0.02	0.02	0.59	0.60	0.01	0.11	0.12	1,605	0.09	0.09	1,636
Area	0.33	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	106	0.02	< 0.005	108
Water	—	—	—	—	—	—	—	—	—	—	30.0	1.35	0.03	73.5
Waste	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	1.51	1.07	8.29	0.02	0.02	0.59	0.60	0.02	0.11	0.12	1,770	4.12	0.12	1,912

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.05	5.38	47.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	10,256	0.49	0.50	10,456
Area	2.28	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	113	8.16	0.19	375
Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	9.34	5.42	53.3	0.10	0.09	3.22	3.32	0.09	0.58	0.67	11,196	24.8	0.71	12,066
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.41	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	9,525	0.57	0.54	9,703
Area	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	113	8.16	0.19	375

Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	7.78	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	10,442	24.9	0.75	11,291
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.44	5.85	42.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	9,695	0.53	0.52	9,881
Area	1.82	0.02	2.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	11.3	< 0.005	< 0.005	11.4
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	643	0.10	0.01	649
Water	—	—	—	—	—	—	—	—	—	—	113	8.16	0.19	375
Waste	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	8.26	5.88	45.4	0.10	0.09	3.22	3.31	0.09	0.58	0.67	10,624	24.9	0.73	11,480
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.18	1.07	7.79	0.02	0.02	0.59	0.60	0.01	0.11	0.12	1,605	0.09	0.09	1,636
Area	0.33	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	106	0.02	< 0.005	108
Water	—	—	—	—	—	—	—	—	—	—	18.7	1.35	0.03	62.1
Waste	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	1.51	1.07	8.29	0.02	0.02	0.59	0.60	0.02	0.11	0.12	1,759	4.12	0.12	1,901

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	2.18	1.55	< 0.005	0.06	—	0.06	0.06	—	0.06	290	0.01	< 0.005	291
Dust From Material Movement	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.40	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	48.0	< 0.005	< 0.005	48.2
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	0.86	0.00	0.00	0.15	0.15	0.00	0.03	0.03	153	0.01	0.01	155
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.58	< 0.005	< 0.005	8.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.42	< 0.005	< 0.005	1.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	2.18	1.55	< 0.005	0.06	—	0.06	0.06	—	0.06	290	0.01	< 0.005	291
Dust From Material Movement	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.40	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	48.0	< 0.005	< 0.005	48.2
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.86	0.00	0.00	0.15	0.15	0.00	0.03	0.03	153	0.01	0.01	155
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.58	< 0.005	< 0.005	8.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.42	< 0.005	< 0.005	1.44

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.39	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	51.8	< 0.005	< 0.005	52.0
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.58	< 0.005	< 0.005	8.61

Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	149	0.01	0.01	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.50	< 0.005	< 0.005	1.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.25	< 0.005	< 0.005	0.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.39	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	51.8	< 0.005	< 0.005	52.0
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	8.58	< 0.005	< 0.005	8.61
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	149	0.01	0.01	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.50	< 0.005	< 0.005	1.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.25	< 0.005	< 0.005	0.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	4.01	2.91	0.01	0.11	—	0.11	0.10	—	0.10	542	0.02	< 0.005	544
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.73	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	89.8	< 0.005	< 0.005	90.1
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	171	0.01	0.01	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	5.84	1.30	0.03	0.08	1.17	1.26	0.08	0.32	0.41	4,524	0.10	0.72	4,740
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.4	< 0.005	< 0.005	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.47	0.11	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	372	0.01	0.06	390
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.38	< 0.005	< 0.005	2.42

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	61.5	< 0.005	0.01	64.5

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	4.01	2.91	0.01	0.11	—	0.11	0.10	—	0.10	542	0.02	< 0.005	544
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.73	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	89.8	< 0.005	< 0.005	90.1

Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	171	0.01	0.01	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	5.84	1.30	0.03	0.08	1.17	1.26	0.08	0.32	0.41	4,524	0.10	0.72	4,740
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.4	< 0.005	< 0.005	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.47	0.11	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	372	0.01	0.06	390
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.38	< 0.005	< 0.005	2.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	61.5	< 0.005	0.01	64.5

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	11.7	8.87	0.01	0.43	—	0.43	0.40	—	0.40	1,487	0.06	0.01	1,492
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.14	1.62	< 0.005	0.08	—	0.08	0.07	—	0.07	246	0.01	< 0.005	247
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.15	2.77	0.00	0.00	0.41	0.41	0.00	0.10	0.10	460	0.02	0.02	467
Vendor	0.02	0.77	0.27	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	605	0.01	0.09	635
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.20	2.19	0.00	0.00	0.41	0.41	0.00	0.10	0.10	415	0.03	0.02	421

Vendor	0.02	0.82	0.27	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	606	0.01	0.09	634
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	264	0.01	0.01	268
Vendor	0.01	0.50	0.17	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	376	0.01	0.06	393
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.7	< 0.005	< 0.005	44.4
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	62.2	< 0.005	0.01	65.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.38	11.7	8.87	0.01	0.43	—	0.43	0.40	—	0.40	1,487	0.06	0.01	1,492
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.14	1.62	< 0.005	0.08	—	0.08	0.07	—	0.07	246	0.01	< 0.005	247
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.15	2.77	0.00	0.00	0.41	0.41	0.00	0.10	0.10	460	0.02	0.02	467
Vendor	0.02	0.77	0.27	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	605	0.01	0.09	635
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.20	2.19	0.00	0.00	0.41	0.41	0.00	0.10	0.10	415	0.03	0.02	421
Vendor	0.02	0.82	0.27	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	606	0.01	0.09	634
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	264	0.01	0.01	268
Vendor	0.01	0.50	0.17	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	376	0.01	0.06	393
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.7	< 0.005	< 0.005	44.4
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	62.2	< 0.005	0.01	65.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	11.5	8.70	0.01	0.42	—	0.42	0.39	—	0.39	1,459	0.06	0.01	1,464
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.10	1.59	< 0.005	0.08	—	0.08	0.07	—	0.07	242	0.01	< 0.005	242
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.14	2.54	0.00	0.00	0.41	0.41	0.00	0.10	0.10	450	0.02	0.02	457
Vendor	0.02	0.74	0.25	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	595	0.01	0.09	623

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	2.01	0.00	0.00	0.41	0.41	0.00	0.10	0.10	407	0.01	0.02	412
Vendor	0.02	0.79	0.26	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	596	0.01	0.09	622
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	1.25	0.00	0.00	0.25	0.25	0.00	0.06	0.06	254	0.01	0.01	257
Vendor	0.01	0.47	0.16	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	362	0.01	0.05	379
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	42.0	< 0.005	< 0.005	42.6
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	60.0	< 0.005	0.01	62.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	11.5	8.70	0.01	0.42	—	0.42	0.39	—	0.39	1,459	0.06	0.01	1,464
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.10	1.59	< 0.005	0.08	—	0.08	0.07	—	0.07	242	0.01	< 0.005	242
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.14	2.54	0.00	0.00	0.41	0.41	0.00	0.10	0.10	450	0.02	0.02	457
Vendor	0.02	0.74	0.25	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	595	0.01	0.09	623
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	2.01	0.00	0.00	0.41	0.41	0.00	0.10	0.10	407	0.01	0.02	412
Vendor	0.02	0.79	0.26	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	596	0.01	0.09	622
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	1.25	0.00	0.00	0.25	0.25	0.00	0.06	0.06	254	0.01	0.01	257
Vendor	0.01	0.47	0.16	< 0.005	0.01	0.10	0.10	0.01	0.03	0.03	362	0.01	0.05	379
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	42.0	< 0.005	< 0.005	42.6
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	60.0	< 0.005	0.01	62.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	1,511	0.06	0.01	1,517
Paving	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.55	0.44	< 0.005	0.02	—	0.02	0.02	—	0.02	62.1	< 0.005	< 0.005	62.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	10.3	< 0.005	< 0.005	10.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	125	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.28	< 0.005	< 0.005	5.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.87	< 0.005	< 0.005	0.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	1,511	0.06	0.01	1,517

Paving	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.55	0.44	< 0.005	0.02	—	0.02	0.02	—	0.02	62.1	< 0.005	< 0.005	62.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	10.3	< 0.005	< 0.005	10.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	125	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.28	< 0.005	< 0.005	5.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.87	< 0.005	< 0.005	0.89

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	134	0.01	< 0.005	134
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	134	0.01	< 0.005	134
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.67	0.59	< 0.005	0.04	—	0.04	0.04	—	0.04	82.3	< 0.005	< 0.005	82.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	13.6	< 0.005	< 0.005	13.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.51	0.00	0.00	0.08	0.08	0.00	0.02	0.02	90.0	< 0.005	< 0.005	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.40	0.00	0.00	0.08	0.08	0.00	0.02	0.02	81.3	< 0.005	< 0.005	82.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	51.4	< 0.005	< 0.005	52.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.51	< 0.005	< 0.005	8.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	134	0.01	< 0.005	134
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	134	0.01	< 0.005	134
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.67	0.59	< 0.005	0.04	—	0.04	0.04	—	0.04	82.3	< 0.005	< 0.005	82.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	13.6	< 0.005	< 0.005	13.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.51	0.00	0.00	0.08	0.08	0.00	0.02	0.02	90.0	< 0.005	< 0.005	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.40	0.00	0.00	0.08	0.08	0.00	0.02	0.02	81.3	< 0.005	< 0.005	82.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	51.4	< 0.005	< 0.005	52.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.51	< 0.005	< 0.005	8.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	1.02	0.77	6.88	0.01	0.01	0.46	0.48	0.01	0.08	0.10	1,478	0.07	0.07	1,506
Government (Civic Center)	6.04	4.60	40.8	0.09	0.07	2.76	2.83	0.07	0.50	0.57	8,779	0.42	0.43	8,949
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.05	5.38	47.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	10,256	0.49	0.50	10,456
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

City Park	0.92	0.90	6.28	0.01	0.01	0.46	0.48	0.01	0.08	0.10	1,372	0.08	0.08	1,398
Government (Civic Center)	5.49	5.33	37.3	0.08	0.07	2.76	2.83	0.07	0.50	0.57	8,153	0.49	0.47	8,305
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.41	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	9,525	0.57	0.54	9,703
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.17	0.15	1.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	231	0.01	0.01	236
Government (Civic Center)	1.01	0.91	6.67	0.01	0.01	0.50	0.52	0.01	0.09	0.10	1,374	0.07	0.07	1,400
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.18	1.07	7.79	0.02	0.02	0.59	0.60	0.01	0.11	0.12	1,605	0.09	0.09	1,636

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	1.02	0.77	6.88	0.01	0.01	0.46	0.48	0.01	0.08	0.10	1,478	0.07	0.07	1,506
Government (Civic Center)	6.04	4.60	40.8	0.09	0.07	2.76	2.83	0.07	0.50	0.57	8,779	0.42	0.43	8,949
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7.05	5.38	47.7	0.10	0.09	3.22	3.31	0.08	0.58	0.66	10,256	0.49	0.50	10,456
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

City Park	0.92	0.90	6.28	0.01	0.01	0.46	0.48	0.01	0.08	0.10	1,372	0.08	0.08	1,398
Government (Civic Center)	5.49	5.33	37.3	0.08	0.07	2.76	2.83	0.07	0.50	0.57	8,153	0.49	0.47	8,305
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.41	6.23	43.6	0.09	0.09	3.22	3.31	0.08	0.58	0.66	9,525	0.57	0.54	9,703
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.17	0.15	1.12	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	231	0.01	0.01	236
Government (Civic Center)	1.01	0.91	6.67	0.01	0.01	0.50	0.52	0.01	0.09	0.10	1,374	0.07	0.07	1,400
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.18	1.07	7.79	0.02	0.02	0.59	0.60	0.01	0.11	0.12	1,605	0.09	0.09	1,636

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	611	0.10	0.01	617
Parking Lot	—	—	—	—	—	—	—	—	—	—	32.0	0.01	< 0.005	32.3
Total	—	—	—	—	—	—	—	—	—	—	643	0.10	0.01	649

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	611	0.10	0.01	617
Parking Lot	—	—	—	—	—	—	—	—	—	—	32.0	0.01	< 0.005	32.3
Total	—	—	—	—	—	—	—	—	—	—	643	0.10	0.01	649
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	101	0.02	< 0.005	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	5.30	< 0.005	< 0.005	5.35
Total	—	—	—	—	—	—	—	—	—	—	106	0.02	< 0.005	108

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	611	0.10	0.01	617
Parking Lot	—	—	—	—	—	—	—	—	—	—	32.0	0.01	< 0.005	32.3
Total	—	—	—	—	—	—	—	—	—	—	643	0.10	0.01	649

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	611	0.10	0.01	617
Parking Lot	—	—	—	—	—	—	—	—	—	—	32.0	0.01	< 0.005	32.3
Total	—	—	—	—	—	—	—	—	—	—	643	0.10	0.01	649
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	101	0.02	< 0.005	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	5.30	< 0.005	< 0.005	5.35
Total	—	—	—	—	—	—	—	—	—	—	106	0.02	< 0.005	108

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Government (Civic Center)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.92	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0
Total	2.28	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88
Total	0.33	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.92	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0
Total	2.28	0.05	5.58	< 0.005	0.01	—	0.01	0.01	—	0.01	22.9	< 0.005	< 0.005	23.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.37	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	0.25	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88
Total	0.33	< 0.005	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.87	< 0.005	< 0.005	1.88

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	26.2	< 0.005	< 0.005	26.4
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	155	8.17	0.20	418
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	181	8.17	0.20	444
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	26.2	< 0.005	< 0.005	26.4
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	155	8.17	0.20	418
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	181	8.17	0.20	444
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

City Park	—	—	—	—	—	—	—	—	—	—	4.33	< 0.005	< 0.005	4.38
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	25.7	1.35	0.03	69.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	30.0	1.35	0.03	73.5

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	-42.0	-0.01	> -0.005	-42.4
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	155	8.17	0.20	418
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	113	8.16	0.19	375
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	-42.0	-0.01	> -0.005	-42.4
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	155	8.17	0.20	418
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	113	8.16	0.19	375
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—

City Park	—	—	—	—	—	—	—	—	—	—	-6.95	> -0.005	> -0.005	-7.01
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	25.7	1.35	0.03	69.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	18.7	1.35	0.03	62.1

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.46	0.05	0.00	1.61
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	160	16.0	0.00	562
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.46	0.05	0.00	1.61
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	160	16.0	0.00	562
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.08	0.01	0.00	0.27
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.2

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.46	0.05	0.00	1.61
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	160	16.0	0.00	562
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.46	0.05	0.00	1.61
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	160	16.0	0.00	562
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	161	16.1	0.00	563
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	0.08	0.01	0.00	0.27
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	26.6	2.66	0.00	93.2

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Government (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00

Governmen (Civic Center)	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/4/2023	1/5/2024	5.00	25.0	—
Grading	Grading	1/8/2024	2/16/2024	5.00	30.0	—
Building Construction	Building Construction	2/19/2024	11/7/2025	5.00	450	—

Paving	Paving	11/10/2025	11/28/2025	5.00	15.0	—
Architectural Coating	Architectural Coating	1/27/2025	12/5/2025	5.00	225	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 2	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Tier 2	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 2	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Tier 2	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	63.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	48.6	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	21.0	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	9.73	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2

Site Preparation	Vendor	—	9.10	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	63.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	48.6	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	21.0	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	9.73	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	37.5	0.00	—
Grading	0.00	15,200	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.50

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	0.00	0%
Government (Civic Center)	0.00	0%
Parking Lot	1.50	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	204	0.03	< 0.005

2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	253	253	253	92,506	1,648	1,648	1,648	601,517
Government (Civic Center)	1,506	1,506	1,506	549,570	9,791	9,791	9,791	3,573,577
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	253	253	253	92,506	1,648	1,648	1,648	601,517
Government (Civic Center)	1,506	1,506	1,506	549,570	9,791	9,791	9,791	3,573,577
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
—	—	—	—	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	0.00	204	0.0330	0.0040	0.00
Government (Civic Center)	1,093,432	204	0.0330	0.0040	0.00
Parking Lot	57,238	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	0.00	204	0.0330	0.0040	0.00

Government (Civic Center)	1,093,432	204	0.0330	0.0040	0.00
Parking Lot	57,238	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	0.00
Government (Civic Center)	10,378,777	0.00
Parking Lot	0.00	0.00
City Park	0.00	13,451,033
Government (Civic Center)	10,378,777	0.00
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	-17,506,564
Government (Civic Center)	10,378,777	0.00
Parking Lot	0.00	0.00
City Park	0.00	-4,055,532
Government (Civic Center)	10,378,777	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)

City Park	0.85	—
Government (Civic Center)	298	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
City Park	0.85	—
Government (Civic Center)	298	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Government (Civic Center)	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government (Civic Center)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Government (Civic Center)	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government (Civic Center)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The proposed project would include a recreational center and park on a 13.9 acre project site.
Construction: Construction Phases	Construction will begin in December of 2023 and occur for approximately 24 months. Overlap between building construction and architectural coating.
Construction: Off-Road Equipment	Default construction equipment with tier 2 engine
Operations: Vehicle Data	Based on a total trip generation of 1,760 ADT, including 11 trips for the park, 1,506 trips for the recreational center, and 243 for the dog park. The trips for the dog park and recreational park were combined for the same land use.
Operations: Energy Use	The proposed project would not include natural gas

APPENDIX B

NOISE MEASUREMENT SHEETS

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Noise Measurement Survey

Project Number: LPX2204 Test Personnel: Moe Abushanab
Project Name: Tracy Recreation Center Equipment: LD LxT

Site Number: ST-1 Date: 2/15/2023 Time: From 2:14 p.m. To 2:29 p.m.

Site Location: Near northwest corner of project site. East of paved path. Approximately 30 ft away from Kavanagh Ave.

Primary Noise Sources: Road traffic on Kavanagh Avenue
Background traffic noise

Comments: Some neighborhood activities. Wind.

File:	.001
L_{eq}	60.0
L_{max}	72.3
L_{min}	49.1
L_5	66.8
L_{10}	64.2
$L_{33.3}$	56.0
L_{50}	53.9
$L_{66.6}$	52.6
L_{90}	51.2

Atmospheric Conditions	
Average Wind Velocity (mph)	4.7
Maximum Wind Velocity (mph)	9
Temperature (F)	56.0
Relative Humidity (%)	23

Location Photo:

Noise Measurement Survey

Project Number: LPX2204 Test Personnel: Moe Abushanab
Project Name: Tracy Recreation Center Equipment: LD LxT

Site Number: ST-2 Date: 2/15/2023 Time: From 2:31 p.m. To 2:46 p.m.

Site Location: Near northeast corner of project site. Opposite Kavanagh Ave and Elsinore Dr. by fence adjacent to school, approximately 30 ft away from Kavanagh Ave centerline.

Primary Noise Sources: Road traffic on Kavanagh Avenue
Background traffic noise

Comments: Some neighborhood activities. Dog park nearby. Wind.

File:	.002
L_{eq}	64.0
L_{max}	82.8
L_{min}	47.9
L_{5}	70.2
L_{10}	67.5
$L_{33.3}$	58.6
L_{50}	54.8
$L_{66.6}$	51.8
L_{90}	49.7

Atmospheric Conditions	
Average Wind Velocity (mph)	4.7
Maximum Wind Velocity (mph)	9
Temperature (F)	56.0
Relative Humidity (%)	23

Location Photo:

Noise Measurement Survey

Project Number: LPX2204 Test Personnel: Moe Abushanab
Project Name: Tracy Recreation Center Equipment: LD LxT

Site Number: ST-3 Date: 2/15/2023 Time: From 2:52 p.m. To 3:07 p.m.

Site Location: Near southeast corner of project site. By fence near residence, in line with parking (east of parking). Approximately 50 ft away from residence property line

Primary Noise Sources: Background traffic noise

Comments: Windy.

File:	.003
L_{eq}	51.6
L_{max}	59.6
L_{min}	47.7
L_5	53.7
L_{10}	53.0
$L_{33.3}$	51.9
L_{50}	51.2
$L_{66.6}$	50.5
L_{90}	49.4

Atmospheric Conditions	
Average Wind Velocity (mph)	4.7
Maximum Wind Velocity (mph)	9
Temperature (F)	56.0
Relative Humidity (%)	23

Location Photo:

Noise Measurement Survey

Project Number: LPX2204 Test Personnel: Moe Abushanab
Project Name: Tracy Recreation Center Equipment: LD LxT

Site Number: ST-4 Date: 2/15/2023 Time: From 3:10 p.m. To 3:25 p.m.

Site Location: Near south of project site, east of entrance. Approximately 150 ft away from Grant Line Rd centerline

Primary Noise Sources: Road traffic on Grant Line Rd.

Comments:

File:	.004
L_{eq}	59.4
L_{max}	74.3
L_{min}	46.0
L_{5}	66.2
L_{10}	61.9
$L_{33.3}$	57.4
L_{50}	54.5
$L_{66.6}$	52.4
L_{90}	49.2

Atmospheric Conditions	
Average Wind Velocity (mph)	4.7
Maximum Wind Velocity (mph)	9
Temperature (F)	56.0
Relative Humidity (%)	23

Location Photo:

APPENDIX C

TRAFFIC VOLUME DATA

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Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Tracy
Tracy Boulevard
B/ Kavanagh Avenue - Grant Line Road
24 Hour Directional Volume Count

TCY001
Site Code: 003-23244

Start Time	3/16/23 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	185			17	162				
12:15		16	191			15	183				
12:30		17	196			13	177				
12:45		13	179	58	751	13	177	58	699	116	1450
01:00		10	152			16	178				
01:15		10	166			7	203				
01:30		8	185			7	194				
01:45		11	210	39	713	14	188	44	763	83	1476
02:00		15	187			11	187				
02:15		24	254			11	188				
02:30		21	219			19	**224**				
02:45		22	189	82	849	14	**233**	55	832	137	1681
03:00		27	**245**			9	**197**				
03:15		37	**248**			19	**215**				
03:30		30	**215**			28	189				
03:45		40	**217**	134	925	30	207	86	808	220	1733
04:00		32	226			34	223				
04:15		42	193			39	202				
04:30		41	243			54	196				
04:45		48	228	163	890	66	221	193	842	356	1732
05:00		58	200			70	195				
05:15		57	183			94	185				
05:30		59	204			91	179				
05:45		61	153	235	740	104	207	359	766	594	1506
06:00		64	172			106	176				
06:15		60	169			117	140				
06:30		92	172			137	142				
06:45		114	154	330	667	**202**	158	562	616	892	1283
07:00		140	144			**215**	131				
07:15		174	126			**207**	113				
07:30		179	153			**155**	147				
07:45		138	107	631	530	166	117	743	508	1374	1038
08:00		120	106			128	127				
08:15		154	105			110	106				
08:30		128	67			123	109				
08:45		124	75	526	353	127	83	488	425	1014	778
09:00		134	65			134	67				
09:15		144	49			131	72				
09:30		141	54			139	75				
09:45		156	44	575	212	150	57	554	271	1129	483
10:00		171	47			125	55				
10:15		167	47			144	41				
10:30		163	21			153	39				
10:45		**170**	21	671	136	140	36	562	171	1233	307
11:00		**219**	20			167	36				
11:15		**186**	16			183	23				
11:30		**206**	17			161	26				
11:45		163	19	774	72	188	15	699	100	1473	172
Total		4218	6838	4218	6838	4403	6801	4403	6801	8621	13639
Combined Total		11056		11056		11204		11204		22260	
AM Peak	-	10:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	781	-	-	-	779	-	-	-	-	-
P.H.F.		0.892				0.906					
PM Peak	-	-	03:00	-	-	-	02:30	-	-	-	-
Vol.	-	-	925	-	-	-	869	-	-	-	-
P.H.F.			0.932				0.932				
Percentage		38.2%	61.8%			39.3%	60.7%				
ADT/AADT		ADT 22,260		AADT 22,260							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Tracy
Kavanagh Avenue
B/ Tracy Boulevard - Holly Drive
24 Hour Directional Volume Count

TCY002
Site Code: 003-23244

Start Time	3/16/23 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	16			4	20				
12:15		1	25			1	19				
12:30		2	14			3	24				
12:45		2	18	7	73	0	18	8	81	15	154
01:00		0	20			1	31				
01:15		1	17			0	20				
01:30		2	26			1	28				
01:45		0	18	3	81	1	15	3	94	6	175
02:00		1	30			1	25				
02:15		0	26			0	28				
02:30		0	25			0	19				
02:45		2	37	3	118	0	31	1	103	4	221
03:00		0	25			1	36				
03:15		0	27			4	31				
03:30		0	26			1	**47**				
03:45		0	33	0	111	6	**32**	12	146	12	257
04:00		2	**50**			7	**46**				
04:15		0	**46**			3	**35**				
04:30		3	**28**			9	34				
04:45		2	**34**	7	158	7	32	26	147	33	305
05:00		2	23			6	39				
05:15		0	20			9	27				
05:30		2	37			7	29				
05:45		2	26	6	106	6	31	28	126	34	232
06:00		1	26			5	23				
06:15		7	22			12	17				
06:30		4	28			9	22				
06:45		4	29	16	105	11	28	37	90	53	195
07:00		9	15			13	17				
07:15		13	27			19	19				
07:30		13	25			**22**	13				
07:45		15	18	50	85	**29**	18	83	67	133	152
08:00		**38**	16			**46**	27				
08:15		**20**	21			**57**	17				
08:30		**22**	22			20	17				
08:45		**16**	14	96	73	21	15	144	76	240	149
09:00		12	18			21	10				
09:15		14	13			13	6				
09:30		5	10			16	13				
09:45		15	10	46	51	17	8	67	37	113	88
10:00		10	9			17	9				
10:15		10	8			17	13				
10:30		12	7			13	10				
10:45		19	7	51	31	21	4	68	36	119	67
11:00		21	9			28	6				
11:15		11	5			23	4				
11:30		17	4			20	4				
11:45		11	8	60	26	10	3	81	17	141	43
Total		345	1018	345	1018	558	1020	558	1020	903	2038
Combined Total		1363		1363		1578		1578		2941	
AM Peak	-	08:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	96	-	-	-	154	-	-	-	-	-
P.H.F.		0.632				0.675					
PM Peak	-	-	04:00	-	-	-	03:30	-	-	-	-
Vol.	-	-	158	-	-	-	160	-	-	-	-
P.H.F.			0.790				0.851				
Percentage		25.3%	74.7%			35.4%	64.6%				
ADT/AADT		ADT 2,941		AADT 2,941							

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City of Tracy
Holly Drive
B/ Kavanagh Avenue - Grant Line Road
24 Hour Directional Volume Count

TCY004
Site Code: 003-23244

Start Time	3/16/23 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	62			4	80				
12:15		2	69			6	79				
12:30		9	47			6	68				
12:45		4	47	18	225	10	54	26	281	44	506
01:00		2	64			1	56				
01:15		6	56			6	59				
01:30		0	66			7	53				
01:45		2	64	10	250	3	72	17	240	27	490
02:00		0	71			4	60				
02:15		2	68			1	87				
02:30		2	66			2	64				
02:45		7	66	11	271	1	**127**	8	338	19	609
03:00		3	64			1	**72**				
03:15		5	76			1	**91**				
03:30		4	70			6	**105**				
03:45		5	50	17	260	6	83	14	351	31	611
04:00		7	**96**			7	90				
04:15		8	**68**			13	87				
04:30		2	**84**			14	84				
04:45		15	**70**	32	318	13	66	47	327	79	645
05:00		9	77			13	57				
05:15		14	61			16	79				
05:30		12	70			13	62				
05:45		28	85	63	293	14	76	56	274	119	567
06:00		23	66			20	72				
06:15		14	62			23	56				
06:30		20	62			25	52				
06:45		21	60	78	250	21	52	89	232	167	482
07:00		30	55			28	44				
07:15		23	40			39	47				
07:30		**73**	38			47	44				
07:45		**84**	46	210	179	**95**	49	209	184	419	363
08:00		**115**	38			**139**	45				
08:15		**78**	33			**112**	31				
08:30		68	28			**50**	44				
08:45		39	22	300	121	46	33	347	153	647	274
09:00		36	32			42	33				
09:15		29	20			56	35				
09:30		41	28			42	31				
09:45		36	28	142	108	38	19	178	118	320	226
10:00		31	13			32	17				
10:15		44	10			55	15				
10:30		43	17			46	14				
10:45		41	12	159	52	45	12	178	58	337	110
11:00		39	9			48	12				
11:15		50	12			44	13				
11:30		46	3			65	8				
11:45		59	5	194	29	62	8	219	41	413	70
Total		1234	2356	1234	2356	1388	2597	1388	2597	2622	4953
Combined Total		3590		3590		3985		3985		7575	
AM Peak	-	07:30	-	-	-	07:45	-	-	-	-	-
Vol.	-	350	-	-	-	396	-	-	-	-	-
P.H.F.		0.761				0.712					
PM Peak	-	-	04:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	318	-	-	-	395	-	-	-	-
P.H.F.			0.828				0.778				
Percentage		34.4%	65.6%			34.8%	65.2%				
ADT/AADT		ADT 7,575		AADT 7,575							

Counts Unlimited, Inc.

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Phone: (951) 268-6268
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City of Tracy
Grant Line Road
B/ Tracy Boulevard - Holly Drive
24 Hour Directional Volume Count

TCY003
Site Code: 003-23244

Start Time	3/16/23 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		16	125			12	149				
12:15		12	140			17	125				
12:30		14	124			11	166				
12:45		12	153	54	542	19	100	59	540	113	1082
01:00		13	135			10	134				
01:15		5	136			9	128				
01:30		8	153			18	131				
01:45		7	154	33	578	11	143	48	536	81	1114
02:00		5	169			9	130				
02:15		9	193			3	159				
02:30		6	179			12	185				
02:45		11	196	31	737	13	189	37	663	68	1400
03:00		15	208			21	150				
03:15		19	**197**			15	**196**				
03:30		20	**191**			20	**198**				
03:45		21	**217**	75	813	18	**170**	74	714	149	1527
04:00		16	**219**			34	**198**				
04:15		12	176			30	147				
04:30		25	181			48	152				
04:45		46	188	99	764	53	147	165	644	264	1408
05:00		25	180			57	154				
05:15		27	167			54	131				
05:30		50	217			54	133				
05:45		56	161	158	725	61	146	226	564	384	1289
06:00		40	163			47	176				
06:15		43	155			55	147				
06:30		43	161			60	99				
06:45		58	138	184	617	68	132	230	554	414	1171
07:00		102	123			86	98				
07:15		89	106			94	102				
07:30		86	107			107	89				
07:45		**128**	115	405	451	**196**	80	483	369	888	820
08:00		**162**	115			**226**	81				
08:15		**153**	119			**181**	73				
08:30		**120**	93			**129**	86				
08:45		103	98	538	425	124	62	660	302	1198	727
09:00		79	91			88	61				
09:15		80	65			118	43				
09:30		80	60			104	60				
09:45		88	58	327	274	124	39	434	203	761	477
10:00		94	58			105	37				
10:15		81	36			117	34				
10:30		100	37			94	36				
10:45		111	39	386	170	123	35	439	142	825	312
11:00		100	29			119	24				
11:15		94	20			96	27				
11:30		119	26			115	21				
11:45		125	28	438	103	162	25	492	97	930	200
Total		2728	6199	2728	6199	3347	5328	3347	5328	6075	11527
Combined Total		8927		8927		8675		8675		17602	
AM Peak	-	07:45	-	-	-	07:45	-	-	-	-	-
Vol.	-	563	-	-	-	732	-	-	-	-	-
P.H.F.		0.869				0.810					
PM Peak	-	-	03:15	-	-	-	03:15	-	-	-	-
Vol.	-	-	824	-	-	-	762	-	-	-	-
P.H.F.			0.941				0.962				
Percentage		30.6%	69.4%			38.6%	61.4%				
ADT/AADT		ADT 17,602		AADT 17,602							

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Tracy
N/S: Tracy Boulevard
E/W: Kavanagh Avenue
Weather: Clear

File Name : 01_TCY_Tracy_Kav AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Tracy Boulevard Southbound				Kavanagh Avenue Westbound				Tracy Boulevard Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	172	38	219	13	24	9	46	18	104	18	140	19	11	30	60	465
07:15 AM	6	167	37	210	16	35	6	57	14	154	6	174	34	8	24	66	507
07:30 AM	4	142	13	159	5	5	10	20	6	167	6	179	29	12	8	49	407
07:45 AM	8	143	15	166	6	8	7	21	8	123	7	138	24	1	17	42	367
Total	27	624	103	754	40	72	32	144	46	548	37	631	106	32	79	217	1746
08:00 AM	5	109	12	126	8	5	8	21	8	109	2	119	16	5	10	31	297
08:15 AM	4	102	11	117	2	7	4	13	5	144	5	154	18	5	6	29	313
08:30 AM	3	112	17	132	6	5	5	16	4	124	0	128	21	2	5	28	304
08:45 AM	6	114	9	129	5	7	5	17	7	114	3	124	19	6	8	33	303
Total	18	437	49	504	21	24	22	67	24	491	10	525	74	18	29	121	1217
Grand Total	45	1061	152	1258	61	96	54	211	70	1039	47	1156	180	50	108	338	2963
Apprch %	3.6	84.3	12.1		28.9	45.5	25.6		6.1	89.9	4.1		53.3	14.8	32		
Total %	1.5	35.8	5.1	42.5	2.1	3.2	1.8	7.1	2.4	35.1	1.6	39	6.1	1.7	3.6	11.4	

	Tracy Boulevard Southbound				Kavanagh Avenue Westbound				Tracy Boulevard Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**9**	**172**	**38**	**219**	13	24	9	46	**18**	104	**18**	140	19	11	**30**	60	465
07:15 AM	6	167	37	210	**16**	**35**	6	**57**	14	154	6	174	**34**	8	24	**66**	**507**
07:30 AM	4	142	13	159	5	5	**10**	20	6	**167**	6	**179**	29	**12**	8	49	407
07:45 AM	8	143	15	166	6	8	7	21	8	123	7	138	24	1	17	42	367
Total Volume	27	624	103	754	40	72	32	144	46	548	37	631	106	32	79	217	1746
% App. Total	3.6	82.8	13.7		27.8	50	22.2		7.3	86.8	5.9		48.8	14.7	36.4		
PHF	.750	.907	.678	.861	.625	.514	.800	.632	.639	.820	.514	.881	.779	.667	.658	.822	.861

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City of Tracy
N/S: Tracy Boulevard
E/W: Kavanagh Avenue
Weather: Clear

File Name : 01_TCY_Tracy_Kav PM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Tracy Boulevard Southbound				Kavanagh Avenue Westbound				Tracy Boulevard Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	191	31	232	10	18	11	39	16	202	8	226	38	5	22	65	562
04:15 PM	8	183	31	222	4	13	10	27	7	181	5	193	35	7	15	57	499
04:30 PM	13	174	35	222	8	11	10	29	19	217	7	243	24	17	14	55	549
04:45 PM	9	199	33	241	6	12	13	31	6	217	5	228	29	12	16	57	557
Total	40	747	130	917	28	54	44	126	48	817	25	890	126	41	67	234	2167
05:00 PM	3	181	22	206	6	11	6	23	10	184	6	200	17	17	8	42	471
05:15 PM	7	166	17	190	5	8	4	17	10	168	4	182	32	11	13	56	445
05:30 PM	6	163	24	193	4	8	10	22	4	191	9	204	22	13	12	47	466
05:45 PM	14	183	23	220	10	11	7	28	18	127	8	153	26	7	14	47	448
Total	30	693	86	809	25	38	27	90	42	670	27	739	97	48	47	192	1830
Grand Total	70	1440	216	1726	53	92	71	216	90	1487	52	1629	223	89	114	426	3997
Apprch %	4.1	83.4	12.5		24.5	42.6	32.9		5.5	91.3	3.2		52.3	20.9	26.8		
Total %	1.8	36	5.4	43.2	1.3	2.3	1.8	5.4	2.3	37.2	1.3	40.8	5.6	2.2	2.9	10.7	

	Tracy Boulevard Southbound				Kavanagh Avenue Westbound				Tracy Boulevard Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	191	31	232	**10**	**18**	11	**39**	16	202	**8**	226	**38**	5	**22**	**65**	**562**
04:15 PM	8	183	31	222	4	13	10	27	7	181	5	193	35	7	15	57	499
04:30 PM	**13**	174	**35**	222	8	11	10	29	**19**	**217**	7	**243**	24	**17**	14	55	549
04:45 PM	9	**199**	33	**241**	6	12	**13**	31	6	217	5	228	29	12	16	57	557
Total Volume	40	747	130	917	28	54	44	126	48	817	25	890	126	41	67	234	2167
% App. Total	4.4	81.5	14.2		22.2	42.9	34.9		5.4	91.8	2.8		53.8	17.5	28.6		
PHF	.769	.938	.929	.951	.700	.750	.846	.808	.632	.941	.781	.916	.829	.603	.761	.900	.964

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(951)268-6268

City of Tracy
N/S: Tracy Boulevard
E/W: Grant Line Road
Weather: Clear

File Name : 02_TCY_Tracy_GL AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Tracy Boulevard Southbound				Grant Line Road Westbound				Tracy Boulevard Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	57	31	105	17	71	16	104	10	31	11	52	15	48	6	69	330
07:15 AM	13	93	30	136	14	69	9	92	12	61	23	96	20	60	22	102	426
07:30 AM	18	110	21	149	28	90	14	132	21	67	16	104	19	54	16	89	474
07:45 AM	15	153	45	213	47	134	16	197	33	109	31	173	26	91	41	158	741
Total	63	413	127	603	106	364	55	525	76	268	81	425	80	253	85	418	1971
08:00 AM	28	112	47	187	43	167	20	230	60	110	29	199	31	115	28	174	790
08:15 AM	16	128	36	180	20	123	30	173	35	104	54	193	50	114	20	184	730
08:30 AM	21	102	25	148	22	102	25	149	44	101	27	172	27	105	21	153	622
08:45 AM	25	104	21	150	26	81	25	132	41	98	23	162	30	74	26	130	574
Total	90	446	129	665	111	473	100	684	180	413	133	726	138	408	95	641	2716
Grand Total	153	859	256	1268	217	837	155	1209	256	681	214	1151	218	661	180	1059	4687
Apprch %	12.1	67.7	20.2		17.9	69.2	12.8		22.2	59.2	18.6		20.6	62.4	17		
Total %	3.3	18.3	5.5	27.1	4.6	17.9	3.3	25.8	5.5	14.5	4.6	24.6	4.7	14.1	3.8	22.6	

	Tracy Boulevard Southbound				Grant Line Road Westbound				Tracy Boulevard Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	**153**	45	**213**	**47**	134	16	197	33	109	31	173	26	91	**41**	158	741
08:00 AM	**28**	112	**47**	187	43	**167**	20	**230**	**60**	**110**	29	**199**	31	**115**	28	174	**790**
08:15 AM	16	128	36	180	20	123	**30**	173	35	104	**54**	193	**50**	114	20	**184**	730
08:30 AM	21	102	25	148	22	102	25	149	44	101	27	172	27	105	21	153	622
Total Volume	80	495	153	728	132	526	91	749	172	424	141	737	134	425	110	669	2883
% App. Total	11	68	21		17.6	70.2	12.1		23.3	57.5	19.1		20	63.5	16.4		
PHF	.714	.809	.814	.854	.702	.787	.758	.814	.717	.964	.653	.926	.670	.924	.671	.909	.912

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City of Tracy
N/S: Tracy Boulevard
E/W: Grant Line Road
Weather: Clear

File Name : 02_TCY_Tracy_GL PM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Tracy Boulevard Southbound				Grant Line Road Westbound				Tracy Boulevard Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	33	136	49	218	41	123	46	210	53	178	35	266	52	157	39	248	942
04:15 PM	43	121	41	205	32	106	40	178	42	141	28	211	51	139	48	238	832
04:30 PM	35	109	38	182	35	123	36	194	49	141	23	213	51	153	35	239	828
04:45 PM	39	129	46	214	31	121	44	196	37	124	32	193	45	164	39	248	851
Total	150	495	174	819	139	473	166	778	181	584	118	883	199	613	161	973	3453
05:00 PM	43	143	28	214	47	114	20	181	54	126	31	211	51	151	35	237	843
05:15 PM	30	138	46	214	39	107	26	172	54	149	27	230	48	117	42	207	823
05:30 PM	32	132	35	199	28	110	32	170	63	162	39	264	48	173	47	268	901
05:45 PM	41	129	39	209	38	106	41	185	37	116	33	186	47	121	32	200	780
Total	146	542	148	836	152	437	119	708	208	553	130	891	194	562	156	912	3347
Grand Total	296	1037	322	1655	291	910	285	1486	389	1137	248	1774	393	1175	317	1885	6800
Apprch %	17.9	62.7	19.5		19.6	61.2	19.2		21.9	64.1	14		20.8	62.3	16.8		
Total %	4.4	15.2	4.7	24.3	4.3	13.4	4.2	21.9	5.7	16.7	3.6	26.1	5.8	17.3	4.7	27.7	

	Tracy Boulevard Southbound				Grant Line Road Westbound				Tracy Boulevard Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	33	**136**	**49**	**218**	**41**	**123**	**46**	**210**	**53**	**178**	**35**	**266**	**52**	157	39	**248**	**942**
04:15 PM	**43**	121	41	205	32	106	40	178	42	141	28	211	51	139	**48**	238	832
04:30 PM	35	109	38	182	35	123	36	194	49	141	23	213	51	153	35	239	828
04:45 PM	39	129	46	214	31	121	44	196	37	124	32	193	45	**164**	39	248	851
Total Volume	150	495	174	819	139	473	166	778	181	584	118	883	199	613	161	973	3453
% App. Total	18.3	60.4	21.2		17.9	60.8	21.3		20.5	66.1	13.4		20.5	63	16.5		
PHF	.872	.910	.888	.939	.848	.961	.902	.926	.854	.820	.843	.830	.957	.934	.839	.981	.916

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City of Tracy
N/S: Buthmann Avenue
E/W: Kavanagh Avenue
Weather: Clear

File Name : 03_TCY_Buth_Kav AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Buthmann Avenue Southbound				Kavanagh Avenue Westbound				Buthmann Avenue Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	10	3	15	2	9	1	12	3	3	2	8	3	5	1	9	44
07:15 AM	4	8	1	13	4	9	1	14	4	3	5	12	4	13	2	19	58
07:30 AM	4	7	4	15	8	11	0	19	2	6	5	13	4	7	1	12	59
07:45 AM	8	18	4	30	10	19	3	32	6	11	21	38	2	28	3	33	133
Total	18	43	12	73	24	48	5	77	15	23	33	71	13	53	7	73	294
08:00 AM	4	20	15	39	13	44	4	61	2	16	25	43	10	27	5	42	185
08:15 AM	1	10	5	16	6	21	4	31	3	15	9	27	2	10	1	13	87
08:30 AM	0	9	2	11	1	10	2	13	4	8	8	20	7	6	0	13	57
08:45 AM	1	8	4	13	3	10	1	14	2	11	6	19	3	6	6	15	61
Total	6	47	26	79	23	85	11	119	11	50	48	109	22	49	12	83	390
Grand Total	24	90	38	152	47	133	16	196	26	73	81	180	35	102	19	156	684
Apprch %	15.8	59.2	25		24	67.9	8.2		14.4	40.6	45		22.4	65.4	12.2		
Total %	3.5	13.2	5.6	22.2	6.9	19.4	2.3	28.7	3.8	10.7	11.8	26.3	5.1	14.9	2.8	22.8	

	Buthmann Avenue Southbound				Kavanagh Avenue Westbound				Buthmann Avenue Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	7	4	15	8	11	0	19	2	6	5	13	4	7	1	12	59
07:45 AM	**8**	18	4	30	10	19	3	32	**6**	11	21	38	2	**28**	3	33	133
08:00 AM	4	**20**	**15**	**39**	**13**	**44**	**4**	**61**	2	**16**	**25**	**43**	**10**	27	**5**	**42**	**185**
08:15 AM	1	10	5	16	6	21	4	31	3	15	9	27	2	10	1	13	87
Total Volume	17	55	28	100	37	95	11	143	13	48	60	121	18	72	10	100	464
% App. Total	17	55	28		25.9	66.4	7.7		10.7	39.7	49.6		18	72	10		
PHF	.531	.688	.467	.641	.712	.540	.688	.586	.542	.750	.600	.703	.450	.643	.500	.595	.627

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City of Tracy
N/S: Buthmann Avenue
E/W: Kavanagh Avenue
Weather: Clear

File Name : 03_TCY_Buth_Kav PM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Buthmann Avenue Southbound				Kavanagh Avenue Westbound				Buthmann Avenue Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	9	1	13	7	22	1	30	10	18	9	37	5	20	5	30	110
04:15 PM	4	6	4	14	3	13	1	17	2	12	8	22	4	30	5	39	92
04:30 PM	2	17	6	25	4	14	4	22	12	13	7	32	8	14	2	24	103
04:45 PM	0	11	6	17	5	8	2	15	1	14	7	22	6	12	4	22	76
Total	9	43	17	69	19	57	8	84	25	57	31	113	23	76	16	115	381
05:00 PM	1	15	9	25	2	14	2	18	5	18	7	30	3	11	2	16	89
05:15 PM	0	10	3	13	3	13	1	17	1	18	6	25	10	21	3	34	89
05:30 PM	0	11	2	13	5	16	2	23	5	12	11	28	1	24	0	25	89
05:45 PM	3	5	2	10	4	13	0	17	3	13	5	21	6	18	5	29	77
Total	4	41	16	61	14	56	5	75	14	61	29	104	20	74	10	104	344
Grand Total	13	84	33	130	33	113	13	159	39	118	60	217	43	150	26	219	725
Apprch %	10	64.6	25.4		20.8	71.1	8.2		18	54.4	27.6		19.6	68.5	11.9		
Total %	1.8	11.6	4.6	17.9	4.6	15.6	1.8	21.9	5.4	16.3	8.3	29.9	5.9	20.7	3.6	30.2	

	Buthmann Avenue Southbound				Kavanagh Avenue Westbound				Buthmann Avenue Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	3	9	1	13	**7**	**22**	1	**30**	10	**18**	**9**	**37**	5	20	**5**	30	**110**
04:15 PM	**4**	6	4	14	3	13	1	17	2	12	8	22	4	**30**	5	**39**	92
04:30 PM	2	**17**	**6**	**25**	4	14	**4**	22	**12**	13	7	32	**8**	14	2	24	103
04:45 PM	0	11	6	17	5	8	2	15	1	14	7	22	6	12	4	22	76
Total Volume	9	43	17	69	19	57	8	84	25	57	31	113	23	76	16	115	381
% App. Total	13	62.3	24.6		22.6	67.9	9.5		22.1	50.4	27.4		20	66.1	13.9		
PHF	.563	.632	.708	.690	.679	.648	.500	.700	.521	.792	.861	.764	.719	.633	.800	.737	.866

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City of Tracy
N/S: Buthmann Avenue
E/W: Grant Line Road
Weather: Clear

File Name : 04_TCY_Buth_GL AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Buthmann Avenue Southbound			Grant Line Road Westbound			Grant Line Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	7	15	22	92	6	98	2	78	80	200
07:15 AM	8	8	16	84	8	92	7	86	93	201
07:30 AM	9	17	26	117	9	126	6	90	96	248
07:45 AM	14	21	35	205	27	232	10	135	145	412
Total	38	61	99	498	50	548	25	389	414	1061
08:00 AM	21	28	49	213	22	235	24	153	177	461
08:15 AM	7	17	24	166	12	178	15	176	191	393
08:30 AM	5	11	16	145	8	153	17	128	145	314
08:45 AM	11	9	20	125	8	133	14	101	115	268
Total	44	65	109	649	50	699	70	558	628	1436
Grand Total	82	126	208	1147	100	1247	95	947	1042	2497
Apprch %	39.4	60.6		92	8		9.1	90.9		
Total %	3.3	5	8.3	45.9	4	49.9	3.8	37.9	41.7	

	Buthmann Avenue Southbound			Grant Line Road Westbound			Grant Line Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	14	21	35	205	**27**	232	10	135	145	412
08:00 AM	**21**	**28**	**49**	**213**	22	**235**	**24**	153	177	**461**
08:15 AM	7	17	24	166	12	178	15	**176**	**191**	393
08:30 AM	5	11	16	145	8	153	17	128	145	314
Total Volume	47	77	124	729	69	798	66	592	658	1580
% App. Total	37.9	62.1		91.4	8.6		10	90		
PHF	.560	.688	.633	.856	.639	.849	.688	.841	.861	.857

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Groups Printed- Total Volume

	Buthmann Avenue Southbound			Grant Line Road Westbound			Grant Line Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	13	24	37	197	13	210	15	212	227	474
04:15 PM	9	16	25	160	8	168	15	185	200	393
04:30 PM	10	22	32	160	16	176	15	218	233	441
04:45 PM	7	28	35	159	10	169	14	212	226	430
Total	39	90	129	676	47	723	59	827	886	1738
05:00 PM	14	19	33	176	10	186	19	209	228	447
05:15 PM	14	17	31	158	7	165	17	160	177	373
05:30 PM	12	12	24	142	13	155	13	224	237	416
05:45 PM	11	16	27	172	13	185	14	184	198	410
Total	51	64	115	648	43	691	63	777	840	1646
Grand Total	90	154	244	1324	90	1414	122	1604	1726	3384
Apprch %	36.9	63.1		93.6	6.4		7.1	92.9		
Total %	2.7	4.6	7.2	39.1	2.7	41.8	3.6	47.4	51	

	Buthmann Avenue Southbound			Grant Line Road Westbound			Grant Line Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**13**	24	**37**	**197**	13	**210**	**15**	212	227	**474**
04:15 PM	9	16	25	160	8	168	15	185	200	393
04:30 PM	10	22	32	160	**16**	176	15	**218**	**233**	441
04:45 PM	7	**28**	35	159	10	169	14	212	226	430
Total Volume	39	90	129	676	47	723	59	827	886	1738
% App. Total	30.2	69.8		93.5	6.5		6.7	93.3		
PHF	.750	.804	.872	.858	.734	.861	.983	.948	.951	.917

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City of Tracy
N/S: Coventry Drive
E/W: Kavanagh Avenue
Weather: Clear

File Name : 05_TCY_Cov_Kav AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Coventry Drive Southbound				Kavanagh Avenue Westbound				Coventry Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	13	0	13	1	0	0	1	1	8	0	9	23
07:15 AM	0	0	1	1	2	11	0	13	0	0	0	0	1	21	0	22	36
07:30 AM	0	0	3	3	0	20	0	20	0	0	0	0	1	21	0	22	45
07:45 AM	3	0	1	4	0	35	0	35	0	0	0	0	1	59	0	60	99
Total	3	0	5	8	2	79	0	81	1	0	0	1	4	109	0	113	203
08:00 AM	1	0	2	3	0	60	0	60	0	0	0	0	1	49	0	50	113
08:15 AM	0	0	1	1	0	18	0	18	0	1	0	1	1	16	0	17	37
08:30 AM	1	0	0	1	0	13	1	14	0	0	0	0	0	15	0	15	30
08:45 AM	1	0	0	1	1	10	0	11	0	0	0	0	0	11	0	11	23
Total	3	0	3	6	1	101	1	103	0	1	0	1	2	91	0	93	203
Grand Total	6	0	8	14	3	180	1	184	1	1	0	2	6	200	0	206	406
Apprch %	42.9	0	57.1		1.6	97.8	0.5		50	50	0		2.9	97.1	0		
Total %	1.5	0	2	3.4	0.7	44.3	0.2	45.3	0.2	0.2	0	0.5	1.5	49.3	0	50.7	

	Coventry Drive Southbound				Kavanagh Avenue Westbound				Coventry Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**3**	3	0	20	0	20	0	0	0	0	**1**	21	0	22	45
07:45 AM	**3**	0	1	**4**	0	35	0	35	0	0	0	0	1	**59**	0	**60**	99
08:00 AM	1	0	2	3	0	**60**	0	**60**	0	0	0	0	1	49	0	50	**113**
08:15 AM	0	0	1	1	0	18	0	18	0	**1**	0	**1**	1	16	0	17	37
Total Volume	4	0	7	11	0	133	0	133	0	1	0	1	4	145	0	149	294
% App. Total	36.4	0	63.6		0	100	0		0	100	0		2.7	97.3	0		
PHF	.333	.000	.583	.688	.000	.554	.000	.554	.000	.250	.000	.250	1.00	.614	.000	.621	.650

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E/W: Kavanagh Avenue
Weather: Clear

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Site Code : 00323244
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Groups Printed- Total Volume

	Coventry Drive Southbound				Kavanagh Avenue Westbound				Coventry Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	2	4	1	30	0	31	0	0	0	0	0	31	0	31	66
04:15 PM	0	0	0	0	1	11	0	12	1	0	1	2	2	35	0	37	51
04:30 PM	1	0	0	1	0	18	0	18	0	0	0	0	1	22	0	23	42
04:45 PM	0	0	2	2	0	14	2	16	0	0	0	0	0	13	0	13	31
Total	3	0	4	7	2	73	2	77	1	0	1	2	3	101	0	104	190
05:00 PM	0	0	1	1	0	17	2	19	0	0	0	0	0	20	0	20	40
05:15 PM	0	0	0	0	0	15	1	16	0	0	0	0	0	25	0	25	41
05:30 PM	2	0	1	3	0	19	0	19	0	0	0	0	0	33	0	33	55
05:45 PM	0	0	0	0	0	18	1	19	1	0	0	1	1	20	0	21	41
Total	2	0	2	4	0	69	4	73	1	0	0	1	1	98	0	99	177
Grand Total	5	0	6	11	2	142	6	150	2	0	1	3	4	199	0	203	367
Apprch %	45.5	0	54.5		1.3	94.7	4		66.7	0	33.3		2	98	0		
Total %	1.4	0	1.6	3	0.5	38.7	1.6	40.9	0.5	0	0.3	0.8	1.1	54.2	0	55.3	

	Coventry Drive Southbound				Kavanagh Avenue Westbound				Coventry Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**2**	0	**2**	**4**	**1**	**30**	0	**31**	0	0	0	0	0	31	0	31	**66**
04:15 PM	0	0	0	0	1	11	0	12	**1**	0	**1**	**2**	**2**	**35**	0	**37**	51
04:30 PM	1	0	0	1	0	18	0	18	0	0	0	0	1	22	0	23	42
04:45 PM	0	0	2	2	0	14	**2**	16	0	0	0	0	0	13	0	13	31
Total Volume	3	0	4	7	2	73	2	77	1	0	1	2	3	101	0	104	190
% App. Total	42.9	0	57.1		2.6	94.8	2.6		50	0	50		2.9	97.1	0		
PHF	.375	.000	.500	.438	.500	.608	.250	.621	.250	.000	.250	.250	.375	.721	.000	.703	.720

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City of Tracy
N/S: Dovenshire Drive
E/W: Kavanagh Avenue
Weather: Clear

File Name : 06_TCY_Dov_Kav AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Dovenshire Drive Southbound			Kavanagh Avenue Westbound			Kavanagh Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	11	0	11	0	8	8	19
07:15 AM	1	1	2	13	1	14	0	21	21	37
07:30 AM	0	0	0	20	1	21	0	20	20	41
07:45 AM	3	1	4	32	0	32	1	60	61	97
Total	4	2	6	76	2	78	1	109	110	194
08:00 AM	0	2	2	60	0	60	0	52	52	114
08:15 AM	0	1	1	15	0	15	1	16	17	33
08:30 AM	1	0	1	12	1	13	1	12	13	27
08:45 AM	1	2	3	10	2	12	0	15	15	30
Total	2	5	7	97	3	100	2	95	97	204
Grand Total	6	7	13	173	5	178	3	204	207	398
Apprch %	46.2	53.8		97.2	2.8		1.4	98.6		
Total %	1.5	1.8	3.3	43.5	1.3	44.7	0.8	51.3	52	

	Dovenshire Drive Southbound			Kavanagh Avenue Westbound			Kavanagh Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	1	1	2	13	**1**	14	0	21	21	37
07:30 AM	0	0	0	20	1	21	0	20	20	41
07:45 AM	**3**	1	**4**	32	0	32	**1**	**60**	**61**	97
08:00 AM	0	**2**	2	**60**	0	**60**	0	52	52	**114**
Total Volume	4	4	8	125	2	127	1	153	154	289
% App. Total	50	50		98.4	1.6		0.6	99.4		
PHF	.333	.500	.500	.521	.500	.529	.250	.638	.631	.634

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City of Tracy
N/S: Dovenshire Drive
E/W: Kavanagh Avenue
Weather: Clear

File Name : 06_TCY_Dov_Kav PM
Site Code : 00323244
Start Date : 3/16/2023

Groups Printed- Total Volume

	Dovenshire Drive Southbound			Kavanagh Avenue Westbound			Kavanagh Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	1	1	27	1	28	0	30	30	59
04:15 PM	1	0	1	15	0	15	0	40	40	56
04:30 PM	0	0	0	19	3	22	1	21	22	44
04:45 PM	0	0	0	16	2	18	1	16	17	35
Total	1	1	2	77	6	83	2	107	109	194
05:00 PM	0	1	1	18	3	21	0	19	19	41
05:15 PM	0	0	0	17	1	18	1	25	26	44
05:30 PM	0	0	0	20	0	20	0	33	33	53
05:45 PM	0	0	0	19	1	20	1	21	22	42
Total	0	1	1	74	5	79	2	98	100	180
Grand Total	1	2	3	151	11	162	4	205	209	374
Apprch %	33.3	66.7		93.2	6.8		1.9	98.1		
Total %	0.3	0.5	0.8	40.4	2.9	43.3	1.1	54.8	55.9	

	Dovenshire Drive Southbound			Kavanagh Avenue Westbound			Kavanagh Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	**1**	**1**	**27**	1	**28**	0	30	30	**59**
04:15 PM	**1**	0	1	15	0	15	0	**40**	**40**	56
04:30 PM	0	0	0	19	**3**	22	**1**	21	22	44
04:45 PM	0	0	0	16	2	18	1	16	17	35
Total Volume	1	1	2	77	6	83	2	107	109	194
% App. Total	50	50		92.8	7.2		1.8	98.2		
PHF	.250	.250	.500	.713	.500	.741	.500	.669	.681	.822

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City of Tracy
N/S: Elsinore Drive
E/W: Kavanagh Avenue
Weather: Clear

File Name : 07_TCY_Els_Kav AM
Site Code : 00323244
Start Date : 3/16/2023
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Groups Printed- Total Volume

	Elsinore Drive Southbound				Kavanagh Avenue Westbound				North Elementary School Driveway Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	9	0	9	18
07:15 AM	1	0	3	4	0	11	0	11	0	0	0	0	0	20	0	20	35
07:30 AM	0	0	2	2	0	16	1	17	0	0	0	0	1	13	1	15	34
07:45 AM	1	0	1	2	0	20	1	21	0	0	2	2	1	42	3	46	71
Total	2	0	6	8	0	56	2	58	0	0	2	2	2	84	4	90	158
08:00 AM	3	0	3	6	0	43	3	46	1	0	1	2	10	53	2	65	119
08:15 AM	1	0	3	4	0	30	0	30	0	0	0	0	1	19	0	20	54
08:30 AM	1	0	2	3	0	11	1	12	0	0	0	0	1	13	0	14	29
08:45 AM	0	0	0	0	0	11	0	11	0	0	0	0	1	9	0	10	21
Total	5	0	8	13	0	95	4	99	1	0	1	2	13	94	2	109	223
Grand Total	7	0	14	21	0	151	6	157	1	0	3	4	15	178	6	199	381
Apprch %	33.3	0	66.7		0	96.2	3.8		25	0	75		7.5	89.4	3		
Total %	1.8	0	3.7	5.5	0	39.6	1.6	41.2	0.3	0	0.8	1	3.9	46.7	1.6	52.2	

	Elsinore Drive Southbound				Kavanagh Avenue Westbound				North Elementary School Driveway Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	2	2	0	16	1	17	0	0	0	0	1	13	1	15	34
07:45 AM	1	0	1	2	0	20	1	21	0	0	**2**	**2**	1	42	**3**	46	71
08:00 AM	**3**	0	**3**	**6**	0	**43**	**3**	**46**	**1**	0	1	2	**10**	**53**	2	**65**	**119**
08:15 AM	1	0	3	4	0	30	0	30	0	0	0	0	1	19	0	20	54
Total Volume	5	0	9	14	0	109	5	114	1	0	3	4	13	127	6	146	278
% App. Total	35.7	0	64.3		0	95.6	4.4		25	0	75		8.9	87	4.1		
PHF	.417	.000	.750	.583	.000	.634	.417	.620	.250	.000	.375	.500	.325	.599	.500	.562	.584

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City of Tracy
N/S: Elsinore Drive
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File Name : 07_TCY_Els_Kav PM
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Groups Printed- Total Volume

	Elsinore Drive Southbound				Kavanagh Avenue Westbound				North Elementary School Driveway Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	2	0	26	1	27	0	0	0	0	0	32	1	33	62
04:15 PM	3	0	2	5	0	20	2	22	0	0	0	0	2	42	0	44	71
04:30 PM	0	0	1	1	0	20	1	21	0	0	0	0	0	19	0	19	41
04:45 PM	0	0	1	1	0	15	0	15	0	0	0	0	0	19	0	19	35
Total	3	1	5	9	0	81	4	85	0	0	0	0	2	112	1	115	209
05:00 PM	0	0	1	1	0	17	2	19	0	0	0	0	1	11	0	12	32
05:15 PM	2	0	0	2	0	20	1	21	0	0	0	0	0	25	0	25	48
05:30 PM	2	0	1	3	0	16	1	17	0	0	0	0	2	27	0	29	49
05:45 PM	2	0	0	2	0	17	2	19	0	0	0	0	0	31	0	31	52
Total	6	0	2	8	0	70	6	76	0	0	0	0	3	94	0	97	181
Grand Total	9	1	7	17	0	151	10	161	0	0	0	0	5	206	1	212	390
Apprch %	52.9	5.9	41.2		0	93.8	6.2		0	0	0		2.4	97.2	0.5		
Total %	2.3	0.3	1.8	4.4	0	38.7	2.6	41.3	0	0	0	0	1.3	52.8	0.3	54.4	

	Elsinore Drive Southbound				Kavanagh Avenue Westbound				North Elementary School Driveway Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	1	2	0	**26**	1	**27**	0	0	0	0	0	32	**1**	33	62
04:15 PM	**3**	0	**2**	**5**	0	20	**2**	22	0	0	0	0	**2**	**42**	0	**44**	**71**
04:30 PM	0	0	1	1	0	20	1	21	0	0	0	0	0	19	0	19	41
04:45 PM	0	0	1	1	0	15	0	15	0	0	0	0	0	19	0	19	35
Total Volume	3	1	5	9	0	81	4	85	0	0	0	0	2	112	1	115	209
% App. Total	33.3	11.1	55.6		0	95.3	4.7		0	0	0		1.7	97.4	0.9		
PHF	.250	.250	.625	.450	.000	.779	.500	.787	.000	.000	.000	.000	.250	.667	.250	.653	.736

Counts Unlimited, Inc.
PO Box 1178
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City of Tracy
N/S: Parker Avenue
E/W: Grant Line Road
Weather: Clear

File Name : 08_TCY_Parker_GL AM
Site Code : 00323244
Start Date : 3/16/2023
Page No : 1

Groups Printed- Total Volume

	Parker Avenue Southbound				Grant Line Road Westbound				Parker Avenue Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	9	225	1	235	21	0	14	35	3	142	19	164	435
07:15 AM	0	0	0	0	7	152	1	160	20	0	15	35	1	147	13	161	356
07:30 AM	0	1	2	3	13	131	0	144	18	1	5	24	6	106	14	126	297
07:45 AM	0	0	0	0	6	107	4	117	17	1	6	24	4	89	10	103	244
Total	1	1	2	4	35	615	6	656	76	2	40	118	14	484	56	554	1332
08:00 AM	0	1	5	6	3	87	1	91	8	1	4	13	1	82	12	95	205
08:15 AM	1	0	4	5	10	105	3	118	14	2	4	20	10	69	6	85	228
08:30 AM	2	1	2	5	3	112	1	116	11	5	8	24	7	84	10	101	246
08:45 AM	1	0	6	7	9	101	3	113	19	4	2	25	6	85	12	103	248
Total	4	2	17	23	25	405	8	438	52	12	18	82	24	320	40	384	927
Grand Total	5	3	19	27	60	1020	14	1094	128	14	58	200	38	804	96	938	2259
Apprch %	18.5	11.1	70.4		5.5	93.2	1.3		64	7	29		4.1	85.7	10.2		
Total %	0.2	0.1	0.8	1.2	2.7	45.2	0.6	48.4	5.7	0.6	2.6	8.9	1.7	35.6	4.2	41.5	

	Parker Avenue Southbound				Grant Line Road Westbound				Parker Avenue Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	0	0	1	9	**225**	1	**235**	**21**	0	14	**35**	3	142	**19**	**164**	**435**
07:15 AM	0	0	0	0	7	152	1	160	20	0	**15**	35	1	**147**	13	161	356
07:30 AM	0	**1**	**2**	**3**	**13**	131	0	144	18	**1**	5	24	**6**	106	14	126	297
07:45 AM	0	0	0	0	6	107	**4**	117	17	1	6	24	4	89	10	103	244
Total Volume	1	1	2	4	35	615	6	656	76	2	40	118	14	484	56	554	1332
% App. Total	25	25	50		5.3	93.8	0.9		64.4	1.7	33.9		2.5	87.4	10.1		
PHF	.250	.250	.250	.333	.673	.683	.375	.698	.905	.500	.667	.843	.583	.823	.737	.845	.766

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City of Tracy
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Groups Printed- Total Volume

	Parker Avenue Southbound				Grant Line Road Westbound				Parker Avenue Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	14	150	0	164	28	0	15	43	0	179	34	213	420
04:15 PM	0	0	0	0	7	133	0	140	23	0	19	42	2	144	23	169	351
04:30 PM	0	0	1	1	9	131	0	140	19	1	14	34	1	198	41	240	415
04:45 PM	0	0	1	1	9	159	2	170	18	0	14	32	0	160	21	181	384
Total	0	0	2	2	39	573	2	614	88	1	62	151	3	681	119	803	1570
05:00 PM	0	0	2	2	13	174	1	188	24	0	8	32	1	151	31	183	405
05:15 PM	0	1	1	2	11	119	0	130	22	1	11	34	1	163	27	191	357
05:30 PM	3	0	2	5	5	111	3	119	20	1	14	35	3	124	26	153	312
05:45 PM	1	1	1	3	9	129	1	139	17	1	9	27	0	111	21	132	301
Total	4	2	6	12	38	533	5	576	83	3	42	128	5	549	105	659	1375
Grand Total	4	2	8	14	77	1106	7	1190	171	4	104	279	8	1230	224	1462	2945
Apprch %	28.6	14.3	57.1		6.5	92.9	0.6		61.3	1.4	37.3		0.5	84.1	15.3		
Total %	0.1	0.1	0.3	0.5	2.6	37.6	0.2	40.4	5.8	0.1	3.5	9.5	0.3	41.8	7.6	49.6	

	Parker Avenue Southbound				Grant Line Road Westbound				Parker Avenue Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**14**	150	0	164	**28**	0	15	**43**	0	179	34	213	**420**
04:15 PM	0	0	0	0	7	133	0	140	23	0	**19**	42	**2**	144	23	169	351
04:30 PM	0	0	**1**	**1**	9	131	0	140	19	**1**	14	34	1	**198**	**41**	**240**	415
04:45 PM	0	0	1	1	9	**159**	**2**	**170**	18	0	14	32	0	160	21	181	384
Total Volume	0	0	2	2	39	573	2	614	88	1	62	151	3	681	119	803	1570
% App. Total	0	0	100		6.4	93.3	0.3		58.3	0.7	41.1		0.4	84.8	14.8		
PHF	.000	.000	.500	.500	.696	.901	.250	.903	.786	.250	.816	.878	.375	.860	.726	.836	.935

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City of Tracy
N/S: Holly Drive
E/W: Kavanagh Avenue
Weather: Clear

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Groups Printed- Total Volume

	Holly Drive Southbound				Kavanagh Avenue Westbound				Holly Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	14	2	17	4	2	0	6	2	23	1	26	2	4	1	7	56
07:15 AM	0	17	2	19	3	3	1	7	6	19	3	28	1	2	18	21	75
07:30 AM	1	27	3	31	6	3	1	10	15	26	2	43	1	0	8	9	93
07:45 AM	0	32	11	43	22	14	1	37	11	29	1	41	4	5	30	39	160
Total	2	90	18	110	35	22	3	60	34	97	7	138	8	11	57	76	384
08:00 AM	2	42	11	55	37	12	4	53	7	24	2	33	3	12	25	40	181
08:15 AM	1	35	3	39	6	2	4	12	8	50	10	68	3	5	14	22	141
08:30 AM	1	25	1	27	1	6	0	7	4	40	3	47	2	5	4	11	92
08:45 AM	1	32	4	37	1	4	0	5	1	31	1	33	2	3	8	13	88
Total	5	134	19	158	45	24	8	77	20	145	16	181	10	25	51	86	502
Grand Total	7	224	37	268	80	46	11	137	54	242	23	319	18	36	108	162	886
Apprch %	2.6	83.6	13.8		58.4	33.6	8		16.9	75.9	7.2		11.1	22.2	66.7		
Total %	0.8	25.3	4.2	30.2	9	5.2	1.2	15.5	6.1	27.3	2.6	36	2	4.1	12.2	18.3	

	Holly Drive Southbound				Kavanagh Avenue Westbound				Holly Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	27	3	31	6	3	1	10	**15**	26	2	43	1	0	8	9	93
07:45 AM	0	32	**11**	43	22	**14**	1	37	11	29	1	41	**4**	5	**30**	39	160
08:00 AM	**2**	**42**	11	**55**	**37**	12	**4**	**53**	7	24	2	33	3	**12**	25	**40**	**181**
08:15 AM	1	35	3	39	6	2	4	12	8	**50**	**10**	**68**	3	5	14	22	141
Total Volume	4	136	28	168	71	31	10	112	41	129	15	185	11	22	77	110	575
% App. Total	2.4	81	16.7		63.4	27.7	8.9		22.2	69.7	8.1		10	20	70		
PHF	.500	.810	.636	.764	.480	.554	.625	.528	.683	.645	.375	.680	.688	.458	.642	.688	.794

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City of Tracy
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Weather: Clear

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Groups Printed- Total Volume

	Holly Drive Southbound				Kavanagh Avenue Westbound				Holly Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	50	2	52	2	8	4	14	20	54	6	80	6	9	18	33	179
04:15 PM	1	51	5	57	4	5	2	11	7	38	2	47	5	13	25	43	158
04:30 PM	0	49	3	52	1	4	2	7	16	55	2	73	3	4	11	18	150
04:45 PM	3	48	6	57	1	3	1	5	12	45	6	63	5	4	9	18	143
Total	4	198	16	218	8	20	9	37	55	192	16	263	19	30	63	112	630
05:00 PM	1	48	4	53	5	3	1	9	9	56	5	70	2	8	7	17	149
05:15 PM	0	53	5	58	5	8	1	14	9	41	3	53	5	11	12	28	153
05:30 PM	0	44	2	46	6	8	0	14	12	46	4	62	3	11	15	29	151
05:45 PM	2	46	3	51	4	1	2	7	18	61	3	82	10	5	15	30	170
Total	3	191	14	208	20	20	4	44	48	204	15	267	20	35	49	104	623
Grand Total	7	389	30	426	28	40	13	81	103	396	31	530	39	65	112	216	1253
Apprch %	1.6	91.3	7		34.6	49.4	16		19.4	74.7	5.8		18.1	30.1	51.9		
Total %	0.6	31	2.4	34	2.2	3.2	1	6.5	8.2	31.6	2.5	42.3	3.1	5.2	8.9	17.2	

	Holly Drive Southbound				Kavanagh Avenue Westbound				Holly Drive Northbound				Kavanagh Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	50	2	52	2	**8**	**4**	**14**	**20**	54	**6**	**80**	**6**	9	18	33	**179**
04:15 PM	1	**51**	5	**57**	**4**	5	2	11	7	38	2	47	5	**13**	**25**	**43**	158
04:30 PM	0	49	3	52	1	4	2	7	16	**55**	2	73	3	4	11	18	150
04:45 PM	**3**	48	**6**	57	1	3	1	5	12	45	6	63	5	4	9	18	143
Total Volume	4	198	16	218	8	20	9	37	55	192	16	263	19	30	63	112	630
% App. Total	1.8	90.8	7.3		21.6	54.1	24.3		20.9	73	6.1		17	26.8	56.2		
PHF	.333	.971	.667	.956	.500	.625	.563	.661	.688	.873	.667	.822	.792	.577	.630	.651	.880

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City of Tracy
N/S: Holly Drive
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File Name : 10_TCY_Holly_GL AM
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Groups Printed- Total Volume

	Holly Drive Southbound				Grant Line Road Westbound				Holly Drive Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	35	42	62	139	11	126	42	179	38	42	14	94	31	88	43	162	574
07:15 AM	24	41	47	112	8	101	15	124	33	38	23	94	25	106	22	153	483
07:30 AM	14	19	17	50	7	82	11	100	30	30	14	74	27	83	10	120	344
07:45 AM	11	16	19	46	4	92	16	112	12	11	9	32	12	76	14	102	292
Total	84	118	145	347	30	401	84	515	113	121	60	294	95	353	89	537	1693
08:00 AM	14	14	14	42	4	62	11	77	11	15	10	36	10	57	11	78	233
08:15 AM	15	19	22	56	7	86	9	102	10	9	6	25	11	59	10	80	263
08:30 AM	9	16	17	42	6	73	9	88	14	13	9	36	19	50	11	80	246
08:45 AM	10	15	13	38	5	98	13	116	13	17	6	36	6	68	14	88	278
Total	48	64	66	178	22	319	42	383	48	54	31	133	46	234	46	326	1020
Grand Total	132	182	211	525	52	720	126	898	161	175	91	427	141	587	135	863	2713
Apprch %	25.1	34.7	40.2		5.8	80.2	14		37.7	41	21.3		16.3	68	15.6		
Total %	4.9	6.7	7.8	19.4	1.9	26.5	4.6	33.1	5.9	6.5	3.4	15.7	5.2	21.6	5	31.8	

	Holly Drive Southbound				Grant Line Road Westbound				Holly Drive Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**35**	**42**	**62**	**139**	**11**	**126**	**42**	**179**	**38**	**42**	14	**94**	**31**	88	**43**	**162**	**574**
07:15 AM	24	41	47	112	8	101	15	124	33	38	**23**	94	25	**106**	22	153	483
07:30 AM	14	19	17	50	7	82	11	100	30	30	14	74	27	83	10	120	344
07:45 AM	11	16	19	46	4	92	16	112	12	11	9	32	12	76	14	102	292
Total Volume	84	118	145	347	30	401	84	515	113	121	60	294	95	353	89	537	1693
% App. Total	24.2	34	41.8		5.8	77.9	16.3		38.4	41.2	20.4		17.7	65.7	16.6		
PHF	.600	.702	.585	.624	.682	.796	.500	.719	.743	.720	.652	.782	.766	.833	.517	.829	.737

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Groups Printed- Total Volume

	Holly Drive Southbound				Grant Line Road Westbound				Holly Drive Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	22	28	7	57	14	131	20	165	16	35	14	65	22	136	22	180	467
04:15 PM	29	34	16	79	9	97	19	125	18	27	9	54	15	132	20	167	425
04:30 PM	16	27	19	62	9	97	24	130	17	25	13	55	21	178	18	217	464
04:45 PM	21	33	22	76	19	101	27	147	19	37	11	67	21	116	20	157	447
Total	88	122	64	274	51	426	90	567	70	124	47	241	79	562	80	721	1803
05:00 PM	21	29	22	72	14	140	16	170	14	26	16	56	24	119	20	163	461
05:15 PM	18	23	15	56	11	113	18	142	19	30	14	63	14	126	15	155	416
05:30 PM	18	25	9	52	10	74	12	96	16	31	10	57	19	122	20	161	366
05:45 PM	17	25	10	52	11	95	17	123	27	20	12	59	23	97	18	138	372
Total	74	102	56	232	46	422	63	531	76	107	52	235	80	464	73	617	1615
Grand Total	162	224	120	506	97	848	153	1098	146	231	99	476	159	1026	153	1338	3418
Apprch %	32	44.3	23.7		8.8	77.2	13.9		30.7	48.5	20.8		11.9	76.7	11.4		
Total %	4.7	6.6	3.5	14.8	2.8	24.8	4.5	32.1	4.3	6.8	2.9	13.9	4.7	30	4.5	39.1	

	Holly Drive Southbound				Grant Line Road Westbound				Holly Drive Northbound				Grant Line Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	22	28	7	57	14	**131**	20	**165**	16	35	**14**	65	**22**	136	**22**	180	**467**
04:15 PM	**29**	**34**	16	**79**	9	97	19	125	18	27	9	54	15	132	20	167	425
04:30 PM	16	27	19	62	9	97	24	130	17	25	13	55	21	**178**	18	**217**	464
04:45 PM	21	33	**22**	76	**19**	101	**27**	147	**19**	**37**	11	**67**	21	116	20	157	447
Total Volume	88	122	64	274	51	426	90	567	70	124	47	241	79	562	80	721	1803
% App. Total	32.1	44.5	23.4		9	75.1	15.9		29	51.5	19.5		11	77.9	11.1		
PHF	.759	.897	.727	.867	.671	.813	.833	.859	.921	.838	.839	.899	.898	.789	.909	.831	.965

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	32	79	40	72	32	46	548	37	27	624	103
Future Volume (veh/h)	106	32	79	40	72	32	46	548	37	27	624	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	34	83	42	76	34	48	577	39	28	657	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	67	113	170	205	77	91	1525	103	59	1325	217
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.05	0.45	0.45	0.03	0.43	0.43
Sat Flow, veh/h	671	338	574	315	1039	390	1781	3378	228	1781	3055	502
Grp Volume(v), veh/h	229	0	0	152	0	0	48	303	313	28	382	383
Grp Sat Flow(s),veh/h/ln	1583	0	0	1744	0	0	1781	1777	1829	1781	1777	1780
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	1.1	4.8	4.8	0.7	6.6	6.6
Cycle Q Clear(g_c), s	5.5	0.0	0.0	3.1	0.0	0.0	1.1	4.8	4.8	0.7	6.6	6.6
Prop In Lane	0.49		0.36	0.28		0.22	1.00		0.12	1.00		0.28
Lane Grp Cap(c), veh/h	439	0	0	453	0	0	91	802	826	59	770	772
V/C Ratio(X)	0.52	0.00	0.00	0.34	0.00	0.00	0.53	0.38	0.38	0.47	0.50	0.50
Avail Cap(c_a), veh/h	768	0	0	815	0	0	214	802	826	210	770	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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	0.0	14.9	0.0	0.0	19.6	7.7	7.7	20.2	8.7	8.7
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.4	0.0	0.0	4.7	1.4	1.3	5.8	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	1.2	0.0	0.0	0.5	1.6	1.7	0.3	2.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	0.0	15.4	0.0	0.0	24.4	9.1	9.0	26.0	10.9	11.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	B	B
Approach Vol, veh/h		229			152			664			793	
Approach Delay, s/veh		16.7			15.4			10.2			11.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	23.7		12.9	6.7	22.9		12.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.1	18.4		18.0				
Max Q Clear Time (g_c+I1), s	2.7	6.8		7.5	3.1	8.6		5.1				
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		12.0	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	425	110	132	526	91	172	424	141	80	495	153
Future Volume (veh/h)	134	425	110	132	526	91	172	424	141	80	495	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	447	116	139	554	96	181	446	148	84	521	161
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	637	164	173	685	118	222	909	299	108	755	232
Arrive On Green	0.10	0.23	0.23	0.10	0.23	0.23	0.12	0.35	0.35	0.06	0.28	0.28
Sat Flow, veh/h	1781	2797	720	1781	3030	523	1781	2627	864	1781	2676	823
Grp Volume(v), veh/h	141	283	280	139	324	326	181	300	294	84	345	337
Grp Sat Flow(s),veh/h/ln	1781	1777	1741	1781	1777	1776	1781	1777	1715	1781	1777	1722
Q Serve(g_s), s	5.2	9.8	9.9	5.1	11.6	11.6	6.6	8.9	9.0	3.1	11.6	11.7
Cycle Q Clear(g_c), s	5.2	9.8	9.9	5.1	11.6	11.6	6.6	8.9	9.0	3.1	11.6	11.7
Prop In Lane	1.00		0.41	1.00		0.29	1.00		0.50	1.00		0.48
Lane Grp Cap(c), veh/h	176	404	396	173	402	402	222	615	593	108	501	486
V/C Ratio(X)	0.80	0.70	0.71	0.80	0.81	0.81	0.82	0.49	0.49	0.78	0.69	0.69
Avail Cap(c_a), veh/h	176	480	470	173	477	477	226	615	593	160	501	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	23.8	23.8	29.6	24.5	24.6	28.6	17.2	17.3	31.0	21.4	21.5
Incr Delay (d2), s/veh	23.0	3.6	3.9	23.4	8.5	8.8	20.0	2.8	2.9	13.4	7.5	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.1	4.1	3.2	5.3	5.4	3.9	3.8	3.8	1.7	5.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	27.3	27.7	53.0	33.0	33.3	48.6	20.0	20.2	44.4	28.9	29.4
LnGrp LOS	D	C	C	D	C	C	D	B	C	D	C	C
Approach Vol, veh/h		704			789			775			766	
Approach Delay, s/veh		32.5			36.7			26.8			30.8	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	27.7	11.0	19.7	12.8	23.4	11.1	19.6
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	6.6	21.4	6.5	18.1	8.5	18.9	6.6	18.0
Max Q Clear Time (g_c+I1), s	5.1	11.0	7.1	11.9	8.6	13.7	7.2	13.6
Green Ext Time (p_c), s	0.0	2.7	0.0	1.7	0.0	2.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	72	10	37	95	11	13	48	60	17	55	28
Future Vol, veh/h	18	72	10	37	95	11	13	48	60	17	55	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	76	11	39	100	12	14	51	63	18	58	29
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	8.4	8.7	8.2	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	18%	26%	17%
Vol Thru, %	40%	72%	66%	55%
Vol Right, %	50%	10%	8%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	100	143	100
LT Vol	13	18	37	17
Through Vol	48	72	95	55
RT Vol	60	10	11	28
Lane Flow Rate	127	105	151	105
Geometry Grp	1	1	1	1
Degree of Util (X)	0.155	0.135	0.192	0.133
Departure Headway (Hd)	4.383	4.616	4.592	4.547
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	818	776	781	788
Service Time	2.412	2.648	2.622	2.577
HCM Lane V/C Ratio	0.155	0.135	0.193	0.133
HCM Control Delay	8.2	8.4	8.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.5	0.7	0.5

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	592	729	69	47	77
Future Vol, veh/h	66	592	729	69	47	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	623	767	73	49	81

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	840	0	-	0	1254	420
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	791	-	-	-	164	582
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	791	-	-	-	150	582
Mov Cap-2 Maneuver	-	-	-	-	271	-
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	18
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	791	-	-	-	406
HCM Lane V/C Ratio	0.088	-	-	-	0.321
HCM Control Delay (s)	10	-	-	-	18
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	145	133	0	4	7
Future Vol, veh/h	4	145	133	0	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	153	140	0	4	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	140	0	-	0	301	140
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1443	-	-	-	691	908
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1443	-	-	-	689	908
Mov Cap-2 Maneuver	-	-	-	-	689	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1443	-	-	-	814
HCM Lane V/C Ratio	0.003	-	-	-	0.014
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	153	125	2	4	4
Future Vol, veh/h	1	153	125	2	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	161	132	2	4	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	134	0	-	0	296	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	163	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1451	-	-	-	695	916
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1451	-	-	-	694	916
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	866	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1451	-	-	-	790
HCM Lane V/C Ratio	0.001	-	-	-	0.011
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

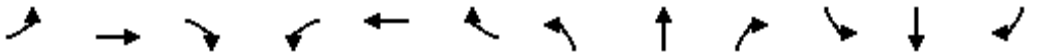
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	127	6	0	109	5	1	0	3	5	0	9
Future Vol, veh/h	13	127	6	0	109	5	1	0	3	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	134	6	0	115	5	1	0	3	5	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	140	0	0	287	285	137	285	286	118
Stage 1	-	-	-	-	-	-	165	165	-	118	118	-
Stage 2	-	-	-	-	-	-	122	120	-	167	168	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1468	-	-	1443	-	-	665	624	911	667	623	934
Stage 1	-	-	-	-	-	-	837	762	-	887	798	-
Stage 2	-	-	-	-	-	-	882	796	-	835	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1468	-	-	1443	-	-	653	618	911	660	617	934
Mov Cap-2 Maneuver	-	-	-	-	-	-	653	618	-	660	617	-
Stage 1	-	-	-	-	-	-	829	754	-	878	798	-
Stage 2	-	-	-	-	-	-	873	796	-	824	751	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	9.4	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	829	1468	-	-	1443	-	-	813
HCM Lane V/C Ratio	0.005	0.009	-	-	-	-	-	0.018
HCM Control Delay (s)	9.4	7.5	0	-	0	-	-	9.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	484	56	35	615	6	76	2	40	1	1	2
Future Volume (veh/h)	14	484	56	35	615	6	76	2	40	1	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	509	59	37	647	6	80	2	42	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	32	650	75	64	797	7	476	19	408	440	137	275
Arrive On Green	0.02	0.20	0.20	0.04	0.22	0.22	0.27	0.27	0.27	0.25	0.25	0.25
Sat Flow, veh/h	1781	3210	371	1781	3608	33	1781	73	1524	1781	557	1113
Grp Volume(v), veh/h	15	281	287	37	319	334	80	0	44	1	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1864	1781	0	1596	1781	0	1670
Q Serve(g_s), s	0.6	10.9	11.0	1.5	12.4	12.4	2.5	0.0	1.5	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.6	10.9	11.0	1.5	12.4	12.4	2.5	0.0	1.5	0.0	0.0	0.1
Prop In Lane	1.00		0.21	1.00		0.02	1.00		0.95	1.00		0.67
Lane Grp Cap(c), veh/h	32	360	365	64	392	412	476	0	427	440	0	412
V/C Ratio(X)	0.47	0.78	0.79	0.57	0.81	0.81	0.17	0.00	0.10	0.00	0.00	0.01
Avail Cap(c_a), veh/h	122	463	470	134	475	499	476	0	427	440	0	412
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	35.5	27.5	27.6	34.6	27.0	27.0	20.5	0.0	20.1	20.7	0.0	20.7
Incr Delay (d2), s/veh	10.3	6.4	6.6	7.8	8.7	8.3	0.8	0.0	0.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.9	5.0	0.8	5.8	6.0	1.1	0.0	0.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	33.9	34.1	42.4	35.7	35.3	21.2	0.0	20.6	20.7	0.0	20.7
LnGrp LOS	D	C	C	D	D	D	C	A	C	C	A	C
Approach Vol, veh/h		583			690			124			4	
Approach Delay, s/veh		34.3			35.9			21.0			20.7	
Approach LOS		C			D			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	7.1	19.3		22.5	5.8	20.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	5.5	19.0		18.0	5.0	19.5				
Max Q Clear Time (g_c+I1), s		4.5	3.5	13.0		2.1	2.6	14.4				
Green Ext Time (p_c), s		0.4	0.0	1.6		0.0	0.0	1.7				

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	22	77	71	31	10	41	129	15	4	136	28
Future Vol, veh/h	11	22	77	71	31	10	41	129	15	4	136	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	23	81	75	33	11	43	136	16	4	143	29
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	8.4	9.1	9.4	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	10%	63%	2%
Vol Thru, %	70%	20%	28%	81%
Vol Right, %	8%	70%	9%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	110	112	168
LT Vol	41	11	71	4
Through Vol	129	22	31	136
RT Vol	15	77	10	28
Lane Flow Rate	195	116	118	177
Geometry Grp	1	1	1	1
Degree of Util (X)	0.254	0.147	0.164	0.228
Departure Headway (Hd)	4.699	4.56	5.018	4.633
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	782	711	771
Service Time	2.749	2.615	3.074	2.683
HCM Lane V/C Ratio	0.256	0.148	0.166	0.23
HCM Control Delay	9.4	8.4	9.1	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.5	0.6	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	353	89	30	401	84	113	121	60	84	118	145
Future Volume (veh/h)	95	353	89	30	401	84	113	121	60	84	118	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	372	94	32	422	88	119	127	63	88	124	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	674	168	62	593	123	152	643	545	117	607	515
Arrive On Green	0.07	0.24	0.24	0.03	0.20	0.20	0.09	0.34	0.34	0.07	0.32	0.32
Sat Flow, veh/h	1781	2817	704	1781	2932	606	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	100	233	233	32	254	256	119	127	63	88	124	153
Grp Sat Flow(s),veh/h/ln	1781	1777	1744	1781	1777	1761	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.1	6.5	6.7	1.0	7.6	7.7	3.7	2.7	1.5	2.8	2.7	4.1
Cycle Q Clear(g_c), s	3.1	6.5	6.7	1.0	7.6	7.7	3.7	2.7	1.5	2.8	2.7	4.1
Prop In Lane	1.00		0.40	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	425	417	62	360	356	152	643	545	117	607	515
V/C Ratio(X)	0.78	0.55	0.56	0.52	0.71	0.72	0.78	0.20	0.12	0.75	0.20	0.30
Avail Cap(c_a), veh/h	156	561	551	156	561	556	172	643	545	156	607	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	19.0	19.0	27.0	21.2	21.2	25.5	13.2	12.8	26.1	13.9	14.4
Incr Delay (d2), s/veh	18.5	1.1	1.2	6.5	2.6	2.7	18.6	0.7	0.4	12.9	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	1.9	2.5	2.5	0.5	3.0	3.0	2.3	1.2	0.5	1.5	1.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	20.1	20.2	33.5	23.7	23.9	44.1	13.8	13.2	39.1	14.7	15.9
LnGrp LOS	D	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		566			542			309			365	
Approach Delay, s/veh		24.4			24.4			25.4			21.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	24.1	6.5	18.1	9.4	23.0	8.6	16.0
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	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	4.7	3.0	8.7	5.7	6.1	5.1	9.7
Green Ext Time (p_c), s	0.0	0.7	0.0	1.8	0.0	0.9	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	41	67	28	54	44	48	817	25	40	747	130
Future Volume (veh/h)	126	41	67	28	54	44	48	817	25	40	747	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	43	71	29	57	46	51	860	26	42	786	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	73	92	136	188	124	91	1660	50	79	1406	245
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.47	0.47	0.04	0.46	0.46
Sat Flow, veh/h	756	356	448	220	914	606	1781	3522	106	1781	3025	527
Grp Volume(v), veh/h	247	0	0	132	0	0	51	434	452	42	462	461
Grp Sat Flow(s),veh/h/ln	1560	0	0	1740	0	0	1781	1777	1851	1781	1777	1775
Q Serve(g_s), s	3.9	0.0	0.0	0.0	0.0	0.0	1.4	8.3	8.3	1.1	9.1	9.1
Cycle Q Clear(g_c), s	7.0	0.0	0.0	3.1	0.0	0.0	1.4	8.3	8.3	1.1	9.1	9.1
Prop In Lane	0.54		0.29	0.22		0.35	1.00		0.06	1.00		0.30
Lane Grp Cap(c), veh/h	435	0	0	448	0	0	91	837	873	79	826	825
V/C Ratio(X)	0.57	0.00	0.00	0.29	0.00	0.00	0.56	0.52	0.52	0.53	0.56	0.56
Avail Cap(c_a), veh/h	690	0	0	732	0	0	202	837	873	202	826	825
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	0.0	16.5	0.0	0.0	22.4	9.0	9.0	22.6	9.4	9.4
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.4	0.0	0.0	5.3	2.3	2.2	5.4	2.7	2.7
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	2.5	0.0	0.0	1.2	0.0	0.0	0.7	3.0	3.1	0.5	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	0.0	16.9	0.0	0.0	27.7	11.2	11.2	28.0	12.1	12.1
LnGrp LOS	B	A	A	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		247			132			937			965	
Approach Delay, s/veh		19.1			16.9			12.1			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	27.3		14.4	7.0	27.0		14.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	22.5		18.5	5.5	22.5		18.5				
Max Q Clear Time (g_c+I1), s	3.1	10.3		9.0	3.4	11.1		5.1				
Green Ext Time (p_c), s	0.0	4.5		1.0	0.0	4.6		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		13.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	613	161	139	473	166	181	584	118	150	495	174
Future Volume (veh/h)	199	613	161	139	473	166	181	584	118	150	495	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	209	645	169	146	498	175	191	615	124	158	521	183
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	728	191	182	577	202	231	854	172	195	696	243
Arrive On Green	0.14	0.26	0.26	0.10	0.22	0.22	0.13	0.29	0.29	0.11	0.27	0.27
Sat Flow, veh/h	1781	2787	729	1781	2582	902	1781	2947	593	1781	2582	903
Grp Volume(v), veh/h	209	411	403	146	342	331	191	370	369	158	358	346
Grp Sat Flow(s),veh/h/ln	1781	1777	1739	1781	1777	1708	1781	1777	1764	1781	1777	1708
Q Serve(g_s), s	8.7	16.9	16.9	6.1	14.0	14.2	7.9	14.2	14.3	6.6	14.0	14.1
Cycle Q Clear(g_c), s	8.7	16.9	16.9	6.1	14.0	14.2	7.9	14.2	14.3	6.6	14.0	14.1
Prop In Lane	1.00		0.42	1.00		0.53	1.00		0.34	1.00		0.53
Lane Grp Cap(c), veh/h	250	464	454	182	397	381	231	515	511	195	479	461
V/C Ratio(X)	0.84	0.89	0.89	0.80	0.86	0.87	0.83	0.72	0.72	0.81	0.75	0.75
Avail Cap(c_a), veh/h	293	487	477	228	421	405	270	515	511	223	479	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	26.9	27.0	33.3	28.3	28.4	32.2	24.2	24.2	33.0	25.3	25.4
Incr Delay (d2), s/veh	16.5	17.0	17.5	15.0	15.8	17.2	16.7	8.4	8.5	17.7	10.2	10.8
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	4.6	8.7	8.6	3.2	7.2	7.2	4.4	6.9	6.9	3.7	7.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	43.9	44.5	48.3	44.2	45.6	48.9	32.6	32.7	50.8	35.5	36.2
LnGrp LOS	D	D	D	D	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1023			819			930			862	
Approach Delay, s/veh		45.0			45.5			36.0			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	26.5	12.3	24.3	14.3	25.0	15.1	21.5
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	8.3	22.0	9.7	20.8	11.5	20.0	12.5	18.0
Max Q Clear Time (g_c+I1), s	10.6	16.3	8.1	18.9	9.9	16.1	10.7	16.2
Green Ext Time (p_c), s	0.0	2.3	0.1	0.9	0.1	1.6	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	76	16	19	57	8	25	57	31	9	43	17
Future Vol, veh/h	23	76	16	19	57	8	25	57	31	9	43	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	80	17	20	60	8	26	60	33	9	45	18
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	8.2	8.1	8.1	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	20%	23%	13%
Vol Thru, %	50%	66%	68%	62%
Vol Right, %	27%	14%	10%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	115	84	69
LT Vol	25	23	19	9
Through Vol	57	76	57	43
RT Vol	31	16	8	17
Lane Flow Rate	119	121	88	73
Geometry Grp	1	1	1	1
Degree of Util (X)	0.145	0.149	0.11	0.089
Departure Headway (Hd)	4.377	4.426	4.493	4.427
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	812	799	811
Service Time	2.395	2.444	2.513	2.447
HCM Lane V/C Ratio	0.145	0.149	0.11	0.09
HCM Control Delay	8.1	8.2	8.1	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.5	0.4	0.3

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	827	676	47	39	90
Future Vol, veh/h	59	827	676	47	39	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	871	712	49	41	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	761	0	-	0	1297	381
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	560	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	847	-	-	-	154	617
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	535	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	847	-	-	-	143	617
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	535	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	447
HCM Lane V/C Ratio	0.073	-	-	-	0.304
HCM Control Delay (s)	9.6	-	-	-	16.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	101	75	2	3	4
Future Vol, veh/h	3	101	75	2	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	106	79	2	3	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	81	0	-	0	192	80
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	112	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1517	-	-	-	797	980
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	913	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1517	-	-	-	795	980
Mov Cap-2 Maneuver	-	-	-	-	795	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	913	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1517	-	-	-	891
HCM Lane V/C Ratio	0.002	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	107	77	6	1	1
Future Vol, veh/h	2	107	77	6	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	113	81	6	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	87	0	-	0	201	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	-	788	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	787	975
Mov Cap-2 Maneuver	-	-	-	-	787	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	871
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

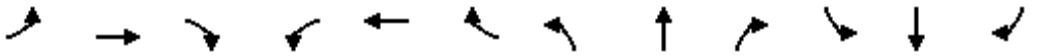
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	112	1	0	81	4	0	0	0	3	1	5
Future Vol, veh/h	2	112	1	0	81	4	0	0	0	3	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	118	1	0	85	4	0	0	0	3	1	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	119	0	0	213	212	119	210	210	87
Stage 1	-	-	-	-	-	-	123	123	-	87	87	-
Stage 2	-	-	-	-	-	-	90	89	-	123	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1469	-	-	744	685	933	747	687	971
Stage 1	-	-	-	-	-	-	881	794	-	921	823	-
Stage 2	-	-	-	-	-	-	917	821	-	881	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1469	-	-	739	684	933	746	686	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	739	684	-	746	686	-
Stage 1	-	-	-	-	-	-	880	793	-	920	823	-
Stage 2	-	-	-	-	-	-	911	821	-	880	793	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1506	-	-	1469	-	-	847
HCM Lane V/C Ratio	-	0.001	-	-	-	-	-	0.011
HCM Control Delay (s)	0	7.4	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	681	119	39	573	2	88	1	62	0	0	2
Future Volume (veh/h)	3	681	119	39	573	2	88	1	62	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	717	125	41	603	2	93	1	65	0	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	788	137	67	1069	4	423	6	371	414	0	368
Arrive On Green	0.00	0.26	0.26	0.04	0.29	0.29	0.24	0.24	0.24	0.00	0.00	0.23
Sat Flow, veh/h	1781	3025	527	1781	3633	12	1781	24	1565	1781	0	1585
Grp Volume(v), veh/h	3	421	421	41	295	310	93	0	66	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1781	1777	1868	1781	0	1589	1781	0	1585
Q Serve(g_s), s	0.1	17.8	17.8	1.8	10.9	10.9	3.3	0.0	2.6	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	17.8	17.8	1.8	10.9	10.9	3.3	0.0	2.6	0.0	0.0	0.1
Prop In Lane	1.00		0.30	1.00		0.01	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	7	463	462	67	523	550	423	0	377	414	0	368
V/C Ratio(X)	0.42	0.91	0.91	0.61	0.56	0.56	0.22	0.00	0.18	0.00	0.00	0.01
Avail Cap(c_a), veh/h	115	470	470	117	523	550	423	0	377	414	0	368
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	27.8	27.8	36.7	23.2	23.2	23.8	0.0	23.5	0.0	0.0	22.9
Incr Delay (d2), s/veh	34.3	21.5	21.6	8.6	1.4	1.3	1.2	0.0	1.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	9.7	9.7	0.9	4.4	4.6	1.5	0.0	1.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	49.3	49.4	45.3	24.6	24.5	25.0	0.0	24.5	0.0	0.0	22.9
LnGrp LOS	E	D	D	D	C	C	C	A	C	A	A	C
Approach Vol, veh/h		845			646			159			2	
Approach Delay, s/veh		49.4			25.8			24.8			22.9	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	7.4	24.7		22.5	4.8	27.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.4	5.1	20.5		18.0	5.0	20.6				
Max Q Clear Time (g_c+I1), s		5.3	3.8	19.8		2.1	2.1	12.9				
Green Ext Time (p_c), s		0.5	0.0	0.4		0.0	0.0	2.1				

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	30	63	8	20	9	55	192	16	4	198	16
Future Vol, veh/h	19	30	63	8	20	9	55	192	16	4	198	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	32	66	8	21	9	58	202	17	4	208	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

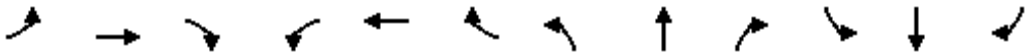
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.5	10.1	9.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	17%	22%	2%
Vol Thru, %	73%	27%	54%	91%
Vol Right, %	6%	56%	24%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	112	37	218
LT Vol	55	19	8	4
Through Vol	192	30	20	198
RT Vol	16	63	9	16
Lane Flow Rate	277	118	39	229
Geometry Grp	1	1	1	1
Degree of Util (X)	0.353	0.158	0.056	0.293
Departure Headway (Hd)	4.586	4.835	5.153	4.594
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	783	738	691	780
Service Time	2.627	2.89	3.217	2.637
HCM Lane V/C Ratio	0.354	0.16	0.056	0.294
HCM Control Delay	10.1	8.8	8.5	9.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.6	0.6	0.2	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	562	80	51	426	90	70	124	47	88	122	64
Future Volume (veh/h)	79	562	80	51	426	90	70	124	47	88	122	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	592	84	54	448	95	74	131	49	93	128	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	768	109	90	678	143	107	605	513	120	618	524
Arrive On Green	0.06	0.25	0.25	0.05	0.23	0.23	0.06	0.32	0.32	0.07	0.33	0.33
Sat Flow, veh/h	1781	3125	442	1781	2921	615	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	83	336	340	54	271	272	74	131	49	93	128	67
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1760	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.6	10.1	10.2	1.7	8.0	8.1	2.3	2.9	1.2	3.0	2.8	1.7
Cycle Q Clear(g_c), s	2.6	10.1	10.2	1.7	8.0	8.1	2.3	2.9	1.2	3.0	2.8	1.7
Prop In Lane	1.00		0.25	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	436	440	90	412	408	107	605	513	120	618	524
V/C Ratio(X)	0.73	0.77	0.77	0.60	0.66	0.67	0.69	0.22	0.10	0.78	0.21	0.13
Avail Cap(c_a), veh/h	155	557	561	155	557	551	155	605	513	170	618	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	20.2	20.2	26.7	20.0	20.0	26.5	14.1	13.6	26.4	13.8	13.4
Incr Delay (d2), s/veh	10.7	5.0	5.1	6.4	1.8	1.9	7.6	0.8	0.4	13.2	0.8	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	1.3	4.2	4.3	0.8	3.1	3.1	1.2	1.3	0.4	1.6	1.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	25.2	25.3	33.1	21.8	21.9	34.1	15.0	13.9	39.6	14.6	13.9
LnGrp LOS	D	C	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		759			597			254			288	
Approach Delay, s/veh		26.5			22.9			20.3			22.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	23.1	7.4	18.6	8.0	23.5	8.2	17.8
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	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	5.0	4.9	3.7	12.2	4.3	4.8	4.6	10.1
Green Ext Time (p_c), s	0.0	0.7	0.0	2.0	0.0	0.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	36	79	40	73	33	46	552	38	29	632	103
Future Volume (veh/h)	106	36	79	40	73	33	46	552	38	29	632	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	38	83	42	77	35	48	581	40	31	665	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	73	113	169	208	79	91	1508	104	64	1323	215
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.05	0.45	0.45	0.04	0.43	0.43
Sat Flow, veh/h	658	363	565	309	1039	396	1781	3374	232	1781	3061	497
Grp Volume(v), veh/h	233	0	0	154	0	0	48	306	315	31	386	387
Grp Sat Flow(s),veh/h/ln	1586	0	0	1744	0	0	1781	1777	1829	1781	1777	1781
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	0.0	1.1	4.9	4.9	0.7	6.7	6.7
Cycle Q Clear(g_c), s	5.6	0.0	0.0	3.2	0.0	0.0	1.1	4.9	4.9	0.7	6.7	6.7
Prop In Lane	0.48		0.36	0.27		0.23	1.00		0.13	1.00		0.28
Lane Grp Cap(c), veh/h	442	0	0	456	0	0	91	794	817	64	768	770
V/C Ratio(X)	0.53	0.00	0.00	0.34	0.00	0.00	0.53	0.38	0.39	0.48	0.50	0.50
Avail Cap(c_a), veh/h	766	0	0	813	0	0	213	794	817	209	768	770
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	0.0	14.9	0.0	0.0	19.7	7.9	7.9	20.1	8.8	8.8
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.4	0.0	0.0	4.7	1.4	1.4	5.5	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	1.2	0.0	0.0	0.5	1.7	1.7	0.4	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	0.0	15.3	0.0	0.0	24.4	9.3	9.2	25.7	11.1	11.1
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	B	B
Approach Vol, veh/h		233			154			669			804	
Approach Delay, s/veh		16.7			15.3			10.3			11.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	23.5		13.0	6.7	22.9		13.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.1	18.4		18.0				
Max Q Clear Time (g_c+I1), s	2.7	6.9		7.6	3.1	8.7		5.2				
Green Ext Time (p_c), s	0.0	3.0		1.0	0.0	3.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	440	110	136	534	95	172	425	148	88	495	153
Future Volume (veh/h)	134	440	110	136	534	95	172	425	148	88	495	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	463	116	143	562	100	181	447	156	93	521	161
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	649	161	172	690	122	222	877	303	119	752	231
Arrive On Green	0.10	0.23	0.23	0.10	0.23	0.23	0.12	0.34	0.34	0.07	0.28	0.28
Sat Flow, veh/h	1781	2819	701	1781	3016	535	1781	2590	896	1781	2676	823
Grp Volume(v), veh/h	141	291	288	143	330	332	181	305	298	93	345	337
Grp Sat Flow(s),veh/h/ln	1781	1777	1744	1781	1777	1774	1781	1777	1709	1781	1777	1722
Q Serve(g_s), s	5.2	10.1	10.3	5.3	11.8	11.9	6.7	9.2	9.4	3.5	11.7	11.8
Cycle Q Clear(g_c), s	5.2	10.1	10.3	5.3	11.8	11.9	6.7	9.2	9.4	3.5	11.7	11.8
Prop In Lane	1.00		0.40	1.00		0.30	1.00		0.52	1.00		0.48
Lane Grp Cap(c), veh/h	175	409	401	172	406	406	222	601	579	119	499	484
V/C Ratio(X)	0.81	0.71	0.72	0.83	0.81	0.82	0.82	0.51	0.51	0.78	0.69	0.70
Avail Cap(c_a), veh/h	175	478	469	172	476	475	225	601	579	159	499	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	23.8	23.9	29.8	24.6	24.6	28.7	17.8	17.8	30.9	21.6	21.6
Incr Delay (d2), s/veh	23.5	4.0	4.4	27.6	9.1	9.4	20.2	3.0	3.2	16.1	7.6	8.0
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	3.2	4.3	4.3	3.4	5.5	5.6	4.0	4.0	3.9	2.0	5.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	27.9	28.2	57.4	33.6	34.0	48.8	20.8	21.1	46.9	29.2	29.6
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		720			805			784			775	
Approach Delay, s/veh		33.0			38.0			27.4			31.5	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.3	11.0	20.0	12.9	23.4	11.1	19.9
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	6.0	21.4	6.5	18.1	8.5	18.9	6.6	18.0
Max Q Clear Time (g_c+I1), s	5.5	11.4	7.3	12.3	8.7	13.8	7.2	13.9
Green Ext Time (p_c), s	0.0	2.7	0.0	1.7	0.0	1.9	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	79	10	37	97	11	13	48	60	17	55	28
Future Vol, veh/h	18	79	10	37	97	11	13	48	60	17	55	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	83	11	39	102	12	14	51	63	18	58	29
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	8.4	8.8	8.3	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	17%	26%	17%
Vol Thru, %	40%	74%	67%	55%
Vol Right, %	50%	9%	8%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	107	145	100
LT Vol	13	18	37	17
Through Vol	48	79	97	55
RT Vol	60	10	11	28
Lane Flow Rate	127	113	153	105
Geometry Grp	1	1	1	1
Degree of Util (X)	0.156	0.145	0.195	0.134
Departure Headway (Hd)	4.406	4.622	4.603	4.571
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	813	775	778	783
Service Time	2.438	2.657	2.636	2.603
HCM Lane V/C Ratio	0.156	0.146	0.197	0.134
HCM Control Delay	8.3	8.4	8.8	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.7	0.5

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	622	745	69	47	77
Future Vol, veh/h	66	622	745	69	47	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	655	784	73	49	81

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	857	0	-	0	1287	429
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	779	-	-	-	156	574
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	779	-	-	-	142	574
Mov Cap-2 Maneuver	-	-	-	-	263	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	779	-	-	-	396
HCM Lane V/C Ratio	0.089	-	-	-	0.33
HCM Control Delay (s)	10.1	-	-	-	18.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	152	135	0	4	7
Future Vol, veh/h	4	152	135	0	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	160	142	0	4	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	142	0	-	0	310	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1441	-	-	-	682	906
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1441	-	-	-	680	906
Mov Cap-2 Maneuver	-	-	-	-	680	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	862	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1441	-	-	-	808
HCM Lane V/C Ratio	0.003	-	-	-	0.014
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	160	127	2	4	4
Future Vol, veh/h	1	160	127	2	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	168	134	2	4	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	136	0	-	0	305	135
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1448	-	-	-	687	914
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	686	914
Mov Cap-2 Maneuver	-	-	-	-	686	-
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1448	-	-	-	784
HCM Lane V/C Ratio	0.001	-	-	-	0.011
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

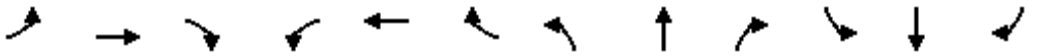
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	131	11	4	109	5	3	0	5	5	0	9
Future Vol, veh/h	13	131	11	4	109	5	3	0	5	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	138	12	4	115	5	3	0	5	5	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	150	0	0	302	300	144	301	304	118
Stage 1	-	-	-	-	-	-	172	172	-	126	126	-
Stage 2	-	-	-	-	-	-	130	128	-	175	178	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1468	-	-	1431	-	-	650	612	903	651	609	934
Stage 1	-	-	-	-	-	-	830	756	-	878	792	-
Stage 2	-	-	-	-	-	-	874	790	-	827	752	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1468	-	-	1431	-	-	637	604	903	641	601	934
Mov Cap-2 Maneuver	-	-	-	-	-	-	637	604	-	641	601	-
Stage 1	-	-	-	-	-	-	822	748	-	869	790	-
Stage 2	-	-	-	-	-	-	863	788	-	814	744	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	9.7	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	781	1468	-	-	1431	-	-	803
HCM Lane V/C Ratio	0.011	0.009	-	-	0.003	-	-	0.018
HCM Control Delay (s)	9.7	7.5	0	-	7.5	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	484	56	35	615	21	76	7	40	17	4	9
Future Volume (veh/h)	44	484	56	35	615	21	76	7	40	17	4	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	509	59	37	647	22	80	7	42	18	4	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	731	84	64	780	27	461	60	359	425	122	275
Arrive On Green	0.04	0.23	0.23	0.04	0.22	0.22	0.26	0.26	0.26	0.24	0.24	0.24
Sat Flow, veh/h	1781	3210	371	1781	3507	119	1781	231	1389	1781	512	1151
Grp Volume(v), veh/h	46	281	287	37	328	341	80	0	49	18	0	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1849	1781	0	1620	1781	0	1663
Q Serve(g_s), s	1.9	10.9	11.0	1.5	13.2	13.3	2.6	0.0	1.7	0.6	0.0	0.5
Cycle Q Clear(g_c), s	1.9	10.9	11.0	1.5	13.2	13.3	2.6	0.0	1.7	0.6	0.0	0.5
Prop In Lane	1.00		0.21	1.00		0.06	1.00		0.86	1.00		0.69
Lane Grp Cap(c), veh/h	73	405	411	64	395	411	461	0	419	425	0	397
V/C Ratio(X)	0.63	0.69	0.70	0.58	0.83	0.83	0.17	0.00	0.12	0.04	0.00	0.03
Avail Cap(c_a), veh/h	118	448	455	130	460	478	461	0	419	425	0	397
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	35.6	26.7	26.7	35.8	27.9	27.9	21.7	0.0	21.3	22.0	0.0	22.0
Incr Delay (d2), s/veh	8.6	4.1	4.2	8.1	10.7	10.4	0.8	0.0	0.6	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.7	4.8	0.8	6.4	6.6	1.2	0.0	0.7	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	30.8	30.9	43.9	38.6	38.3	22.5	0.0	21.9	22.2	0.0	22.2
LnGrp LOS	D	C	C	D	D	D	C	A	C	C	A	C
Approach Vol, veh/h		614			706			129			31	
Approach Delay, s/veh		31.8			38.7			22.3			22.2	
Approach LOS		C			D			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	7.2	21.7		22.5	7.6	21.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	5.5	19.0		18.0	5.0	19.5				
Max Q Clear Time (g_c+I1), s		4.6	3.5	13.0		2.6	3.9	15.3				
Green Ext Time (p_c), s		0.4	0.0	1.6		0.0	0.0	1.5				

Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	23	81	71	32	10	44	130	15	4	137	28
Future Vol, veh/h	12	23	81	71	32	10	44	130	15	4	137	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	24	85	75	34	11	46	137	16	4	144	29
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	8.5	9.1	9.5	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	10%	63%	2%
Vol Thru, %	69%	20%	28%	81%
Vol Right, %	8%	70%	9%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	116	113	169
LT Vol	44	12	71	4
Through Vol	130	23	32	137
RT Vol	15	81	10	28
Lane Flow Rate	199	122	119	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.155	0.167	0.23
Departure Headway (Hd)	4.724	4.579	5.041	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	756	778	708	767
Service Time	2.776	2.637	3.1	2.713
HCM Lane V/C Ratio	0.263	0.157	0.168	0.232
HCM Control Delay	9.5	8.5	9.1	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.5	0.6	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	358	99	30	406	84	122	124	60	84	122	146
Future Volume (veh/h)	96	358	99	30	406	84	122	124	60	84	122	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	377	104	32	427	88	128	131	63	88	128	154
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	664	181	62	596	122	163	649	550	117	600	509
Arrive On Green	0.07	0.24	0.24	0.03	0.20	0.20	0.09	0.35	0.35	0.07	0.32	0.32
Sat Flow, veh/h	1781	2760	752	1781	2938	601	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	101	241	240	32	257	258	128	131	63	88	128	154
Grp Sat Flow(s),veh/h/ln	1781	1777	1735	1781	1777	1762	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.2	6.9	7.0	1.0	7.8	7.9	4.1	2.8	1.6	2.8	2.9	4.2
Cycle Q Clear(g_c), s	3.2	6.9	7.0	1.0	7.8	7.9	4.1	2.8	1.6	2.8	2.9	4.2
Prop In Lane	1.00		0.43	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	428	418	62	361	358	163	649	550	117	600	509
V/C Ratio(X)	0.78	0.56	0.57	0.52	0.71	0.72	0.79	0.20	0.11	0.75	0.21	0.30
Avail Cap(c_a), veh/h	154	555	542	154	555	550	170	649	550	154	600	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	19.2	19.3	27.3	21.4	21.5	25.6	13.2	12.8	26.5	14.3	14.7
Incr Delay (d2), s/veh	19.1	1.2	1.2	6.5	2.6	2.8	20.4	0.7	0.4	13.7	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	1.9	2.6	2.6	0.5	3.1	3.1	2.6	1.2	0.5	1.6	1.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	20.4	20.5	33.9	24.0	24.2	46.1	13.9	13.2	40.2	15.1	16.3
LnGrp LOS	D	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		582			547			322			370	
Approach Delay, s/veh		24.8			24.7			26.6			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	24.5	6.5	18.4	9.8	23.0	8.7	16.2
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	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.8	4.8	3.0	9.0	6.1	6.2	5.2	9.9
Green Ext Time (p_c), s	0.0	0.7	0.0	1.8	0.0	0.9	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	45	67	29	57	45	48	825	26	42	754	130
Future Volume (veh/h)	126	45	67	29	57	45	48	825	26	42	754	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	47	71	31	60	47	51	868	27	44	794	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	77	91	136	189	122	91	1674	52	82	1426	246
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.48	0.48	0.05	0.47	0.47
Sat Flow, veh/h	748	376	443	230	919	594	1781	3518	109	1781	3030	523
Grp Volume(v), veh/h	251	0	0	138	0	0	51	438	457	44	466	465
Grp Sat Flow(s),veh/h/ln	1567	0	0	1743	0	0	1781	1777	1851	1781	1777	1776
Q Serve(g_s), s	3.9	0.0	0.0	0.0	0.0	0.0	1.4	8.5	8.5	1.2	9.3	9.3
Cycle Q Clear(g_c), s	7.2	0.0	0.0	3.3	0.0	0.0	1.4	8.5	8.5	1.2	9.3	9.3
Prop In Lane	0.53		0.28	0.22		0.34	1.00		0.06	1.00		0.29
Lane Grp Cap(c), veh/h	434	0	0	447	0	0	91	845	880	82	836	836
V/C Ratio(X)	0.58	0.00	0.00	0.31	0.00	0.00	0.56	0.52	0.52	0.54	0.56	0.56
Avail Cap(c_a), veh/h	665	0	0	704	0	0	184	845	880	205	836	836
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	0.0	16.9	0.0	0.0	23.0	9.0	9.0	23.1	9.4	9.4
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.4	0.0	0.0	5.4	2.3	2.2	5.4	2.7	2.7
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	2.6	0.0	0.0	1.3	0.0	0.0	0.7	3.1	3.2	0.6	3.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	0.0	0.0	17.3	0.0	0.0	28.3	11.3	11.2	28.5	12.1	12.1
LnGrp LOS	B	A	A	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		251			138			946			975	
Approach Delay, s/veh		19.5			17.3			12.2			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	28.1		14.7	7.0	27.8		14.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.7	22.7		18.1	5.1	23.3		18.1				
Max Q Clear Time (g_c+I1), s	3.2	10.5		9.2	3.4	11.3		5.3				
Green Ext Time (p_c), s	0.0	4.6		1.0	0.0	4.8		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	627	161	146	489	174	181	585	125	157	496	174
Future Volume (veh/h)	199	627	161	146	489	174	181	585	125	157	496	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	209	660	169	154	515	183	191	616	132	165	522	183
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	733	188	190	589	208	230	830	177	202	695	242
Arrive On Green	0.14	0.26	0.26	0.11	0.23	0.23	0.13	0.28	0.28	0.11	0.27	0.27
Sat Flow, veh/h	1781	2802	717	1781	2573	910	1781	2912	623	1781	2583	902
Grp Volume(v), veh/h	209	418	411	154	355	343	191	375	373	165	358	347
Grp Sat Flow(s),veh/h/ln	1781	1777	1741	1781	1777	1707	1781	1777	1758	1781	1777	1708
Q Serve(g_s), s	8.8	17.6	17.6	6.5	14.9	15.0	8.1	14.8	14.8	7.0	14.3	14.4
Cycle Q Clear(g_c), s	8.8	17.6	17.6	6.5	14.9	15.0	8.1	14.8	14.8	7.0	14.3	14.4
Prop In Lane	1.00		0.41	1.00		0.53	1.00		0.35	1.00		0.53
Lane Grp Cap(c), veh/h	249	465	456	190	407	390	230	506	501	202	478	459
V/C Ratio(X)	0.84	0.90	0.90	0.81	0.87	0.88	0.83	0.74	0.74	0.82	0.75	0.75
Avail Cap(c_a), veh/h	288	479	469	224	414	398	265	506	501	219	478	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	27.5	27.5	33.7	28.7	28.7	32.8	25.0	25.1	33.5	25.8	25.9
Incr Delay (d2), s/veh	17.3	19.4	20.0	17.1	17.9	19.4	17.4	9.4	9.6	19.7	10.3	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	9.3	9.2	3.6	7.9	7.8	4.5	7.3	7.2	4.0	7.1	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	47.0	47.5	50.8	46.6	48.1	50.2	34.5	34.7	53.2	36.2	36.8
LnGrp LOS	D	D	D	D	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1038			852			939			870	
Approach Delay, s/veh		47.7			48.0			37.7			39.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	26.5	12.8	24.7	14.5	25.3	15.3	22.2
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	9.5	22.0	9.7	20.8	11.5	20.0	12.5	18.0
Max Q Clear Time (g_c+I1), s	10.8	16.8	8.5	19.6	10.1	16.4	10.8	17.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.6	0.1	1.5	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	83	16	1	62	8	25	57	31	9	43	17
Future Vol, veh/h	23	83	16	1	62	8	25	57	31	9	43	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	87	17	1	65	8	26	60	33	9	45	18
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	8.3	7.9	8.1	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	19%	1%	13%
Vol Thru, %	50%	68%	87%	62%
Vol Right, %	27%	13%	11%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	122	71	69
LT Vol	25	23	1	9
Through Vol	57	83	62	43
RT Vol	31	16	8	17
Lane Flow Rate	119	128	75	73
Geometry Grp	1	1	1	1
Degree of Util (X)	0.144	0.157	0.092	0.089
Departure Headway (Hd)	4.36	4.41	4.446	4.409
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	815	807	814
Service Time	2.376	2.428	2.465	2.427
HCM Lane V/C Ratio	0.144	0.157	0.093	0.09
HCM Control Delay	8.1	8.3	7.9	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.3	0.3

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	855	707	47	39	90
Future Vol, veh/h	59	855	707	47	39	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	900	744	49	41	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	793	0	-	0	1343	397
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	824	-	-	-	143	602
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	824	-	-	-	132	602
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	824	-	-	-	432
HCM Lane V/C Ratio	0.075	-	-	-	0.314
HCM Control Delay (s)	9.7	-	-	-	17.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	108	80	2	3	4
Future Vol, veh/h	3	108	80	2	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	114	84	2	3	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	86	0	-	0	205	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1510	-	-	-	783	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	905	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1510	-	-	-	781	974
Mov Cap-2 Maneuver	-	-	-	-	781	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	905	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1510	-	-	-	881
HCM Lane V/C Ratio	0.002	-	-	-	0.008
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	114	82	6	1	1
Future Vol, veh/h	2	114	82	6	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	120	86	6	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	92	0	-	0	213	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	124	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1503	-	-	-	775	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1503	-	-	-	774	969
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1503	-	-	-	861
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

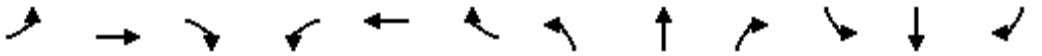
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	120	6	3	81	4	5	0	4	3	1	5
Future Vol, veh/h	2	120	6	3	81	4	5	0	4	3	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	126	6	3	85	4	5	0	4	3	1	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	132	0	0	229	228	129	228	229	87
Stage 1	-	-	-	-	-	-	133	133	-	93	93	-
Stage 2	-	-	-	-	-	-	96	95	-	135	136	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1453	-	-	726	671	921	727	671	971
Stage 1	-	-	-	-	-	-	870	786	-	914	818	-
Stage 2	-	-	-	-	-	-	911	816	-	868	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1453	-	-	719	669	921	722	669	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	719	669	-	722	669	-
Stage 1	-	-	-	-	-	-	869	785	-	913	816	-
Stage 2	-	-	-	-	-	-	903	814	-	863	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	9.6	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	797	1506	-	-	1453	-	-	833
HCM Lane V/C Ratio	0.012	0.001	-	-	0.002	-	-	0.011
HCM Control Delay (s)	9.6	7.4	0	-	7.5	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	681	119	39	573	16	88	6	62	31	5	18
Future Volume (veh/h)	31	681	119	39	573	16	88	6	62	31	5	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	717	125	41	603	17	93	6	65	33	5	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	788	137	67	937	26	423	32	349	414	79	301
Arrive On Green	0.03	0.26	0.26	0.04	0.27	0.27	0.24	0.24	0.24	0.23	0.23	0.23
Sat Flow, veh/h	1781	3025	527	1781	3530	99	1781	136	1470	1781	341	1296
Grp Volume(v), veh/h	33	421	421	41	303	317	93	0	71	33	0	24
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1781	1777	1852	1781	0	1606	1781	0	1637
Q Serve(g_s), s	1.4	17.8	17.8	1.8	11.7	11.7	3.3	0.0	2.7	1.1	0.0	0.9
Cycle Q Clear(g_c), s	1.4	17.8	17.8	1.8	11.7	11.7	3.3	0.0	2.7	1.1	0.0	0.9
Prop In Lane	1.00		0.30	1.00		0.05	1.00		0.92	1.00		0.79
Lane Grp Cap(c), veh/h	58	463	462	67	472	492	423	0	381	414	0	380
V/C Ratio(X)	0.56	0.91	0.91	0.61	0.64	0.64	0.22	0.00	0.19	0.08	0.00	0.06
Avail Cap(c_a), veh/h	115	470	470	117	472	492	423	0	381	414	0	380
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	36.9	27.8	27.8	36.7	25.2	25.2	23.8	0.0	23.6	23.3	0.0	23.2
Incr Delay (d2), s/veh	8.3	21.5	21.6	8.6	3.0	2.9	1.2	0.0	1.1	0.4	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	0.7	9.7	9.7	0.9	4.9	5.2	1.5	0.0	1.1	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	49.3	49.4	45.3	28.2	28.1	25.0	0.0	24.7	23.7	0.0	23.5
LnGrp LOS	D	D	D	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		875			661			164			57	
Approach Delay, s/veh		49.2			29.2			24.8			23.6	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	7.4	24.7		22.5	7.0	25.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.4	5.1	20.5		18.0	5.0	20.6				
Max Q Clear Time (g_c+I1), s		5.3	3.8	19.8		3.1	3.4	13.7				
Green Ext Time (p_c), s		0.5	0.0	0.4		0.1	0.0	2.0				

Intersection Summary												
HCM 6th Ctrl Delay			38.6									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	32	71	8	21	9	57	195	16	4	200	16
Future Vol, veh/h	21	32	71	8	21	9	57	195	16	4	200	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	34	75	8	22	9	60	205	17	4	211	17
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	9	8.6	10.3	9.7
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	17%	21%	2%
Vol Thru, %	73%	26%	55%	91%
Vol Right, %	6%	57%	24%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	268	124	38	220
LT Vol	57	21	8	4
Through Vol	195	32	21	200
RT Vol	16	71	9	16
Lane Flow Rate	282	131	40	232
Geometry Grp	1	1	1	1
Degree of Util (X)	0.363	0.176	0.058	0.298
Departure Headway (Hd)	4.628	4.855	5.199	4.64
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	776	735	684	771
Service Time	2.674	2.913	3.27	2.688
HCM Lane V/C Ratio	0.363	0.178	0.058	0.301
HCM Control Delay	10.3	9	8.6	9.7
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	0.6	0.2	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	571	99	51	430	90	78	126	47	88	130	66
Future Volume (veh/h)	82	571	99	51	430	90	78	126	47	88	130	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	601	104	54	453	95	82	133	49	93	137	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	764	132	89	696	145	112	603	511	119	610	517
Arrive On Green	0.06	0.25	0.25	0.05	0.24	0.24	0.06	0.32	0.32	0.07	0.33	0.33
Sat Flow, veh/h	1781	3030	523	1781	2928	610	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	86	352	353	54	274	274	82	133	49	93	137	69
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1761	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.8	10.8	10.8	1.7	8.1	8.2	2.6	3.0	1.3	3.0	3.1	1.8
Cycle Q Clear(g_c), s	2.8	10.8	10.8	1.7	8.1	8.2	2.6	3.0	1.3	3.0	3.1	1.8
Prop In Lane	1.00		0.29	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	448	448	89	422	418	112	603	511	119	610	517
V/C Ratio(X)	0.75	0.79	0.79	0.61	0.65	0.66	0.73	0.22	0.10	0.78	0.22	0.13
Avail Cap(c_a), veh/h	153	549	549	153	549	544	153	603	511	168	610	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	20.3	20.3	27.1	20.0	20.1	26.8	14.4	13.8	26.8	14.3	13.8
Incr Delay (d2), s/veh	13.2	6.1	6.2	6.5	1.7	1.8	10.9	0.8	0.4	14.2	0.9	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	1.5	4.6	4.6	0.8	3.1	3.1	1.4	1.3	0.4	1.7	1.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	26.4	26.6	33.6	21.7	21.9	37.7	15.3	14.2	40.9	15.1	14.4
LnGrp LOS	D	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		791			602			264			299	
Approach Delay, s/veh		27.9			22.8			22.0			23.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	23.3	7.4	19.2	8.2	23.5	8.3	18.3
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	5.5	18.5	5.0	18.0	5.0	19.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	5.0	5.0	3.7	12.8	4.6	5.1	4.8	10.2
Green Ext Time (p_c), s	0.0	0.7	0.0	1.9	0.0	0.8	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C