MENLO FLATS PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT
TECHNICAL APPENDICES

STATE CLEARINGHOUSE NO. 2020110243

MENLO PARK, CALIFORNIA

LSA

October 2021

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APPENDIX A

NOTICE OF PREPARATION AND COMMENT LETTERS

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NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT
MENLO PORTAL PROJECT
CITY OF MENLO PARK

Date: November 16, 2020

To:	State Clearinghouse State Responsible Agencies State Trustee Agencies Other Public Agencies Interested Organizations	**From:**	Payal Bhagat Consulting Planner City of Menlo Park 701 Laurel Street Menlo Park, CA 94025

Subject: **Notice of Preparation of an Initial Study and Environmental Impact Report for the Menlo Flats Project**

Lead Agency: City of Menlo Park, Planning Division
Project Title: Menlo Flats Project
Project Area: Bayfront Area, City of Menlo Park

Notice is hereby given that the City of Menlo Park (City) will be the lead agency and will prepare a focused environmental impact report (EIR) for the proposed Menlo Flats Project (project). An Initial Study has been prepared along with this Notice of Preparation (NOP), which scopes out several environmental topics from further review. The focused EIR will address potential physical environmental effects of the proposed project that have not been scoped out, as outlined in the California Environmental Quality Act (CEQA). The City is requesting comments on the scope and content of this focused EIR.

A scoping session will be held as part of the Planning Commission meeting on **December 7, 2020** at **7:00 p.m.** In response to the ongoing COVID-19 pandemic, the Planning Commission meeting will be held remotely via Gotowebinar, which can be accessed at: menlopark.org/PlanningCommission. The scoping session, which is part of the focused EIR process, is the time when the City solicits input from the public and agencies on specific topics they believe should be addressed in the environmental analysis. The scoping process is designed to enable the City to determine the scope and content of the focused EIR, identify the range of actions, and identify potentially significant environmental effects, alternatives, and mitigation measures to be analyzed in the focused EIR. Written comments on the scope of the focused EIR may also be sent to:

Payal Bhagat
City of Menlo Park
Community Development Department, Planning Division
701 Laurel Street
Menlo Park, CA 94025
PBhagat@menlopark.org
Phone: 650.330.6702

Comments on the NOP are due no later than the close of the NOP review period (5:00 p.m. on **December 21, 2020**). However, we would appreciate your response at the earliest possible date. Please send your written comments to Payal Bhagat at the address shown above or by email to PBhagat@menlopark.org with "Menlo Flats Project EIR" as the subject. Public agencies that provide comments are asked to include a contact person for the agency.

The Initial Study is available online at: https://www.menlopark.org/1537/CEQA-documents. Due to the ongoing COVID-19 pandemic, paper copies are not currently available for review. If you require additional assistance, please contact Payal Bhagat at PBhagat@menlopark.org.

PROJECT LOCATION AND EXISTING CONDITIONS: The project site is located east of US Highway 101 (US 101) in the City of Menlo Park, San Mateo County, as shown in Figure 1. The approximately 1.38-acre project site is located at 165 Jefferson Drive and is generally surrounded by a mix of uses, including older buildings and new construction. The project site is bordered to the north by the Synergy Badminton Club, to the east by two light industrial buildings, to the south by Jefferson Drive, and to the west by a single-story light industrial building.

The project site is designated Mixed Use Residential within the Bayfront Area on the City's General Plan Land Use Designations Map and is within the Residential-Mixed Use-Bonus (R-MU-B) Zoning District. The generally-level project site is currently developed with a single-story, approximately 24,311-square-foot commercial office building, as shown in Figure 2. The existing building on the project site was constructed in 1964 and is currently occupied by a commercial tenant. A total of 40 surface parking spaces are provided on the project site. Vegetation on the project site consists of small landscaped areas along the southern border and includes a total of 11 mature trees, 4 of which are Heritage Trees.

PROJECT DESCRIPTION: The proposed project would result in demolition of the existing office building and associated improvements and redevelopment of the project site with an approximately 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and approximately 15,000 square feet of commercial space, as well as associated open space, circulation and parking, and infrastructure improvements, as shown in Figures 3, 4, and 5. The project sponsor is currently proposing that 15 percent of the units would comply with the City's Below Market Rate (BMR) Housing Program Ordinance, Chapter 16.96, and the City's Below Market Rate Guidelines (Guidelines). The proposed allotment and mix of affordable housing units would continue to be refined with the City.

The ground floor of each building would be raised approximately 5 feet above grade to accommodate flood plain design requirements. The proposed residential building would be a maximum of 84 feet, 11 inches and would front to Jefferson Drive. The proposed building would include an at-grade, three-level, approximately 81,988-square-foot, 176-space parking garage.

A total of approximately 20,929 square feet of open space would be provided across the entire project site, including private residential open space, common open space, and an approximately 1,647-square-foot public plaza located at the southeast corner of the building and a 3,375-square-foot publicly-accessible pedestrian paseo along the eastern boundary of the project site.

PROJECT APPROVALS: The following City discretionary approvals would be required prior to development at the project site:

- EIR Certification
- Use Permit
- Architectural Control
- Heritage Tree Removal Permit
- Below Market Rate Housing Agreement
- Building Permit
- Encroachment Permit

There will be a fiscal impact analysis conducted regarding the proposed project. In order to qualify for bonus-level development within the R-MU-B zoning district, the proposed project will also be required to complete an appraisal process to identify the value of the community amenities to be provided in exchange for the opportunity to develop at the bonus level.

RESPONSIBLE AGENCIES: The agencies/entities listed below are expected to review the draft focused EIR to evaluate the proposed project:

- Pacific Gas & Electric
- California Department of Transportation
- California Department of Toxic Substances Control
- California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program
- Native American Heritage Commission
- City/County Association of Governments
- Bay Area Air Quality Management District
- San Mateo County Transportation Authority
- San Mateo County Environmental Health Division
- West Bay Sanitary District
- Menlo Park Fire Protection District

INTRODUCTION TO EIR: ConnectMenlo, which updated the City's General Plan Land Use and Circulation Elements and rezoned land in the M-2 Area (now referred to as the Bayfront Area), was approved on November 29, 2016. Because the City's General Plan is a long-range planning document, the ConnectMenlo EIR was prepared as a program EIR, pursuant to CEQA Guidelines Section 15168. The City certified the program EIR for ConnectMenlo on November 29, 2016. Section 15168(d) of the CEQA Guidelines provides information for simplifying the preparation of environmental documents by incorporating by reference analyses and discussions from the program EIR. CEQA Guidelines Section 15162(d) states that where an EIR has been prepared and certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to the effects that were not analyzed as significant in the prior EIR or susceptible to substantial reduction or avoidance.

An Initial Study for the proposed project, which is available for review online, has been prepared to evaluate the potential environmental impacts of the proposed project and determine what level of additional environmental review is appropriate. In accordance with the requirements outlined in Section 15168 of the CEQA Guidelines, the Initial Study has been prepared to disclose the relevant impacts and mitigation measures covered in the certified program-level ConnectMenlo Final EIR and discuss whether the proposed project is within the parameters of the certified ConnectMenlo Final

EIR. In addition, as a result of the settlement agreement between the City of Menlo Park and the City of East Palo Alto regarding the ConnectMenlo Final EIR, certain topics are required to be analyzed. Based on the findings of the Initial Study, a focused EIR will be prepared for impacts that need further discussion and/or mitigation beyond that provided in the certified ConnectMenlo Final EIR. The focused EIR for the proposed project will be prepared and processed in accordance with CEQA and the CEQA Guidelines.

PROBABLE ENVIRONMENTAL EFFECTS: Based on the conclusions in the Initial Study, the following topics will be scoped out of the EIR: aesthetics; agriculture and forestry resources; biological resources; cultural resources; energy; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; noise (construction-period); mineral resources; public services; recreation; utilities and service systems; and wildfire. These topic areas were adequately analyzed in the ConnectMenlo Final EIR and no additional potential impacts or mitigation measures have been identified in the Initial Study. Therefore, the focused EIR will analyze whether the proposed project would have a significant environmental impact in the following areas:

- Air Quality;
- Greenhouse Gas Emissions;
- Noise (traffic noise);
- Population and Housing; and
- Transportation.

ALTERNATIVES: Based on the significance conclusions determined in the focused EIR, alternatives to the proposed project will be identified and analyzed to reduce identified impacts. Section 15126.6(e) of the CEQA Guidelines requires the evaluation of a No Project Alternative. Other alternatives may be considered during preparation of the EIR and will comply with the CEQA Guidelines, which call for a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.

EIR PROCESS: Following the close of the NOP comment period, a draft focused EIR will be prepared that will consider all NOP comments. In accordance with CEQA Guidelines Section 15105(a), the draft focused EIR will be released for public review and comment for a required 45-day review period. Following the close of the 45-day public review period, the City will prepare a final EIR, which will include responses to all substantive comments received on the draft focused EIR. The draft focused EIR and final EIR will be considered by the Planning Commission in making the decision to certify the EIR and approve or deny the project.

Payal Bhagat

Payal Bhagat
City of Menlo Park

November 16, 2020

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TRUE NORTH
PROJECT NORTH
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Project Site

Menlo Flats Project NOP

Project Location and Regional Vicinity Map

SOURCES: GOOGLE EARTH 8/9/18; LSA, 2020

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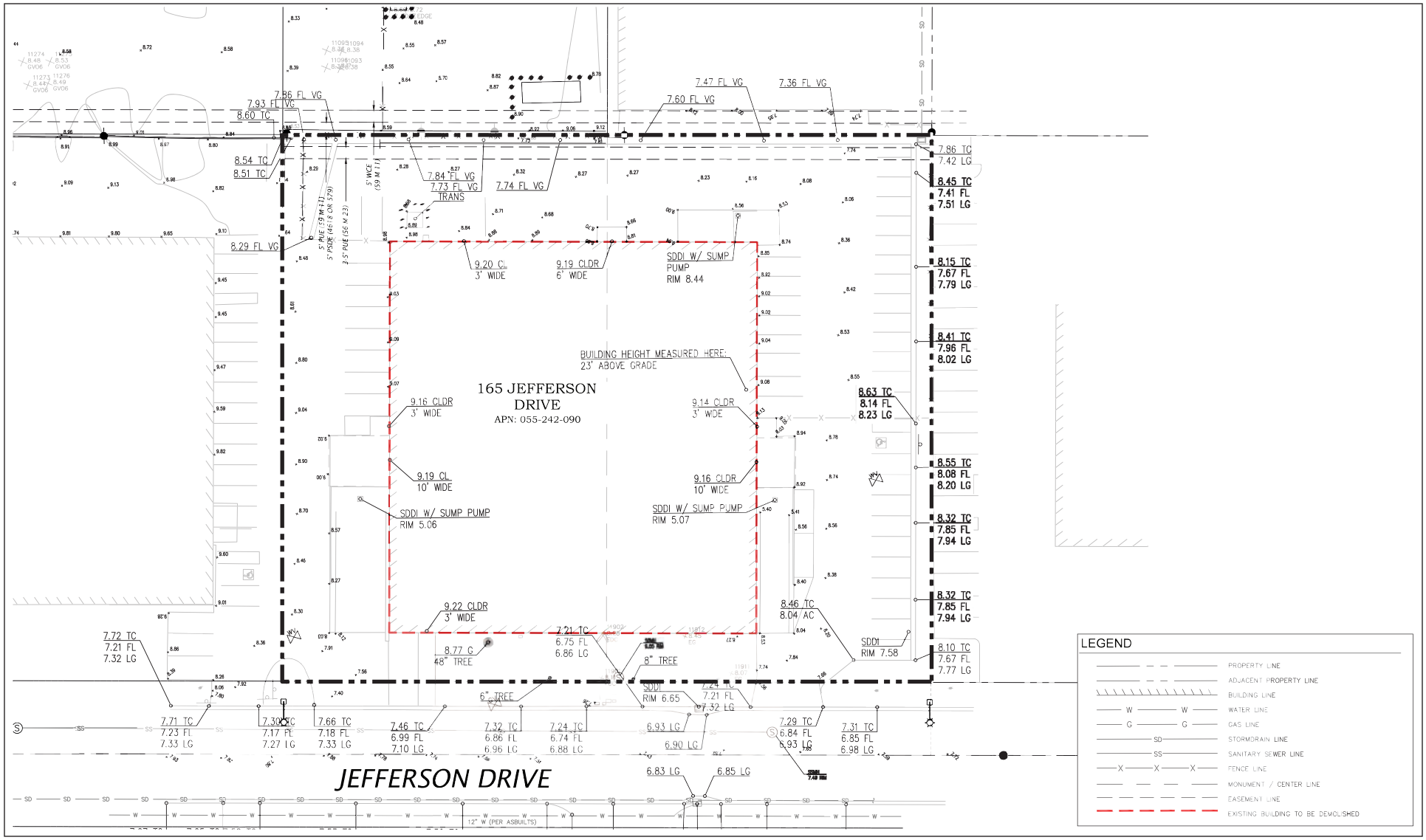

FIGURE 2

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TRUE NORTH
PROJECT NORTH

Project Boundary

Menlo Flats Project NOP
Existing Site Conditions

SOURCE: Greystar; HM; BKF, 7/21/2020

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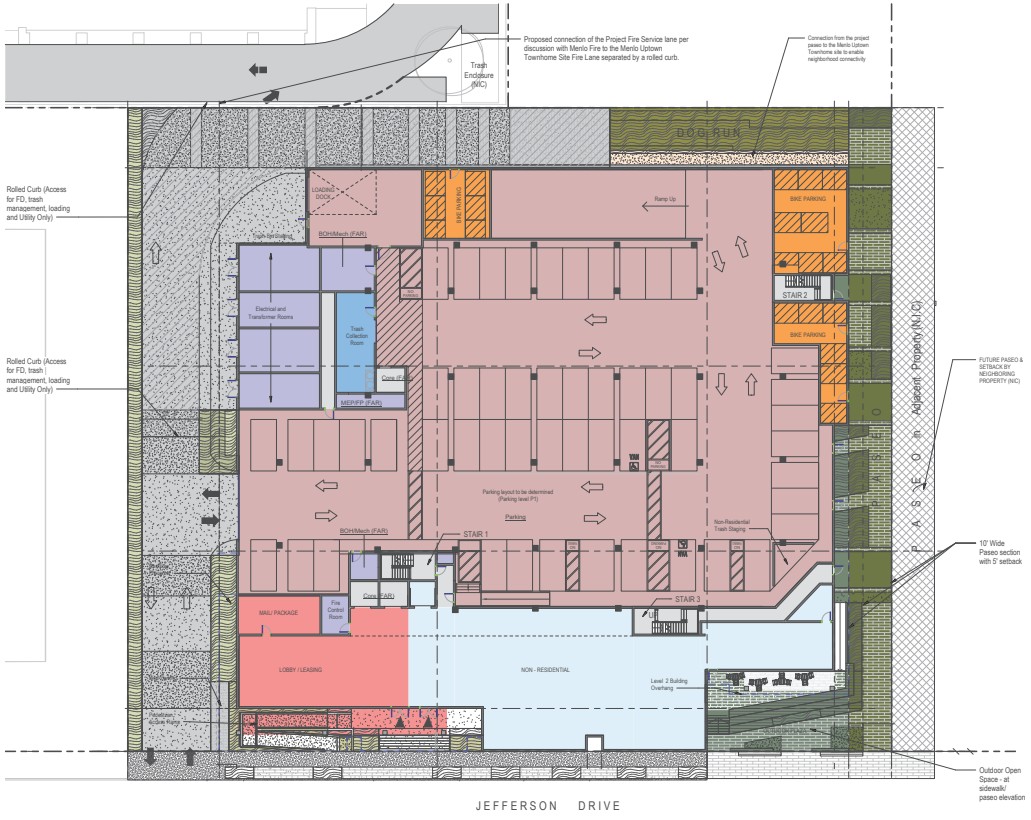
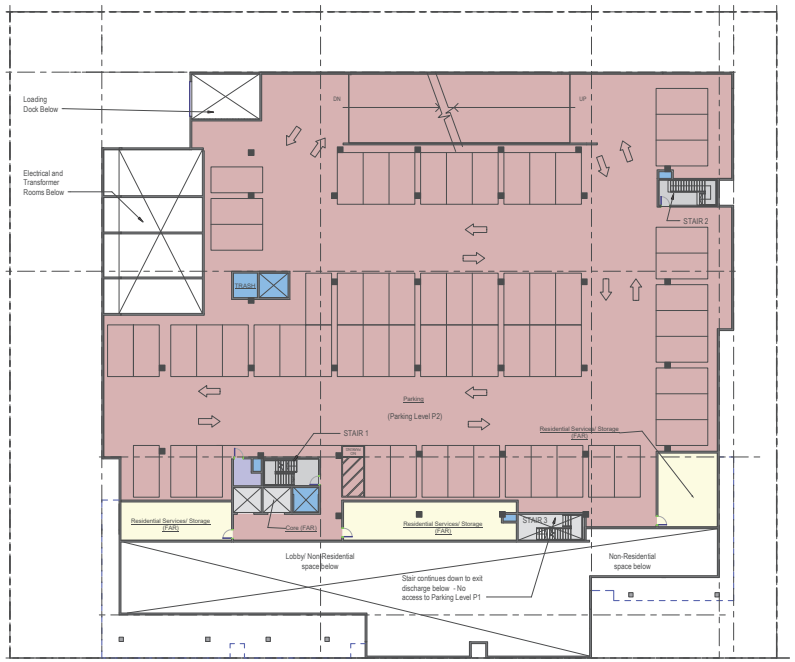


AREA SUMMARY LEVEL 01 AND PARKING LEVEL P1

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 01	0.0 SF	2,838.5 SF	0.0 SF	1,524.0 SF	2,404.4 SF	6,766.8 SF	5,826.3 SF	0.0 SF	492.6 SF	27,645.4 SF	40,731.1 SF	6,274.2 SF
Grand total	0.0 SF	2,838.5 SF	0.0 SF	1,524.0 SF	2,404.4 SF	6,766.8 SF	5,826.3 SF	0.0 SF	492.6 SF	27,645.4 SF	40,731.1 SF	6,274.2 SF

FLOOR PLAN - LEVEL 01 AND PARKING LEVEL P1



AREA SUMMARY - PARKING LEVEL P2

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level P2	0.0 SF	0.0 SF	1,993.0 SF	830.2 SF	85.8 SF	2,909.1 SF	0.0 SF	0.0 SF	317.1 SF	28,739.4 SF	31,965.6 SF	0.0 SF
Grand total	0.0 SF	0.0 SF	1,993.0 SF	830.2 SF	85.8 SF	2,909.1 SF	0.0 SF	0.0 SF	317.1 SF	28,739.4 SF	31,965.6 SF	0.0 SF

FLOOR PLAN - PARKING LEVEL P2

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TRUE NORTH
PROJECT NORTH

FIGURE 3

Menlo Flats Project NOP

Conceptual Ground and Second Level Floor Plans

SOURCE: Greystar; HM; BKF, 7/21/2020

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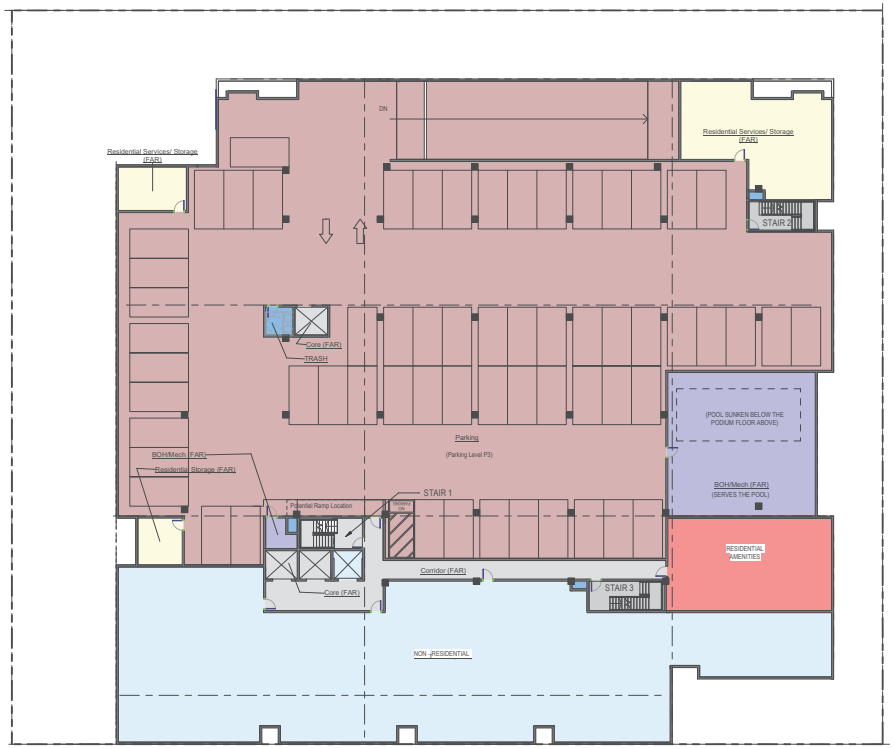

AREA SUMMARY - LEVEL 02 AND PARKING LEVEL P3

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 02	0.0 SF	1,490.3 SF	1,902.5 SF	1,944.3 SF	2,147.9 SF	7,485.1 SF	9,172.3 SF	0.0 SF	130.6 SF	25,603.4 SF	42,391.4 SF	0.0 SF
Grand total	0.0 SF	1,490.3 SF	1,902.5 SF	1,944.3 SF	2,147.9 SF	7,485.1 SF	9,172.3 SF	0.0 SF	130.6 SF	25,603.4 SF	42,391.4 SF	0.0 SF

FLOOR PLAN - LEVEL 02 AND PARKING LEVEL P3

AREA SUMMARY - LEVEL 03

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 03	23,220.9 SF	1,111.3 SF	643.2 SF	3,911.0 SF	182.2 SF	29,068.5 SF	0.0 SF	0.0 SF	220.8 SF	0.0 SF	29,289.4 SF	11,375.4 SF
Grand total	23,220.9 SF	1,111.3 SF	643.2 SF	3,911.0 SF	182.2 SF	29,068.5 SF	0.0 SF	0.0 SF	220.8 SF	0.0 SF	29,289.4 SF	11,375.4 SF

FLOOR PLAN - LEVEL 03

FIGURE 4

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PROJECT NORTH
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SOURCE: Greystar; HM; BKF, 7/21/2020

Menlo Flats Project NOP
Conceptual Third and Fourth Level Floor Plans

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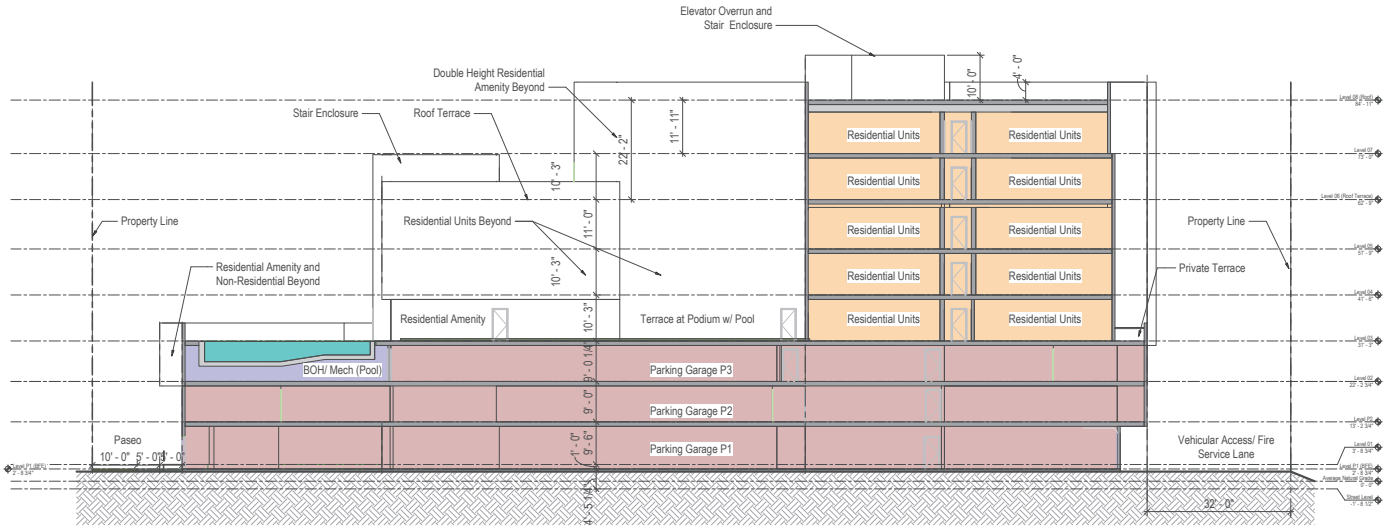
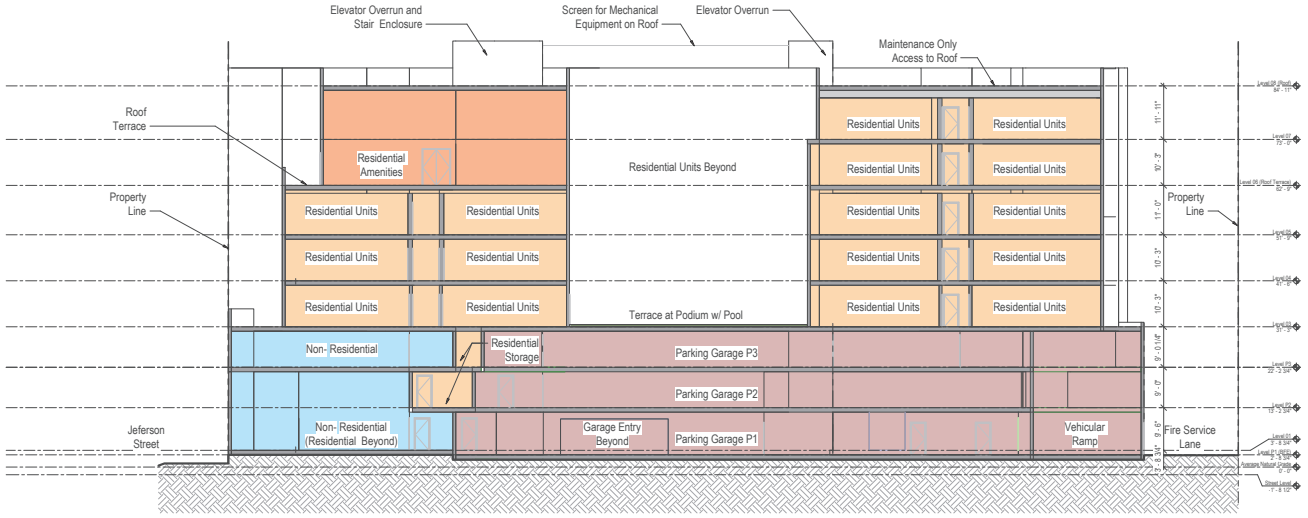


EAST WEST BUILDING SECTION



SOUTH NORTH BUILDING SECTION

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FIGURE 5

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SOURCE: Greystar; HM; BKF, 7/21/2020

Menlo Flats Project NOP
Conceptual Building Sections

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Menlo Flats Project

Comments on the Notice of Preparation (NOP) Scoping

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On December 5, 2020 at 11:13 AM

From: Susan Erhart (email: sipaktchian@gmail.com)

Dear members of the planning commission,

In setting the scope for the draft EIR for the proposed Menlo Flats project, I would ask that the report document the additional traffic and parking issues associated with deliveries to the future tenants.

Although the developers say they have limited the number of Menlo Flats parking spaces in order to reduce car traffic, it doesn't take into account the full range of additional traffic the tenants will generate.

In today's environment, residents don't rely solely on their personal vehicles. Rather, they are the recipients of package and meal deliveries, in addition to being passengers in ride-share vehicles. This is especially true of apartment dwellers in the 20-40 age range, which would likely be the majority of tenants in the Menlo Flats project.

The apartment complex at 777 Hamilton Ave. is a prime example of the traffic difficulties posed by delivery and ride-share vehicles. Parking and stopping aren't permitted on the side of Hamilton where the apartment complex is located, and yet numerous times each week the single lane of northbound traffic is blocked by a delivery truck, a DoorDash driver or an Uber vehicle dropping off a resident. The complex doesn't have a designated area for these vehicles.

Jefferson Street, where the Menlo Flats project is located, doesn't allow parking or stopping on either side of the road. Where will the delivery and ride-share vehicles stop? Does the project have a designated parking area for them?

Given the ubiquity of delivery and ride-share vehicles in this area, the environmental impacts of these vehicles should be documented in assessing the Menlo Flats project and all other large residential proposals. These vehicles will be a factor in the air quality, traffic noise and traffic congestion for Belle Haven and the M-2 zone.

Thank you for your consideration.

Sent on – December 18, 2020 @ 1:29 PM

My comment on this project and adjacent Jefferson Project and 111 Constitution Dr. is that instead of office space, these projects need to include retail which would keep the 600-700 new residents from having to drive to fill basic needs: Grocery, Pharmacy, Office supply, gas station.

Thank you,

Louise

Louise Sturges DeDera cell 650-642-1422 Compass, 1550 El Camino Real Suite 100, Menlo Park,

BRE 00409938 Loudedera@gmail.com

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

Making Conservation a California Way of Life.

December 18, 2020

SCH #: 2020110243
GTS #: 04-SM-2020-00339
GTS ID: 21311
Co/Rt/Pm: SM/ 84/ 26.483

Payal Bhagat, Contract Principal Planner
701 Laurel Street
Menlo Park, CA 94025

Re: Menlo Flats Project Notice of Preparation (NOP) of an Environmental Impact Report (EIR)

Dear Payal Bhagat:

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

Project Understanding
The project proposes a mixed-use building with 158 dwelling units and commercial space, including open space and parking. This project proposes to comply with the City of Menlo Park's Below Market Rate (BMR) Ordinance with 15 percent of units BMR. The site is within close proximity to US-101 and SR-84.

Travel Demand Analysis
With the enactment of Senate Bill (SB) 743, Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. For more information on how Caltrans assesses Transportation Impact Studies, please review Caltrans' Transportation Impact Study Guide.

Vehicle Miles Traveled (VMT) Screening: If the project meets the screening criteria established in the City's Council Procedure #CC-20-012 (Transportation Impact Analysis Guidelines) to be presumed to have a less-than-significant VMT

impact and exempt from detailed VMT analysis, please provide justification to support the exempt status in align with the City's VMT policy. Projects that do not meet the screening criteria should include a detailed VMT analysis in the DEIR.

Mitigation Strategies
Location efficiency factors, including community design and regional accessibility, influence a project's impact on the environment. Using Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, the proposed project site is identified as a Close-In Compact Community where community design is moderate and regional accessibility is strong.

Given the place, type and size of the project, the DEIR should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions from future development in this area. The measures listed below have been quantified by California Air Pollution Control Officers Association (CAPCOA) and shown to have different efficiencies reducing regional VMT:

- Increase in number of affordable housing units in project;
- Orientation of project towards non-auto corridor;
- Pedestrian network improvements;
- Bicycle network improvements or Fair Share contribution to such measures;
- Traffic calming measures;
- Implementation of designated parking spaces for EVs;
- Limiting parking supply;
- Unbundled parking from property costs;
- Transit and trip planning resources such as a commute information kiosk;
- Real-time transit information system;
- Transit access supporting infrastructure (including bus shelter improvements and sidewalk/ crosswalk safety facilities);
- VMT Banking and/or Exchange program;

Using a combination of strategies appropriate to the project and the site can reduce VMT, along with related impacts on the environment and State facilities. TDM programs should be documented with annual monitoring reports by a TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets.

Please reach out to Caltrans for further information about TDM measures and a toolbox for implementing these measures in land use projects. Additionally, Federal Highway Administration's Integrating Demand Management into the Transportation Planning Process: A Desk Reference (Chapter 8). The reference is available online at: http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Transportation Impact Fees
Please identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed project; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

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

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

Sincerely,

Mark Leong

MARK LEONG
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

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

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 9, 2020

Ms. Payal Bhagat
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025
pbhagat@menlopark.org

Subject: Menlo Flats Project, Notice of Preparation, SCH No. 2020110243, City of Menlo Park, San Mateo County

Dear Ms. Bhagat:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) prepared by the City of Menlo Park for the Menlo Flats Project (Project) located in the City of Menlo Park, San Mateo County. CDFW is submitting comments on the NOP regarding potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

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

PROJECT LOCATION

The Project is located within a 1.38-acre site, at 165 Jefferson Drive in the City of Menlo Park, San Mateo County. The Project site is bordered to the north by Synergy Badminton Club, to the east by two light industrial buildings, to the south by Jefferson Drive, and to the west by single-story light industrial buildings.

PROJECT DESCRIPTION SUMMARY

The proposed Project includes demolition of the existing office building and redevelopment of the Project site with an approximately 253,702 gross-square-foot, eight-story mixed use building. The proposed building would be a maximum height of 84 feet, 11 inches, and would front to Jefferson Drive. The proposed building would also

include an at-grade, three-level, approximately 81,988 square-foot 176 space parking garage. Approximately 20,929 square feet of open space throughout the Project area is proposed.

ENVIRONMENTAL SETTING

The state special-status species that have the potential to occur in or near the Project site, include, but are not limited to:

- Bat species
- Nesting birds

COMMENTS AND RECOMMENDATIONS

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

COMMENT 1: Full Project description of Project features

The CEQA Guidelines (§§15124 & 15378) require that the draft Environmental Impact Report (EIR) incorporate a full Project description, including reasonably foreseeable future phases of the Project, and require that it contain sufficient information to evaluate and review the Project's environmental impact.

To fully address the Project's impacts to fish and wildlife resources. Please include complete descriptions of the following features within the draft EIR, if applicable:

- Residential and commercial building heights and widths;
- Introduction of sources of light and glare into habitat areas;
- Stormwater or effluent drainage outlet systems
- Detailed description of proposed work (e.g., crossing improvements, repairs, etc.) at and within stream crossings; and
- Location, type, and height of all fencing.

COMMENT 2: Nesting Birds

CDFW encourages that Project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through early-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or Fish and Game Codes.

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

Recommended Mitigation Measure 1: Nesting Bird Surveys

CDFW recommends that a qualified avian biologist conduct pre-activity surveys for active nests no more than seven (7) days prior to the start of ground or vegetation disturbance and every fourteen (14) days during Project activities to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. Prior to initiation of ground or vegetation disturbance, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once Project activities begins, CDFW recommends having the qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

Recommended Mitigation Measure 2: Nesting Bird Buffers

If continuous monitoring of identified nests by a qualified avian biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project site would be concealed from a nest site by topography. CDFW recommends that a qualified avian biologist advise and support any variance from these buffers.

COMMENT 3: Bats

Bat species may occur within and surrounding the Project site, including in existing buildings. Bats are considered non-game mammals and are protected by state law from take and/or harassment (Fish and Game Code §4150, CCR §251.1). Several bat species are also considered Species of Special Concern (SOC). To evaluate and avoid potential impacts to bat species, CDFW recommends incorporating the following mitigation measures into the Project's draft EIR, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 3: Bat Habitat Assessment

To evaluate Project impacts to bats, a qualified bat biologist should conduct a habitat assessment for bats at the site seven (7) days prior to the start of Project activities. The habitat assessment shall include a visual inspection of features within 50 feet of the work area for potential roosting features (bats need not be present). Habitat features found during the survey shall be flagged or marked.

Recommended Mitigation Measure 4: Bat Habitat Monitoring

If any habitat features identified in the habitat assessment will be altered or disturbed by Project construction, the qualified bat biologist should monitor the feature daily to ensure bats are not disturbed, impacted, or fatalities are caused by the Project.

Recommended Mitigation Measure 5: Bat Project Avoidance

If bat colonies are observed at the Project site, at any time, all Project activities should stop until the qualified bat biologist develops a bat avoidance plan to be implement at the Project site. Once the plan is implemented, Project activities may recommence.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, & CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code section 2080.

Lake and Streambed Alteration Program

Notification is required, pursuant to CDFW's LSA Program (Fish and Game Code section 1600 et. seq.) for any Project-related activities that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank

including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSA Agreement until it has complied with CEQA (Public Resources Code section 21000 et seq.) as the responsible agency.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, section 711.4; Pub. Resources Code, section 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

Thank you for the opportunity to comment on the Project's NOP. If you have any questions regarding this letter or for further coordination with CDFW, please contact Ms. Stephanie Holstege, Environmental Scientist at (707) 210-5104 or Stephanie.Holstege@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Gregg Erickson
BE74D4C93C604EA...

Gregg Erickson
Regional Manager
Bay Delta Region

cc: State Clearinghouse #2020110243

STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

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November 17, 2020

Payal Bhagat, Senior Planner
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

Re: 2020110243, Menlo Flats Project, San Mateo County

Dear Ms. Bhagat:

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

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

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

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

AB 52

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

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

a. A brief description of the project.

b. The lead agency contact information.

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

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

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

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

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

a. Alternatives to the project.

b. Recommended mitigation measures.

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

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

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

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

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

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

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

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

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

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

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

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

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

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

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

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

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

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

SB 18

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

Some of SB 18's provisions include:

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

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

NAHC Recommendations for Cultural Resources Assessments

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

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

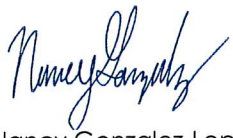
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted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

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

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

Sincerely,



Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

Lozano Smith
ATTORNEYS AT LAW

Kelly M. Rem
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E-mail: krem@lozanosmith.com

December 21, 2020

By U.S. Mail & E-Mail: PBhagat@menlopark.org

Payal Bhagat
City of Menlo Park
Community Development Department, Planning Division
701 Laurel Street
Menlo Park, CA 94025

Re: Response of Sequoia Union High School District to Notice of Preparation of Focused Environmental Impact Report for Menlo Flats Project

Dear Ms. Bhagat:

This office represents the Sequoia Union High School District ("District") with regard to the above referenced matter. The District appreciates the opportunity to provide comments and input regarding the Notice of Preparation of a Focused Environmental Impact Report ("EIR") for the Menlo Flats Project ("Project").

The District is very concerned about this Project, along with the two other Greystar projects and one SP Menlo, LLC, project pending before the City in the western Bayfront neighborhood, due to their close proximity to the District's TIDE Academy and anticipated impacts on student safety. The District has previously submitted comments regarding these other projects, most recently including the proposed Menlo Portal project. Given the similarities between the Menlo Uptown, Menlo Portal, and Menlo Flats projects, and given the nearly identical initial studies prepared for these three projects, the District reiterates many of its prior comments in this letter. **As in the District's prior letters, the District requests that all direct and indirect impacts related to the Project's proximity to District schools be thoroughly reviewed, analyzed, and mitigated.**

The Project, sponsored by Menlo Park Flats Venture, LLC ("Developer"), is proposed to be located at the approximately 1.38-acre site at 165 Jefferson Drive (the "Property"). The Developer is proposing to demolish the existing single-story office and industrial space and redevelop the Property with an approximately 253,702-gross-square-foot, eight-story mixed-use building with 158 dwelling units and 15,000 square feet of commercial space (the "Project"). The Project, which will require a number of entitlements from the City, is anticipated to generate approximately 32 new high school students. All three Greystar projects, combined with the SP Menlo project adjacent to Greystar's proposed Menlo Portal project, are anticipated to generate approximately 216 students within a few hundred meters of the District's TIDE Academy.

The City, through its Initial Study, concludes that the Project will have no additional impacts on the District's ability to provide its public service, other than those impacts addressed in the ConnectMenlo Final Environmental Impact Report ("ConnectMenlo EIR") that was certified by the City in late 2016. Accordingly, the City is attempting to rely on the ConnectMenlo EIR as grounds to prepare a "focused," or limited EIR, which does not evaluate the Project's impacts on the District's ability to provide its public service. We believe that this approach is improper, and the limited scope of the City's proposed EIR inappropriate. Rather, the EIR prepared for the Project must contain a detailed discussion of the Project's potential impacts on the District, and manners in which to mitigate those impacts.

Neither the Initial Study nor the ConnectMenlo EIR adequately evaluated the Project's impacts on the District and, in particular, the District's TIDE Academy. Neither study adequately addressed how the Project will impact the District's ability to house its students; how the Project's impacts on transportation, traffic, and circulation in the area will impact air quality at the TIDE Academy, as well as the safety and convenience of District students, parents, and staff; and generally how the Project will impact the District's ability to deliver its educational program at TIDE Academy. All of these impacts, in addition to mitigation measures for same, must be analyzed in the EIR for the Project.

A. Inappropriate Reliance on ConnectMenlo EIR

By contending that the ConnectMenlo EIR is a "program" EIR for purposes of evaluating the Project's impacts, the City relies on the ConnectMenlo EIR as its basis for preparing a "focused," or simplified EIR for the Project. Due to the City's failure to appropriately consider the ConnectMenlo program's impacts on the District's ability to provide its public service in the first place, and due to changed circumstances since the time that the ConnectMenlo EIR was prepared, the City's reliance on the ConnectMenlo EIR as the basis for disregarding certain Project impacts on the District is improper and misguided.

A "program" EIR is an EIR prepared for a series of small projects that can be characterized as one large project. (14 Cal. Code Regs. § 15168(a).) A project proponent may rely on a program EIR's analysis of the program's environmental impacts, mitigation measures, and alternatives in order to engage in a simplified environmental review for a future project contemplated by the program. (*Id.* at subd. (d).) However, when a program EIR is relied on by a future project proponent, the new project proponent must carefully examine the impacts addressed in the program EIR and determine whether additional environmental review is required. An agency's evaluation of the sufficiency of a program EIR for later approval of a project contemplated by the program involves a two-step process:

1. First, the agency considers whether the project is covered by the program EIR by determining whether it will result in environmental effects that were not examined in the program EIR. (14 Cal. Code Regs. § 15168(c)(1).)

2. Second, the agency must consider whether any new environmental effects could occur, or new mitigation measures would be required, due to events occurring after the program EIR was certified. (14 Cal. Code Regs. §§ 15168(c)(2), 15162.)

If the project will result in significant environmental impacts that were not examined in the program EIR, then the project proponent must prepare an EIR analyzing those impacts and corresponding mitigation measures. (14 Cal. Code Regs. §§ 15162 and 15168(c)(1); Pub. Res. Code §§ 21100(a), 21151.)

The Project's Initial Study provides that the Initial Study "tiers from the ConnectMenlo Final EIR, as appropriate." (Initial Study at 1-11.) The Initial Study later concludes that the proposed Project would have a less-than-significant impact on schools because the "ConnectMenlo Final EIR determined that any development associated with ConnectMenlo would be subject to payment of development impact fees, which under Senate Bill 50 (SB 50) are deemed to be full and complete mitigation." (Initial Study at 3-46.) The ConnectMenlo EIR concluded that "[b]ecause future development under the proposed project would occur incrementally over the 24-year buildout horizon and, in compliance with SB 50, would be subject to pay development impact fees…impacts related to the SUHSD would be less than significant." (ConnectMenlo Draft EIR, p. 4.12-40.) (Emphasis added.)

Both the City's reliance on the ConnectMenlo EIR, and the City's conclusions regarding the Project's impacts on the District, are misplaced.

1. **Neither the ConnectMenlo EIR nor the Initial Study Adequately Identify All Impacts on the District.**

As discussed in greater depth throughout this letter, both the program and the Project will pose numerous, significant impacts on the District, its students, and its ability to provide its educational program, none of which were adequately identified and addressed in the ConnectMenlo EIR and, as a result, the Initial Study. ConnectMenlo likewise did not consider either the program or Project's specific impacts on the District's TIDE Academy, as this school did not yet exist when the ConnectMenlo EIR was prepared. Because TIDE Academy is located in the Bayfront neighborhood, it is particularly vulnerable to the thousands of residential units authorized by ConnectMenlo, all of which will be constructed in the Bayfront Area. With regard to Greystar's projects, ConnectMenlo did not consider whether/how the placement of 976 residential units less than 400 meters away from a District high school would impact the District's program at TIDE Academy.

Further, as discussed above, ConnectMenlo was based on the assumption that development under the program would take place in an incremental fashion, over the course of 24 years. The Initial Study acknowledges the fact that this assumption was incorrect in providing that "[a]lthough the ConnectMenlo Final EIR assumed a buildout horizon of 2040, the maximum development potential may be reached sooner than anticipated." (Initial Study at 1-10, fn. 10.) The Initial Study goes on to state, however, that "no new or additional impacts are anticipated as a result of the expedited buildout." (*Id.*)

The District vehemently disagrees with the Initial Study's conclusion. If the City continues to approve new residential development projects at its current pace, the District will be subject to a rapid influx of students to the District's facilities, many of which are already at or exceeding capacity. For instance, TIDE Academy's current capacity is 400 students. The District expects to meet or exceed this 400-student capacity within 3 years without accounting for the Greystar projects. The proposed Greystar and SP Menlo projects in the area, however, will generate over half of the students needed to fill this capacity in a few years' time. This rapid influx, combined with the existing inadequacies of the District's school facilities funding sources (as discussed below), will prevent the District from engaging in meaningful long-term facilities planning, and will instead require the District to spend valuable resources on temporary solutions to the District's facilities problems, such as the purchase and lease of portables.

2. Neither the ConnectMenlo EIR nor the Initial Study Adequately Identify Mitigation Measures to Address Impacts caused by the Project.

Aside from a brief discussion of SB 50, neither the Initial Study nor the ConnectMenlo EIR adequately considered mitigation measures intended to alleviate the impacts caused by development on the District's facilities. Of particular note, as part of the ConnectMenlo program, the City developed a "community amenities list" as a means by which project developers can mitigate the impacts of their projects under ConnectMenlo by providing amenities to the community. Specifically, the City approved a list of community amenities that developers may offer in exchange for "bonus level development" in the M-2 and other zoning districts in the City, including the Bayfront neighborhood. Despite several requests by the District, the City has not included any school facilities items on its community amenities list that would aid the District.

As discussed, the Developer and City, both in the Initial Study and the ConnectMenlo EIR, rely upon SB 50 as a panacea to all District impacts caused by development under ConnectMenlo. Such reliance is neither legally nor factually justified, and displays a lack of understanding of how school facilities are funded.

By way of background, developer fees are fees that may be levied or imposed in connection with or made conditions of any legislative or adjudicative act by a local agency involving planning, use, or development of real property. (Ed. Code § 17620.) "Level 1" developer fees are levied against residential and commercial or industrial developments on a price per square foot basis. If a district is able to establish a sufficient "nexus" between the expected impacts of residential and commercial development and the district's needs for facilities funding, then the district may charge up to $4.08 per sf of residential development, and up to $0.66 per sf of commercial development, which maximum amounts are increased every two years based on the statewide cost index for class B construction.

SB 50 declares that the payment of the developer fees authorized by Education Code section 17620 constitutes "full and complete mitigation of the impacts of any legislative or adjudicative act on the provision of adequate school facilities." (Gov. Code § 65995(h).) **However,**

California courts have since acknowledged that developer fees do not constitute full and complete mitigation for school-related impacts other than school overcrowding. (*Chawanakee Unified Sch. Dist. v. Cty. of Madera* (2011) 196 Cal.App.4th 1016.) Thus, contrary to the assertions of the City in the ConnectMenlo EIR and the Initial Study, the payment of fees do not constitute full mitigation for all impacts caused by development under ConnectMenlo related to traffic, noise, biological, pedestrian safety, and all other types of impacts related to the District and its educational program.

From a practical standpoint, the amount of developer fees received by school districts typically fall woefully short of alleviating the impacts caused by development. This is due largely to the facts that: (1) statutory developer fee amounts fail to acknowledge the differences in costs of school construction from one district to another, which particularly burdens school districts in the bay area; (2) the developer fee amounts fail to contemplate the special facilities needs of those districts experiencing rapid growth, such as the need for portables; and (3) the adjustment formula for developer fees is based on a "construction cost index" and does not include indexing related to the increases in land costs, resulting in the actual costs of facilities (i.e., land and improvements) increasing at a greater rate than the adjustment.

The inadequacy of developer fees as a source of funding for school facilities has forced school districts to rely increasingly on other sources of funding, primarily including local bond funds and State bond funds administered under the School Facilities Program (SFP). However, these sources of funds can be equally unreliable. It is currently unclear when/whether those school districts that have applied for State funding will be able to receive such funding. Local bond funds are also difficult to generate, as local bonds are subject to district bonding capacity limitations and voter approval. Either way, the funding formula was never intended to require the State and local taxpayers to shoulder a disproportionate portion of the cost of school facilities.

In light of the ConnectMenlo EIR and Initial Study's many inadequacies, below are specific scoping requests for the EIR, which the City must address in the EIR to evaluate adequately the potential environmental impacts of the Project on the District and its students.

B. Transportation/Circulation/Traffic Analysis

1. **Describe the existing and the anticipated vehicular traffic and student pedestrian movement patterns to and from school sites, including movement patterns to and from TIDE Academy and Menlo Atherton High School, and including consideration of bus routes.**

2. **Assess the impact(s) of increased vehicular movement and volumes caused by the Project, including but not limited to potential conflicts with school pedestrian movement, school transportation, and busing activities to and from TIDE Academy and Menlo Atherton High School.**

3. **Estimate travel demand and trip generation, trip distribution, and trip assignment by including consideration of school sites and home-to-school travel.**

4. **Assess cumulative impacts on schools and the community in general resulting from increased vehicular movement and volumes expected from additional development already approved or pending in the City and Bayfront neighborhood.**

5. **Discuss the direct, indirect, and cumulative impacts on the circulation and traffic patterns in the community as a result of traffic generated by the transportation needs of students to and from the Project and schools throughout the District during and after the Project build-out.**

6. **Assess the impacts on the routes and safety of students traveling to school by vehicle, bus, walking, and bicycles.**

The District has significant concerns about the traffic, transportation, and circulation impacts that the Project may have on the District, including the District's staff, parents, and students that attend the TIDE Academy. The foregoing categories of information are critical for determining the extent of those impacts on the District, none of which were adequately identified or discussed in either the Initial Study or the ConnectMenlo EIR.

(a) City Must Consider All Traffic and Related Impacts, Including Impacts of Traffic on Student Safety, Caused by the Project.

Any environmental analysis related to the proposed Project must address potential effects related to traffic, noise, air quality, and any other issues affecting schools. (Pub. Resources Code, §§ 21000, *et seq.*; Cal. Code Regs., tit. 14, §§ 15000, *et seq.*; *Chawanakee Unified School District v. County of Madera, et al.,* (2011) 196 Cal.App.4th 1016.) Additionally, specifically related to traffic, there must be an analysis of safety issues related to traffic impacts, such as reduced pedestrian safety, particularly as to students walking or bicycling to and from TIDE Academy; potentially reduced response times for emergency services and first responders traveling to these schools; and increased potential for accidents due to gridlock during school drop-off and pick up hours. (See, Journal of Planning Education and Research, "Planning for Safe Schools: Impacts of School Siting and Surrounding Environments on Traffic Safety," November 2015, Chia-Yuan Yu and Xuemei Zhu, pg. 8 [Study of traffic accidents near Austin, Texas schools found that "[a] higher percentage of commercial uses was associated with more motorist and pedestrian crashes" around schools].)

The State Office of Planning and Research has developed new CEQA Guidelines which set forth new criteria for the assessment of traffic impacts, and now encourages the use of metrics such as vehicle miles traveled (VMT), rather than level-of-service (LOS), to analyze project impacts on traffic. (14 Cal. Code Regs. § 15064.3.) However, local agencies may still consider impacts on traffic congestion at intersections where appropriate, and must do so where, as here, such traffic

congestion will cause significant impacts on air quality, noise, and safety issues caused by traffic. (Pub. Res. Code § 21099(b)(3).)

Regional vehicular access to the Property is provided by US Highway 101 (US 101), via the Marsh Road on- and off-ramps located to the west and State Route 84 (SR 84 or the Bayfront Expressway) located to the north. Direct local access is provided via Jefferson Drive, which borders the site immediately to the north, west, and south. The Bayfront Area of Menlo Park has experienced a drastic impact in traffic over the last ten to fifteen years as the City has continued to approve of newer corporate campuses and mixed biotechnology, commercial, office, and residential land uses. The City's 2016 General Plan Update calls for an increase of 2.3 million square feet of non-residential space, 400 hotel rooms, 4,500 residential units, 11,570 new residents, and 5,500 new employees in the Bayfront Area. This will result in a total build-out of 4.7 million square feet of non-residential office space, 850 hotel rooms, 5,430 residential units, 13,960 residents, and 20,150 employees, all within the Bayfront Area.[1] The ConnectMenlo EIR concluded that the General Plan Update would result in significant and unavoidable impacts to roadway segments and increase peak hour delays at intersections from increased traffic, even after the mitigation measures called for in the General Plan Update are implemented (if ever).[2]

The construction of and traffic generated by the Project will severely exacerbate the already stifling traffic in the general area and Bayfront Area, and the safety issues posed thereby. These impacts will severely inhibit the District's abilities to operate its educational programs, including at TIDE Academy.

The proposed Project is anticipated to impede circulation in the Bayfront Area, and clog the access roads to, from, and around the District's TIDE Academy. (See, 5 Cal. Code Regs. § 14010(k), which requires that school facilities be easily accessible from arterial roads.) TIDE Academy is located almost directly across Jefferson Drive from the Property. Both TIDE Academy and the proposed Project would be accessed by the same roads, including Jefferson Drive, Independence Drive, Constitution Drive, and the immediately surrounding streets. In addition to drawing hundreds of new residents to the area, including an estimated 32 new high school students, the proposed Project will draw thousands of daily office commuters, visitors, and emergency access vehicles from around the Bay Area. In addition to the immediate roads surrounding the Property and TIDE Academy, these new residents and commuters will rely heavily on the Bayfront Expressway, Bayshore Freeway, Willow Road, and Marsh Road to the west of TIDE Academy.

As indicated in the City's General Plan, the City's roads are not currently equipped to accommodate such high density development and high levels of traffic. Jefferson Drive is a narrow two-lane road. Accordingly, such increases to traffic in the area will not only make it

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[1] ConnectMenlo: General Plan Land Use & Circulation Elements and M-2 Area Zoning Update Draft EIR (June 1, 2016), Table 3-2.

[2] Menlo Park Small High School Project Final EIR (October 6, 2016), pp. 2-15 – 2-16; ConnectMenlo: General Plan Land Use & Circulation Elements and M-2 Area Zoning Update (June 1, 2016), p. 4.13-73.

much more difficult for students and staff to travel to and from TIDE Academy, but will also **drastically increase the risk of vehicular accidents to District families, students, and staff traveling to and from school**. For instance, many students at TIDE Academy access school by turning onto Independence Drive from Marsh Road (immediately to the northwest of the Property). This turn is already extremely dangerous, as it requires drivers essentially to complete a 180 degree turn, with no visibility of the cars and/or people traveling on Independence Drive. By packing hundreds of new residents and visitors into the western Bayfront Area, the Project will be magnifying this dangerous road condition, further placing District students, families, and staff in harm's way.

Likewise, the Project roads and neighborhood are not equipped to handle the parking demands of the visitors and residents drawn by the Project. The proposed 176 parking spaces proposed by the Project will not come close to providing sufficient parking for all residents and visitors of the Project site. As a result, vehicles will spill onto Jefferson Drive and the surrounding streets, which are already suffer from severe parking constraints. While perhaps not an environmental impact on its own, the Project EIR must analyze the indirect impacts on student and pedestrian safety that will be caused by this shortage of parking.

In addition to increased risks of vehicular accidents, the traffic and parking impacts posed by the Project will severely impact the safety and convenience of TIDE Academy students who walk or bike to school. Title 5 of the California Code of Regulations requires that school sites be located within a proposed attendance area that encourages student walking and avoids extensive bussing. (5 Cal. Code Regs. § 14010(l).) To mitigate the impacts of increased traffic in the Bayfront Area, the District has committed to develop and implement a Travel Demand Management Plan. Through this Plan, the District encourages the use of student walking, biking, and other alternative means of student transport to school.[3] Further, to mitigate the impacts of conflicts and/or dangerous interactions between pedestrians, bicyclists, and vehicles, the District agreed to prepare a "Safe Routes to School Map" that identifies facilities such as traffic lights, crosswalks, and demarcated bikeways that promote safe routes to school.[4] The City has likewise committed to supporting and promoting such safe route to school programs to enhance the safety of school children who walk to school.[5]

As TIDE Academy did not yet exist, none of the above impacts on student safety and the District's ability to provide its educational program were adequately evaluated in the ConnectMenlo EIR. While the Initial Study provides that the City will prepare a transportation impact analysis and examine several intersections, the Initial Study otherwise gives no indication that it will examine the above-described impacts, or what criteria will be used by the City in

[3] Menlo Park Small High School Project Draft EIR (July 8, 2016), p. S-4; The City of Menlo Park's Comprehensive Bicycle Development Plan (2005) identifies school-aged bicycle commuters as one of the two key bicycle commute groups utilizing the City's bicycle infrastructure.

[4] Menlo Park Small High School Project Draft EIR (July 8, 2016), p. S-6

[5] ConnectMenlo: General Plan Land Use & Circulation Elements and M-2 Area Zoning Update Draft EIR (June 1, 2016), p. 4.9-7 – 4.9-8

evaluating these impacts. The EIR must analyze and mitigate all of the above traffic and related impacts, including those impacts related to student safety and convenience, the District's ability to implement its transportation and safety mitigation measures for the TIDE Academy, and the District's ability to promote alternative modes of transportation to and from TIDE Academy. It is important that these traffic impacts are not only assessed through a VMT analysis, but also through a LOS analysis, as severe traffic congestion surrounding the District's TIDE Academy caused by the Project will in turn cause significant issues related to safety, noise, and air quality.

(b) City Must Consider Cumulative Traffic and Related Impacts.

Environmental impact reports must discuss cumulative impacts of a project when the project's effects on the environment, viewed in conjunction with impacts of other past, present, or reasonably foreseeable future projects, is cumulatively considerable. (14 CCR 15130(a).) (See *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 CA4th 713, 720, finding that piecemeal approval of several projects with related impacts could lead to severe environmental harm.) While a lead agency may incorporate information from previously prepared program EIRs into the agency's analysis of a project's cumulative impacts, the lead agency must address all cumulative impacts that were not previously addressed in the program EIR. (Pub. Res. Code § 21083.3(c); 14 CCR 14183(b)(3).)

The Project's above- and below-discussed anticipated impacts on the District, combined with the anticipated impacts of the vast number of development projects that have recently been approved and are being considered for approval in the Bayfront Area, and specifically the western Bayfront Area, are cumulatively considerable. Contrary to the assertions contained in the Initial Study, all of these impacts are exacerbated by the rapidity at which the City is approving of development projects in the Bayfront Area, as the District and City are unable to accommodate the massive influx of students through facilities, infrastructure, and related improvements.

Based on the City's website, approximately 3,257 new residential units have already been approved or are in the process of being approved by the City in the Bayfront Area.[6] In the immediate vicinity of TIDE Academy, the City has already approved several large residential projects, including the 777 Hamilton Drive project (195 new apartments); the 3639 Haven Avenue project (394 new apartments); and the 3645 Haven Avenue project (146 new apartments). There are now several other large residential projects being considered by the City, including the Willow Village Master Plan Project at 1350-1390 Willow Road, 925-1098 Hamilton Avenue (1,735 proposed residential units); the Menlo Uptown Project located at 180 and 186 Constitution Drive (483 proposed residential units); the Menlo Portal Project at 104-110 Constitution Drive and 115 Independence Drive (320 proposed dwelling units), and the 111 Independence Drive Project (105 multi-family dwelling units). Thus, in approximately four years since the City has certified the ConnectMenlo EIR, close to 70 percent of the total residential build-out envisioned by ConnectMenlo for the period of 2016-2040 is completed or pending before the City.

[6] See, ConnectMenlo Project Summary, which can be accessed here: https://www.menlopark.org/1396/Bayfront-Area-projects-overview

Each of these projects alone promises to drastically increase traffic in the neighborhood, resulting in air quality, noise, and safety issues for District families and staff attending TIDE Academy. When considered together, their collective impacts on traffic, safety, and air quality in the neighborhood will be devastating. These cumulative impacts on the District's TIDE Academy were neither adequately discussed in the Initial Study, nor evaluated in the ConnectMenlo EIR. **The impacts of the Project must be considered in conjunction with the anticipated impacts of all the other development being considered and approved in this area.**

C. Air Quality

7. **Identify and assess the direct and indirect air quality impacts of the Project on sensitive receptors, such as the District's TIDE Academy.**

8. **Identify and assess cumulative air quality impacts on schools and the community in general resulting from increased vehicular movement and volumes expected from additional development already approved or pending in the City and Bayfront neighborhood.**

The Bay Area Air Quality Management District's (BAAQMD) CEQA Guidelines (May 2017) impose numerous limitations on the exposure of "sensitive receptors," such as schools, to odors, toxics, and pollutants, including pollutants from vehicular exhaust.

It is anticipated that the Project, including when viewed in conjunction with all of the other Greystar developments being considered and approved a few hundred feet from TIDE Academy, will have a significant impact on the air quality of the neighborhood due to extensive construction activities and increases in vehicular traffic. The Belle Haven community is particularly sensitive to such concerns regarding air quality due to the high incidence of asthma throughout the community. Even more pressing, the Project is anticipated to result in significant impacts to sensitive receptors as an increased number of vehicles enter and exit the Project, creating increased levels of air toxins and particulate matter that could negatively impact student health. These impacts, as they relate to the District's students at the TIDE Academy, were not specifically addressed in the ConnectMenlo EIR. Accordingly, they must be analyzed in the EIR.

D. Noise

9. **Identify any noise sources and volumes which may affect school facilities, classrooms and outdoor school areas.**

It is expected that noise from construction and operation of the Project will cause impacts on the District's educational programs at the TIDE Academy. Request No. 9 is intended to clarify that the EIR's consideration of noise issues take into account all of the various ways in which noise may impact schools, including increases in noise levels in the immediate vicinity of TIDE Academy. Again, as the District's TIDE Academy did not yet exist, the ConnectMenlo EIR did

not consider these impacts on the District, and so may not be relied upon by the City as grounds to disregard noise impacts in the Project EIR.

E. Population

10. Describe historical, current, and future population projections for the District.

11. Assess the impacts of population growth within the District on the District's ability to provide its educational program.

In addition to 158 anticipated residential units, it is anticipated that the proposed Project's 15,000 sf of commercial space will draw thousands of residents into the area on a permanent, or at least a daily basis. Using the District's current student generation rate of 0.2, 158 anticipated residential units is likely to generate approximately 32 new high school students to the District. Without the anticipated increase in students from the Project, the District's student population at TIDE Academy is already expected to exceed capacity by 2023. The second closest District high school to the Property, Menlo Atherton High School, is currently over capacity.

The District, therefore, specifically demands that historic, current, and future population projections for the District be addressed in the EIR. Population growth or shrinkage is a primary consideration in determining the impact that development may have on a school district, as a booming population can directly impact the District and its provision of educational services, largely because of resulting school overcrowding, while a district with declining enrollment may depend on new development to avoid school closure or program cuts. Overcrowding can constitute a significant impact within the meaning of CEQA. (See, 14 Cal. Code Regs. §§ 15064(e).) This is particularly true where the overcrowding results in unsafe conditions, decreased quality of education, the need for new bus routes, and a need for new school construction. The same can hold true for potential school closures or program cuts resulting from a declining population.

While the ConnectMenlo EIR discussed the District's student population projections, the City, in reliance on SB 50, disregarded any impacts the General Plan Update's increase in student population could have on the District. For the reasons discussed above, such disregard was legally and practically improper.

F. Housing

12. Describe the type and number of anticipated dwelling units indirectly resulting from the Project.

13. Describe the average square footage for anticipated dwelling units, broken down by type of unit, indirectly resulting from the Project.

14. Estimate the amount of development fees to be generated by development in accordance with implementation of the Project.

The foregoing categories of information are critical for determining the extent of both physical and fiscal impacts on the District caused by increased population growth. These impacts were not adequately addressed in the ConnectMenlo EIR.

California school districts are dependent on developer fees authorized by the provisions of Government Code Sections 65995, *et seq.*, and Education Code sections 17620, *et seq.*, for financing new school facilities and maintenance of existing facilities. The developer fees mandated by Section 65995 provide the District a significant portion of its local share of financing for facilities needs related to development.

The adequacy of the statutory development fees to offset the impact of new development on local school districts can be determined only if the types of housing and average square footage can be taken into consideration. For instance, larger homes often generate approximately the same number of students as smaller homes. At the same time, however, a larger home will generate a greater statutory development fee, better providing for facilities to house the student being generated. It is for these reasons that the Government Code now requires a school district to seek – and presumably to receive – such square footage information from local planning departments. (Gov. Code § 65995.5(c)(3).)

While the foregoing funding considerations raise fiscal issues, they translate directly into physical, environmental impacts, in that inadequate funding for new school construction results in overcrowding of existing facilities. Furthermore, fiscal and social considerations are relevant to an EIR, particularly when they either contribute to or result from physical impacts. (Pub. Resources Code § 21001(g); 14 Cal. Code Regs. §§ 15021(b), 15131(a)-(c), 15142 & 15382.)

Phasing of development is also a crucial consideration in determining the extent of impacts on schools, which is especially relevant considering the rapid build-out of the ConnectMenlo residential units authorized. The timing of the development will determine when new students are expected to be generated, and therefore is an important consideration particularly when considering the cumulative impact of a project in conjunction with other approved or pending development.

G. Public Services

15. Describe existing and future conditions within the District, on a school-by-school basis, including size, location and capacity of facilities.

16. Describe the adequacy of both existing infrastructure serving schools and anticipated infrastructure needed to serve future schools.

17. Describe the District's past and present enrollment trends.

18. **Describe the District's current uses of its facilities.**

19. **Describe projected teacher/staffing requirements based on anticipated population growth and existing State and District policies.**

20. **Describe any impacts on curriculum as a result of anticipated population growth.**

21. **Identify the cost of providing capital facilities to properly accommodate students on a per-student basis, by the District (including land costs).**

22. **Identify the expected shortfall or excess between the estimated development fees to be generated by the Project and the cost for provision of capital facilities.**

23. **Assess the District's present and projected capital facility, operations, maintenance, and personnel costs.**

24. **Assess financing and funding sources available to the District, including but not limited to those mitigation measures set forth in Section 65996 of the Government Code.**

25. **Identify any expected fiscal impacts on the District, including an assessment of projected cost of land acquisition, school construction, and other facilities needs.**

26. **Assess cumulative impacts on schools resulting from additional development already approved, pending, or anticipated.**

27. **Identify how the District will accommodate students from the Project who are not accommodated at current District schools, including the effects on the overall operation and administration of the District, the students and employees.**

As discussed, the Initial Study's reliance on the ConnectMenlo EIR as grounds to disregard the Project's impacts on the District's ability to provide its public services is inappropriate, as the ConnectMenlo EIR did not adequately examine numerous environmental impacts caused by the program and/or the Project, in part due to changes that occurred after the City certified the ConnectMenlo EIR. (14 Cal. Code Regs. § 15168(c)(1).) Nor is the City's reliance upon SB 50 as the sole mitigation measure proper, as developer fees are legally and practically inadequate to mitigate all impacts caused by the Project. Therefore, the District submits the above scoping requests related to the District's ability to continue providing its public service.

Conclusion

The District does not oppose development within District boundaries, and recognizes the importance of housing on the health and welfare of the community. However, the District maintains that the community can only thrive if the District's educational program and its facilities are viable and sufficient, and District staff, families, and students are safe. Accordingly, the needs of the District must be appropriately considered in the environmental review process for all proposed new development that will impact the District, such as the very large Project under consideration.

We request that all notices and copies of documentation with regard to this Project be mailed both to the District directly, and also to our attention as follows:

Crystal Leach, Interim Superintendent
Sequoia Union High School District
480 James Avenue
Redwood City, CA 94062

Harold M. Freiman, Esq.
Lozano Smith
2001 N. Main St., Suite 500
Walnut Creek, CA 94596

Please feel free to contact me directly if we can be of any assistance in reviewing the above issues. Thank you.

Sincerely,

Kelly M. Rem

Kelly M. Rem

cc: Crystal Leach, Interim Superintendent (*by email*)

APPENDIX B

INITIAL STUDY

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MENLO FLATS PROJECT
INITIAL STUDY

MENLO PARK, CALIFORNIA

LSA

November 2020

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MENLO FLATS PROJECT
INITIAL STUDY

MENLO PARK, CALIFORNIA

Submitted to:

City of Menlo Park
Community Development Department
Planning Division
701 Laurel Street
Menlo Park, California 94025

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. CMK2001

LSA

November 2020

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LIST OF ABBREVIATIONS AND ACRONYMS

AB 52	Assembly Bill 52
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
Bay	San Francisco Bay
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH_4	Methane
City	City of Menlo Park
CO_2	Carbon dioxide
ConnectMenlo	General Plan Land Use and Circulation Elements
ConnectMenlo Final EIR	ConnectMenlo Final Environmental Impact Report
DCE	Dichloroethene
DPR	California Department of Parks and Recreation
DTSC	California Department of Toxic Substances Control
ESLs	Environmental Screening Levels
EV	Electric vehicle
EVA	Emergency vehicle access
FEMA	Federal Emergency Management Agency

GHG	Greenhouse gases
gsf	Gross square feet
GWh	Gigawatt-hours
I-280	Interstate 280
kWh	Kilowatt-hours
LID	Low Impact Development
MGD	Million gallons per day
MGY	Million gallons per year
MLD	Most Likely Descendant
MPFPD	Menlo Park Fire Protection District
mpg	Miles per gallon
MPMW	Menlo Park Municipal Water
MPPD	Menlo Park Police Department
N_2O	Nitrous oxide
NAHC	Native American Heritage Commission
NWIC	Northwest Information Center
PCB	Polychlorinated biphenyls
PCE	Peninsula Clean Energy
PG&E	Pacific Gas & Electric
Phase I ESA	Phase I Environmental Site Assessment
R-MU-B	Residential – Mixed Use District – Bonus
SamTrans	San Mateo County Transit District
SB 50	Senate Bill 50
SFPUC	San Francisco Public Utilities Commission

SHPO	State Historic Preservation Office
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
SR 84	State Route 84
SRA	State Responsibility Area
Stanford HCP	Stanford University Habitat Conservation Plan
SVCW	Silicon Valley Clean Water
TCA	Trichloroethane
TCE	Trichloroethylene
TDM	Transportation Demand Management
TIA	Transportation Impact Analysis
TIF	Transportation Impact Fee
UPRR	Union Pacific Railroad
US 101	US Highway 101
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VMT	Vehicle miles traveled
Water Board	San Francisco Bay Regional Water Quality Control Board
WBSD	West Bay Sanitary District
WTP	Water Treatment Plant
WWTP	Waste Water Treatment Plant

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1.0 PROJECT INFORMATION

1. **Project Title:**

   Menlo Flats Project

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

   City of Menlo Park
   City Hall – 1st Floor
   701 Laurel Street
   Menlo Park, CA 94025

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

   Payal Bhagat, Consulting Planner
   City of Menlo Park
   Community Development Department, Planning Division

   Phone: 650-330-6702
   Email: PBhagat@menlopark.org

4. **Project Location:**

   165 Jefferson Drive
   Menlo Park, San Mateo County
   Assessor's Parcel Number (APN): 055-242-090

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

   Menlo Park Flats Venture, LLC
   450 Sansome Street, Suite 500
   San Francisco, CA 94111

6. **General Plan Designation:** Mixed Use Residential, Bayfront Area

7. **Zoning:** Residential – Mixed Use District – Bonus (R-MU-B)

8. **Description of Project:**

This section describes the proposed Menlo Flats Project (proposed project) submitted by Menlo Park Flats Venture, LLC (project sponsor) and evaluated in this Initial Study. A description of the proposed project's location, context and background is followed by details of the proposed project itself and a summary of required approvals and entitlements.

Project Site

The following describes the geographic context of the project site and provides a brief overview of the existing land uses within and in the vicinity of the site.

Regional Location and Access

The approximately 1.38-acre project site is located at 165 Jefferson Drive within the City of Menlo Park, San Mateo County. Menlo Park is located approximately 30 miles south of San Francisco at the southern end of San Francisco Bay (Bay).

Regional vehicular access to the project site is provided by US Highway 101 (US 101), via the Marsh Road on- and off-ramps located immediately to the west and State Route 84 (SR 84 or the Bayfront Expressway) located to the north.[1] Direct local access to the project site is provided by Jefferson Drive, which borders the site to the south.

The nearest bus stop to the project site is served by the San Mateo County Transit District (SamTrans) Route 270, which runs on a loop from the Redwood City Transit Center to Atherton with hour-long headways, and is located approximately 1 mile to the west on Haven Avenue. The Menlo Park and Palo Alto Caltrain stations are located within 3 miles of the site to the south, providing weekday service from San Francisco to Gilroy and weekend service from San Francisco to San Jose.

Figure 1-1 depicts the regional and local context of the project site. Figure 1-2 provides an aerial photograph of the project site and surrounding land uses.

Site Characteristics and Current Site Conditions

The generally-level project site is currently developed with a single-story, approximately 24,311-square-foot commercial office building. Ingress and egress to the project site is provided by a driveway and service lane from Jefferson Drive.

The existing building on the project site was constructed in 1964 and is currently occupied by a commercial tenant. A total of 40 surface parking spaces are provided on the project site. Vegetation on the project site consists of small landscaped areas along the southern border and includes a total of 11 mature trees, 4 of which are Heritage Trees.[2] Figure 1-3 depicts current site conditions; Figure 1-4 depicts an aerial view of the project site and photo viewpoint locations; and Figure 1-5 includes photos of the existing building on the project site (Photos 1 and 2).

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1 The street grid in the immediate vicinity of the project site generally extends northeast-southwest and northwest-southeast. To simplify the direction descriptions used in this document, roadways progressing parallel to US 101 are designated eastbound-westbound and roadways parallel to Marsh Road are designated northbound-southbound. The directional descriptions throughout this document use this geographic convention. However, with respect to transportation and circulation, US 101 is considered to be a northbound-southbound roadway and SR 84 is considered to be an eastbound-westbound roadway.

2 Hort Sceince | Barlett Consulting. 2020. *Arborist Report, 165 Jefferson Drive, Menlo Park, CA.* April 24.

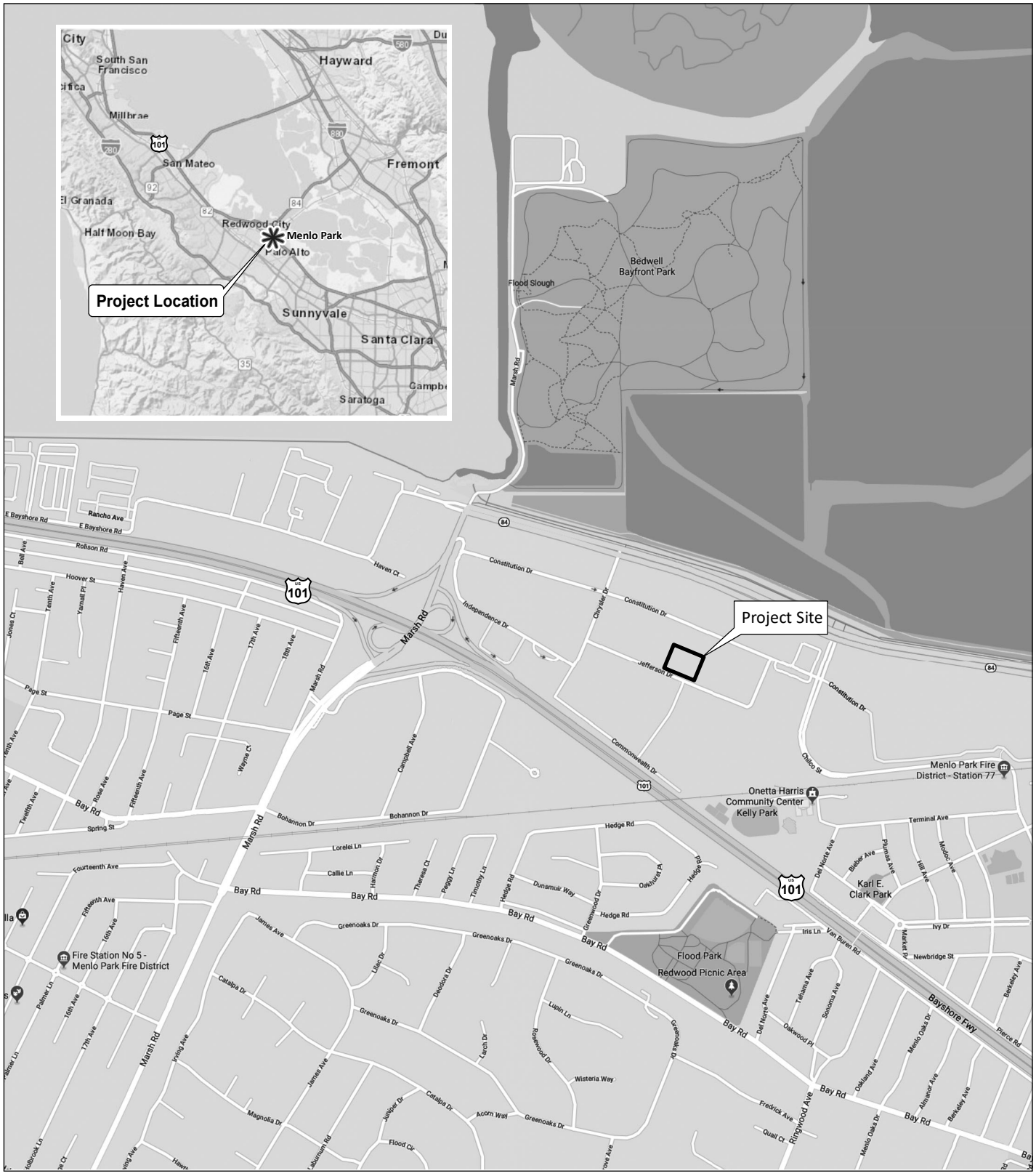

FIGURE 1-1

LSA

0 125 250
FEET

TRUE NORTH
PROJECT NORTH
N

Project Site

Menlo Flats Project Initial Study
Project Location and Regional Vicinity Map

SOURCES: GOOGLE EARTH 8/9/18; LSA, 2020

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LSA

FIGURE 1-2

Menlo Flats Project Initial Study
Project Location and Regional Vicinity Map

SOURCES: GOOGLE EARTH 8/9/18; LSA, 2020,

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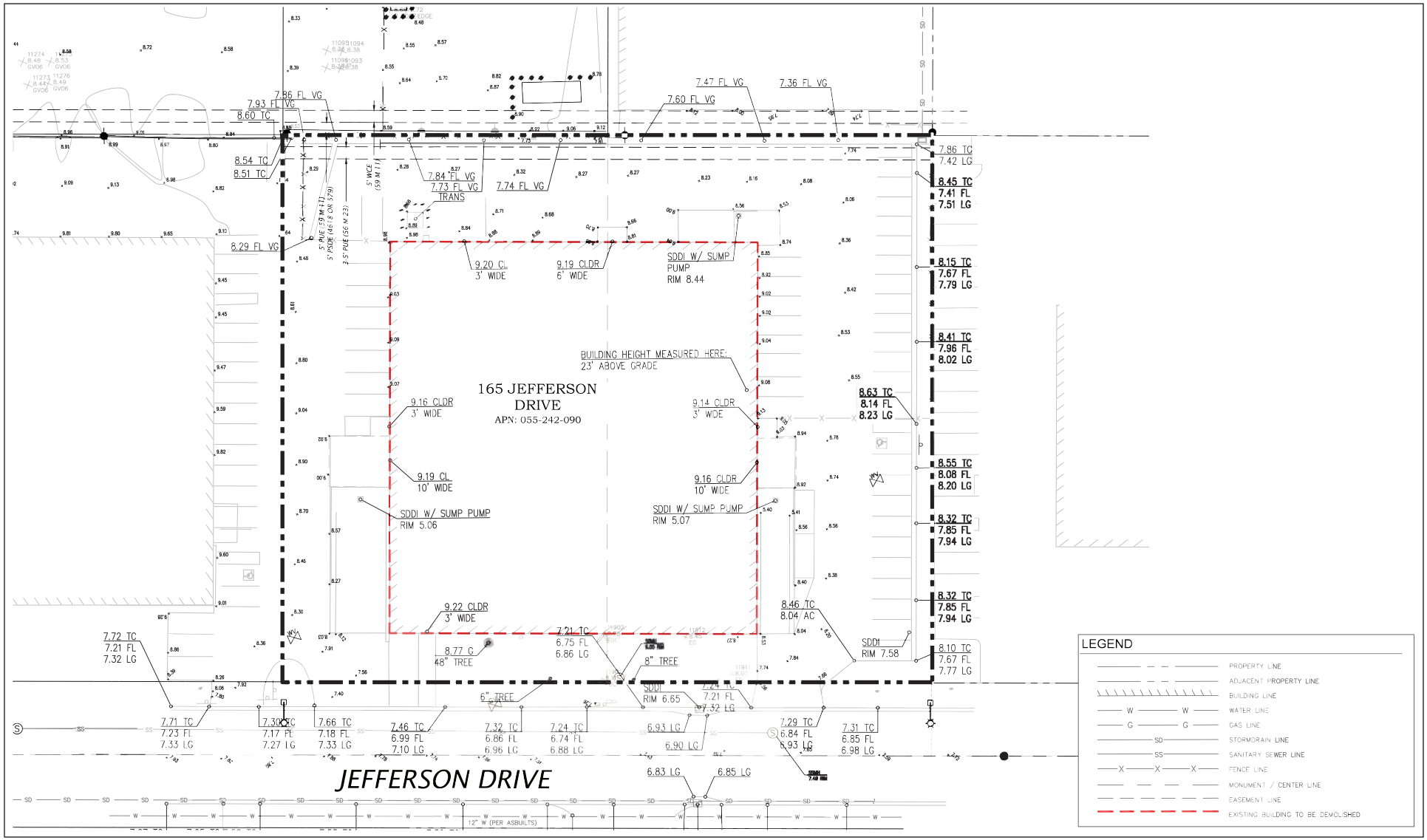

FIGURE 1-3

LSA

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TRUE NORTH
PROJECT NORTH

Project Boundary

Menlo Flats Project Initial Study
Existing Site Conditions

SOURCE: Greystar; HM; BKF, 7/21/2020

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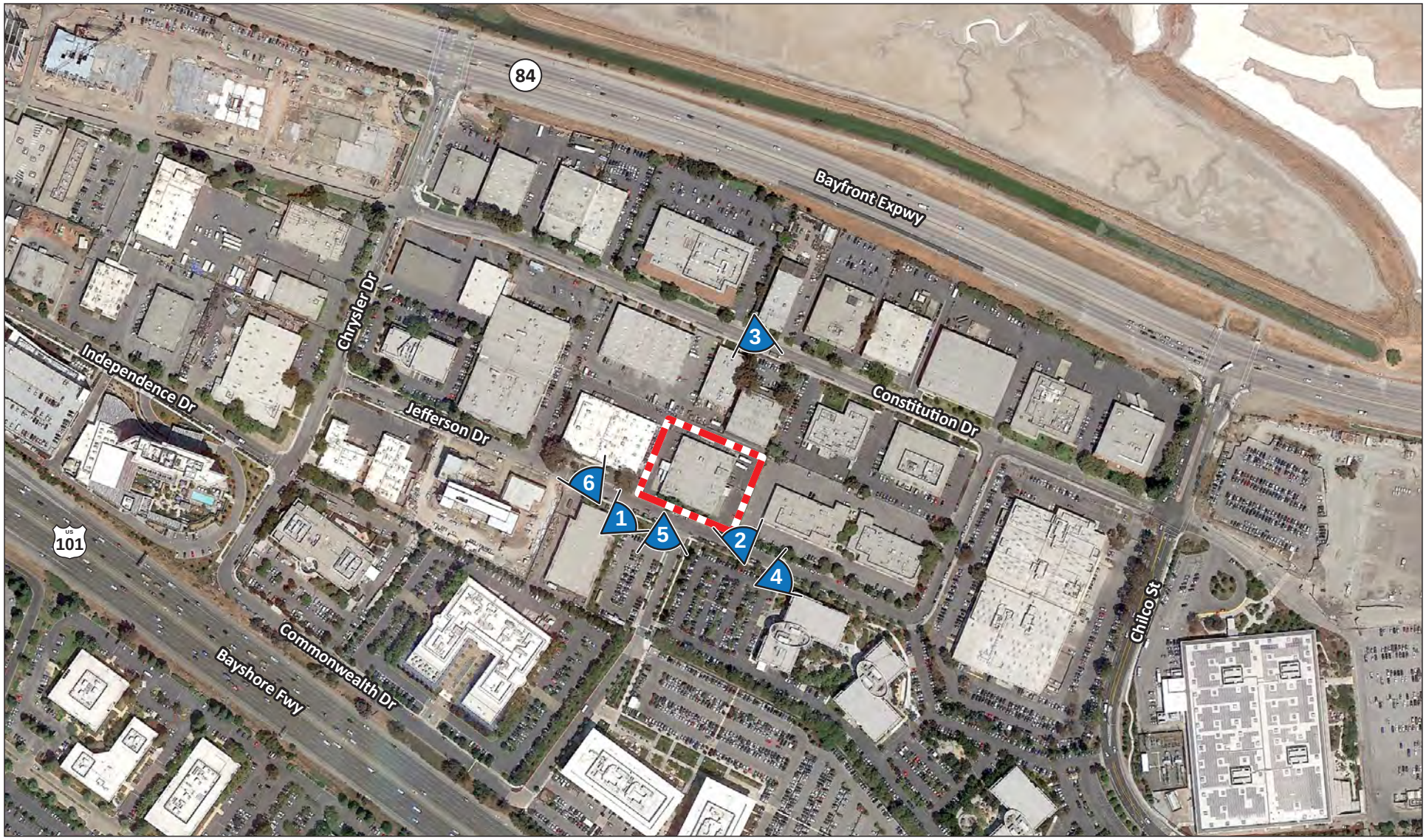

FIGURE 1-4

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TRUE NORTH
PROJECT NORTH
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2 Photo Locations

Project Boundary

Menlo Flats Project Initial Study
Photo Locations

SOURCES: Google Earth, 8/9/19; LSA, 2020

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Photo 1: Existing building, as seen from Jefferson Drive

Photo 2: Existing building, as seen from the southeast corner of the project site

LSA

FIGURE 1-5

Menlo Flats Project Initial Study
Photos of Existing Site

SOURCE: LSA, 2020

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Regulatory Setting

The project site is designated Mixed Use Residential on the City of Menlo Park (City) General Plan Land Use Designations Map, which was updated as part of the City's General Plan Land Use and Circulation Elements Update (referred to as ConnectMenlo). One purpose of ConnectMenlo was to encourage office, research and development, residential, commercial uses, and hotels, all in close proximity or integrated with one another in the Bayfront Area, which is generally located north of US 101. The Mixed Use Residential designation provides for higher density housing to meet the needs of all income levels and is intended to promote live/work/play environments oriented towards pedestrians, transit, and bicycle use, especially for commuting to nearby jobs.[3]

The project site is located within the Residential Mixed Use Bonus (R-MU-B) zoning district.[4] The purpose and intent of the R-MU-B zoning district, identified in the Zoning Ordinance, is to: 1) provide high density housing to nearby employment; 2) encourage mixed use development with a quality living environment and neighborhood-serving retail and services on the ground floor that are oriented to the public and promote a live/work/play environment with pedestrian activity; and 3) blend with and complement existing neighborhoods through site regulations and design standards that minimize impacts to adjacent uses.[5] The maximum base residential density is 30 units per acre, with a floor area ratio (FAR) of up to 90 percent for residential uses and a maximum height of up to 40 feet. In addition, the bonus-level of development allows for a density of up to 100 dwelling units per acre, a FAR of up to 225 percent for residential uses and 25 percent for non-residential uses, and a maximum height of up to 85 feet in exchange for providing community amenities.

Background

On November 29, 2016, the Menlo Park City Council certified the ConnectMenlo Final Environmental Impact Report (ConnectMenlo Final EIR)[6,7] and approved updates to the Land Use and Circulation Elements of the General Plan.[8] ConnectMenlo also included additions to the zoning code and changes to the City's zoning map to rezone specific properties to reflect the General Plan updates, including the new land uses within the Bayfront Area of the city. The ConnectMenlo Final EIR provided a program-level analysis of the development potential envisioned for the entire city, which included the existing development potential throughout the city plus increased development potential in the Bayfront Area. The Land Use Element specifically identifies new development potential in the Bayfront Area of up to 2.3 million square feet of non-residential space, 400 hotel rooms, and 4,500

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3 Menlo Park, City of. 2016a. *General Plan: ConnectMenlo, Menlo Park Land Use and Mobility Update*. November 29.

4 Menlo Park, City of. 2019a. City of Menlo Park GIS Viewer. Website: https://menlopark.maps.arcgis.com/apps/View/index.html?appid=0798b044d1b541f9b0498d94f5c804e0 (accessed September 2020).

5 Menlo Park, City of. 2019b. Menlo Park Municipal Code. January 15.

6 Menlo Park, City of. 2016b. *ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update, Public Review Draft Environmental Impact Report*, SCH#2015062054.Prepared by Placeworks. June 1.

7 Menlo Park, City of. 2016c. *ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update, Public Review Final Environmental Impact Report*, SCH#2015062054. Prepared by Placeworks. October 10.

8 Menlo Park, City of. 2016a. op. cit.

residential units.[9] The buildout potential for future development is expected to occur over a 24-year buildout horizon (from approximately 2016 to 2040).[10]

On December 29, 2016, the City of East Palo Alto filed suit challenging the certification of the ConnectMenlo Final EIR. East Palo Alto alleged that Menlo Park did not comply with the California Environmental Quality Act (CEQA) because the ConnectMenlo Final EIR underestimated the amount of new employment and failed to adequately analyze the traffic impacts that would result from development under ConnectMenlo. To resolve the litigation, Menlo Park and East Palo Alto entered into a settlement agreement. The key terms of the settlement agreement are as follows:

1. Reciprocal Environmental Review for Future Development Projects. Menlo Park will prepare an EIR for any project located in the Office (O), Life Science (LS) or Residential Mixed Use (R-MU) district that exceeds 250,000 net new square feet and would require a use permit, that proposes bonus level development, that proposes a master plan project, or that may have a significant environmental impact. Menlo Park may, with the exception of housing and traffic (which were the focus of East Palo Alto's challenge), simplify the environmental review for future development projects by incorporating analysis and discussions from the ConnectMenlo Final EIR pursuant to CEQA Guidelines Section 15168(d). East Palo Alto will prepare an initial study for future development projects to determine the appropriate level of environmental review and will conduct that review, which can be simplified by incorporating by reference analysis and discussions from its General Plan update referred to as Vista 2035.

2. Reciprocal Traffic Studies. Menlo Park and East Palo Alto will work together to ensure that future development projects' potentially significant traffic impacts on the other jurisdiction are analyzed and mitigated.

3. Reciprocal Study of Multiplier Effect. When the preparation of an EIR is required as described above, Menlo Park or East Palo Alto, as applicable, will conduct a Housing Needs Assessment, which to the extent possible, will include an analysis of the multiplier effect for indirect and induced employment.[11]

[9] The ConnectMenlo Final EIR included an evaluation of 4,500 housing units in the Bayfront Area consisting of 3,000 unrestricted residential units and 1,500 corporate dormitory-style housing units on the Facebook East Campus (also known as the Classic Campus).

[10] Although the ConnectMenlo Final EIR assumed a buildout horizon of 2040, the maximum development potential may be reached sooner than anticipated. However, the ConnectMenlo Final EIR evaluated the maximum development potential that could occur at any given time and did not consider the phased buildout of the development potential; therefore, no new or additional impacts are anticipated as a result of the expedited buildout.

[11] Nothing in the settlement agreement was intended to suggest such an analysis is required by CEQA.

This Initial Study was prepared in accordance with the terms of the settlement agreement, which allows simplification in accordance with CEQA Guidelines Section 15168 for all topic areas except housing and transportation and incorporates by reference the information contained in the ConnectMenlo Final EIR, as applicable. Per CEQA Guidelines Section 15168, later activities occurring under a program EIR may be examined in light of the program EIR and tier from the program EIR as provided for in CEQA Guidelines Section 15152. Per CEQA Guidelines Section 15152, "where an EIR has been prepared and certified for a program […] consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program […] should limit the EIR […] on the later project to effects which: 1) were not examined as significant effects on the environment in the prior EIR; or 2) are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means." The analysis provided in this Initial Study tiers from the ConnectMenlo Final EIR, as appropriate and as further described in each topical section.

The proposed project would be required to comply with all applicable mitigation measures identified in the ConnectMenlo Mitigation Monitoring and Reporting Program (MMRP), which is a requirement of any proposed development project in the city. The proposed project has been determined to have less than significant impacts in a number of topic areas within this Initial Study (refer to Section 3.0) based on compliance with the ConnectMenlo mitigation measures, which are already included in the existing enforceable MMRP prepared for the ConnectMenlo Final EIR. A copy of the ConnectMenlo MMRP is included in Appendix A.

Proposed Project

This section provides a description of the proposed project as identified in the application materials submitted by the project sponsor to the City, dated July 23, 2020.[12] The proposed project would result in demolition of the existing office building and associated improvements and redevelopment of the project site with an approximately 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and approximately 15,000 square feet of commercial space, as well as associated open space, circulation and parking, and infrastructure improvements. The project sponsor is currently proposing that 15 percent of the units would comply with the City's Below Market Rate (BMR) Housing Program Ordinance, Chapter 16.96, and the City's Below Market Rate Guidelines (Guidelines). Individual project components are further described below.

Figure 1-6 depicts the currently available overall conceptual ground level site plan for the proposed project; Figures 1-7 through Figure 1-10 depict the currently available conceptual site plans for the first through eighth floors of the proposed building. Figure 1-11 depicts conceptual building sections. Conceptual landscaping plans are shown in Figures 1-12 and 1-13.

[12] Menlo Park Flats Venture, LLC. 2020. City of Menlo Park Development Permit Application for the Menlo Flats Project. July 23. It should be noted that project plans may be subject to refinement prior to City action on project entitlements.

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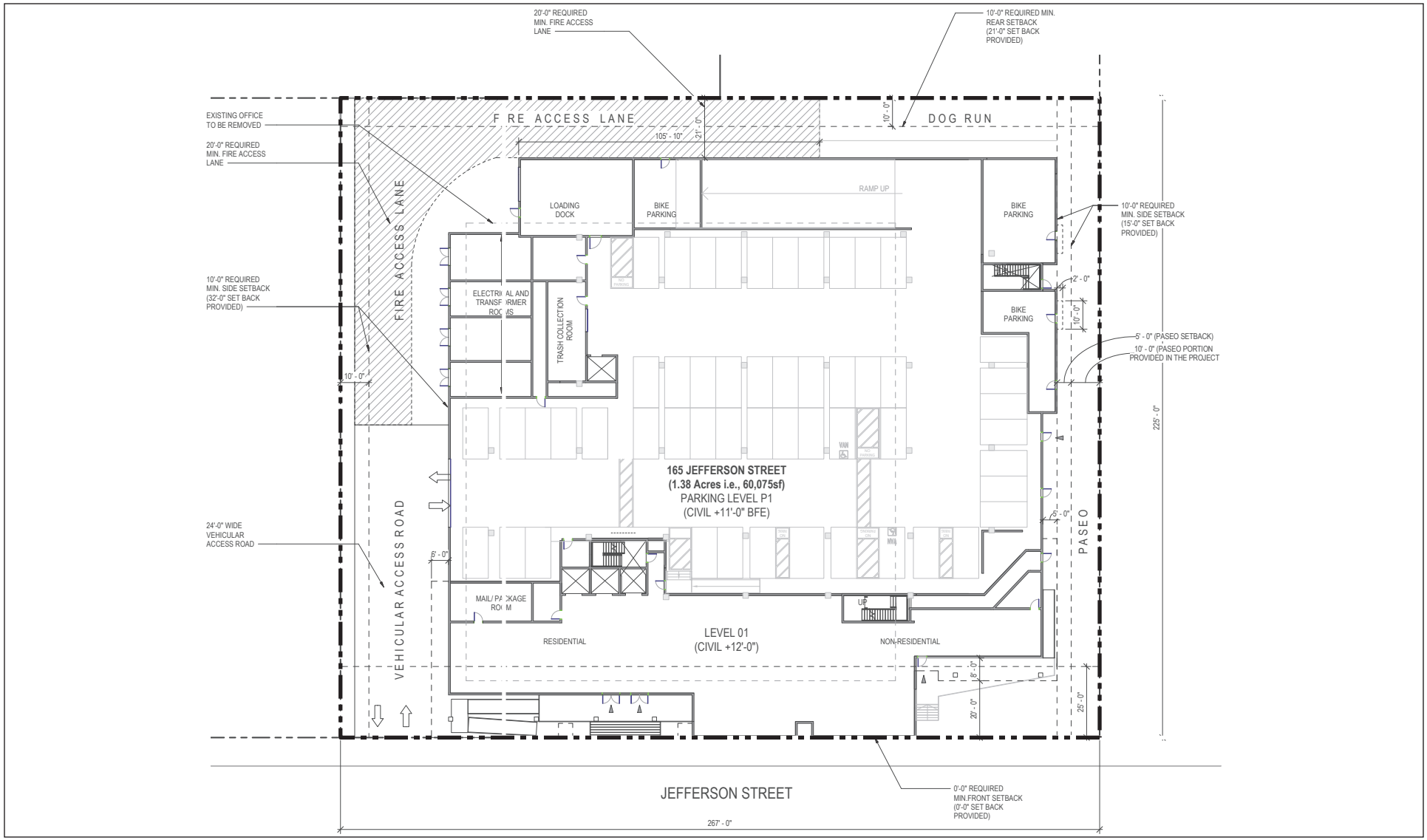

FIGURE 1-6

LSA

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FEET

TRUE NORTH
PROJECT NORTH

Project Boundary

Menlo Flats Project Initial Study
Conceptual Site Plan

SOURCE: Greystar; HM; BKF, 7/21/2020

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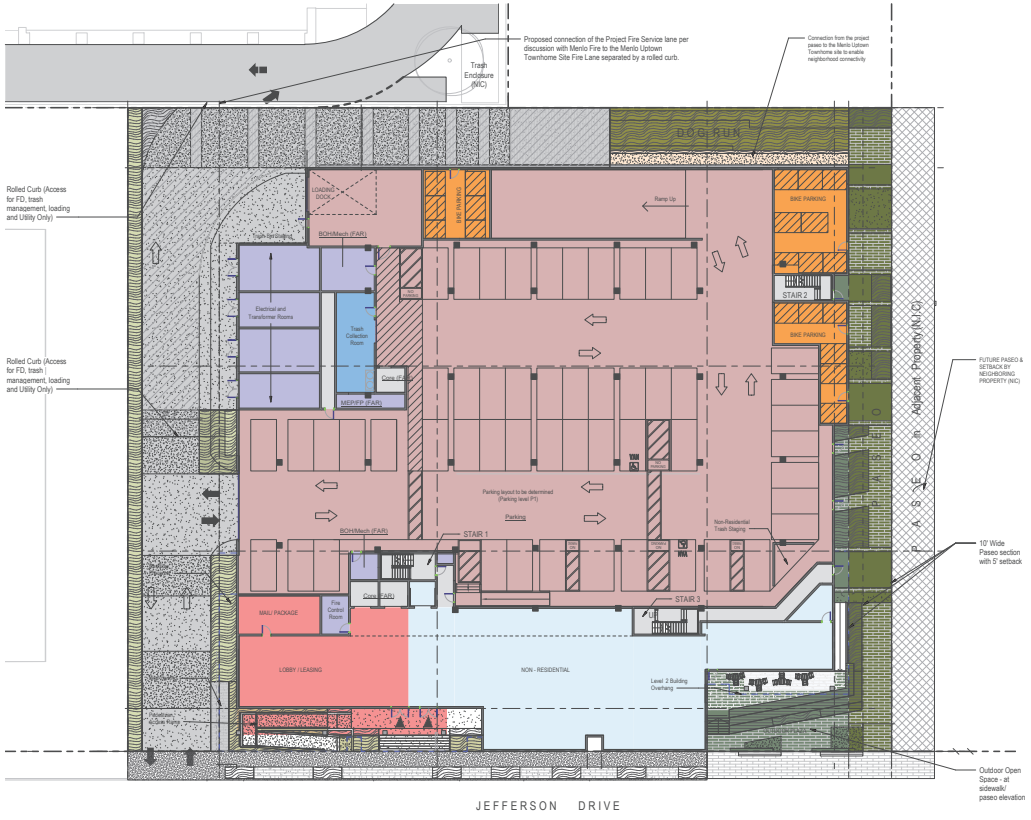
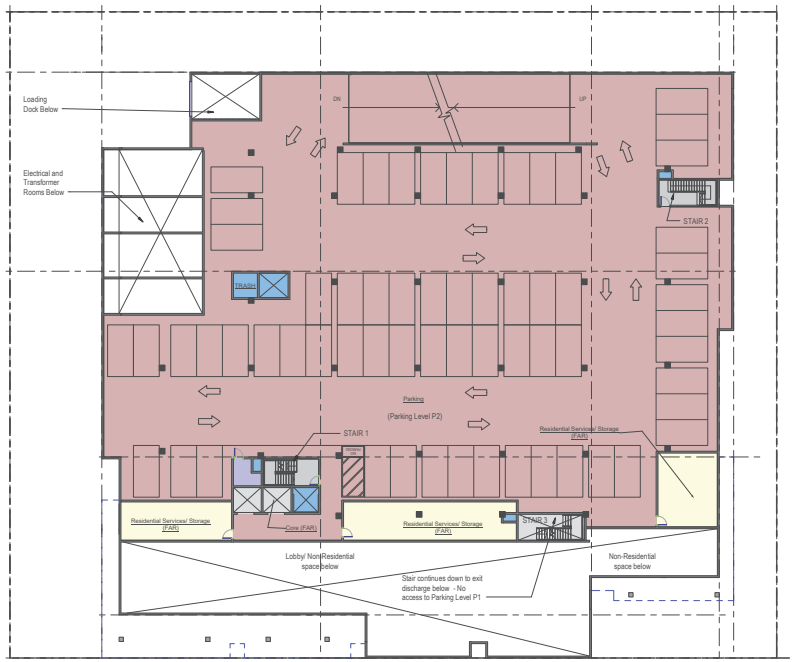


AREA SUMMARY LEVEL 01 AND PARKING LEVEL P1

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 01	0.0 SF	2,838.5 SF	0.0 SF	1,524.0 SF	2,404.4 SF	6,766.8 SF	5,826.3 SF	0.0 SF	492.6 SF	27,645.4 SF	40,731.1 SF	6,274.2 SF
Grand total	0.0 SF	2,838.5 SF	0.0 SF	1,524.0 SF	2,404.4 SF	6,766.8 SF	5,826.3 SF	0.0 SF	492.6 SF	27,645.4 SF	40,731.1 SF	6,274.2 SF

FLOOR PLAN - LEVEL 01 AND PARKING LEVEL P1



AREA SUMMARY - PARKING LEVEL P2

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level P2	0.0 SF	0.0 SF	1,993.0 SF	830.2 SF	85.8 SF	2,909.1 SF	0.0 SF	0.0 SF	317.1 SF	28,739.4 SF	31,965.6 SF	0.0 SF
Grand total	0.0 SF	0.0 SF	1,993.0 SF	830.2 SF	85.8 SF	2,909.1 SF	0.0 SF	0.0 SF	317.1 SF	28,739.4 SF	31,965.6 SF	0.0 SF

FLOOR PLAN - PARKING LEVEL P2

LSA

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FEET

TRUE NORTH
PROJECT NORTH

FIGURE 1-7

Menlo Flats Project Initial Study
Conceptual Ground and Second Level Floor Plans

SOURCE: Greystar; HM; BKF, 7/21/2020

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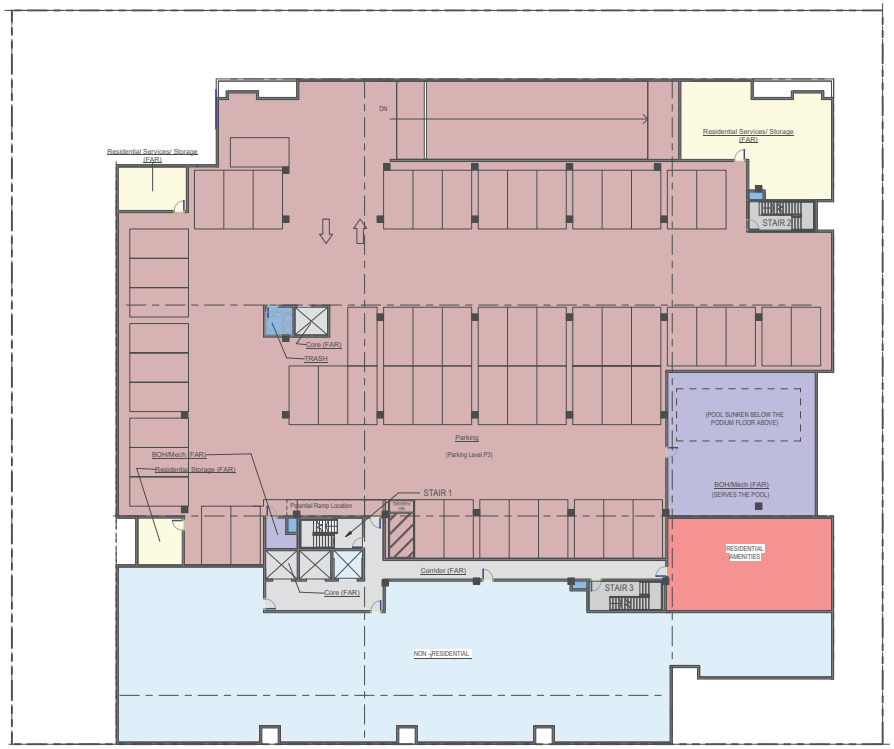

AREA SUMMARY - LEVEL 02 AND PARKING LEVEL P3

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 02	0.0 SF	1,490.3 SF	1,902.5 SF	1,944.3 SF	2,147.9 SF	7,485.1 SF	9,172.3 SF	0.0 SF	130.6 SF	25,603.4 SF	42,391.4 SF	0.0 SF
Grand total	0.0 SF	1,490.3 SF	1,902.5 SF	1,944.3 SF	2,147.9 SF	7,485.1 SF	9,172.3 SF	0.0 SF	130.6 SF	25,603.4 SF	42,391.4 SF	0.0 SF

FLOOR PLAN - LEVEL 02 AND PARKING LEVEL P3

AREA SUMMARY - LEVEL 03

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 03	23,220.9 SF	1,111.3 SF	643.2 SF	3,911.0 SF	182.2 SF	29,068.5 SF	0.0 SF	0.0 SF	220.8 SF	0.0 SF	29,289.4 SF	11,375.4 SF
Grand total	23,220.9 SF	1,111.3 SF	643.2 SF	3,911.0 SF	182.2 SF	29,068.5 SF	0.0 SF	0.0 SF	220.8 SF	0.0 SF	29,289.4 SF	11,375.4 SF

FLOOR PLAN - LEVEL 03

FIGURE 1-8

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TRUE NORTH
PROJECT NORTH

SOURCE: Greystar; HM; BKF, 7/21/2020

Menlo Flats Project Initial Study
Conceptual Third and Fourth Level Floor Plans

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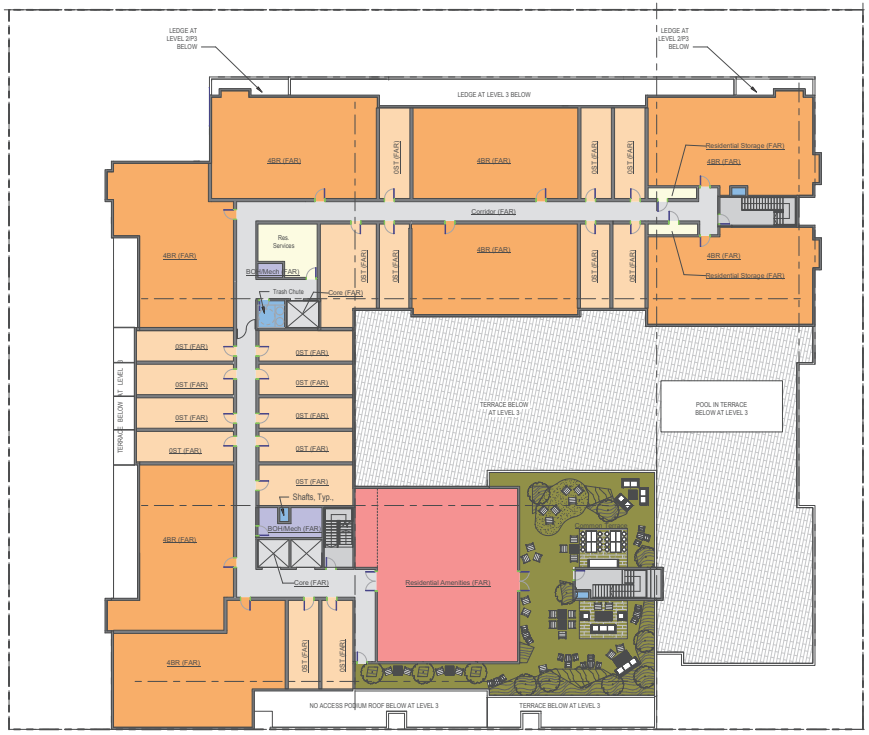
AREA SUMMARY - LEVEL 04

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 04	25,159.9 SF	0.0 SF	472.5 SF	3,604.7 SF	135.4 SF	29,372.4 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	29,503.1 SF	0.0 SF
Grand total	25,159.9 SF	0.0 SF	472.5 SF	3,604.7 SF	135.4 SF	29,372.4 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	29,503.1 SF	0.0 SF

AREA SUMMARY - LEVEL 05

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 05	25,159.9 SF	0.0 SF	472.5 SF	3,604.7 SF	135.4 SF	29,372.4 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	29,503.1 SF	0.0 SF
Grand total	25,159.9 SF	0.0 SF	472.5 SF	3,604.7 SF	135.4 SF	29,372.4 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	29,503.1 SF	0.0 SF

FLOOR PLAN - LEVEL 04 (TYP. 04 & 05)



AREA SUMMARY - LEVEL 06

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 06 (Roof Terrace)	19,453.2 SF	2,659.4 SF	466.4 SF	3,275.0 SF	238.7 SF	26,092.7 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	26,223.4 SF	3,279.7 SF
Grand total	19,453.2 SF	2,659.4 SF	466.4 SF	3,275.0 SF	238.7 SF	26,092.7 SF	0.0 SF	0.0 SF	130.6 SF	0.0 SF	26,223.4 SF	3,279.7 SF

FLOOR PLAN - LEVEL 06 (ROOF TERRACE)

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FIGURE 1-9

Menlo Flats Project Initial Study

Conceptual Fifth through Sixth and Seventh Level Floor Plans

SOURCE: Greystar; HM; BKF, 7/21/2020

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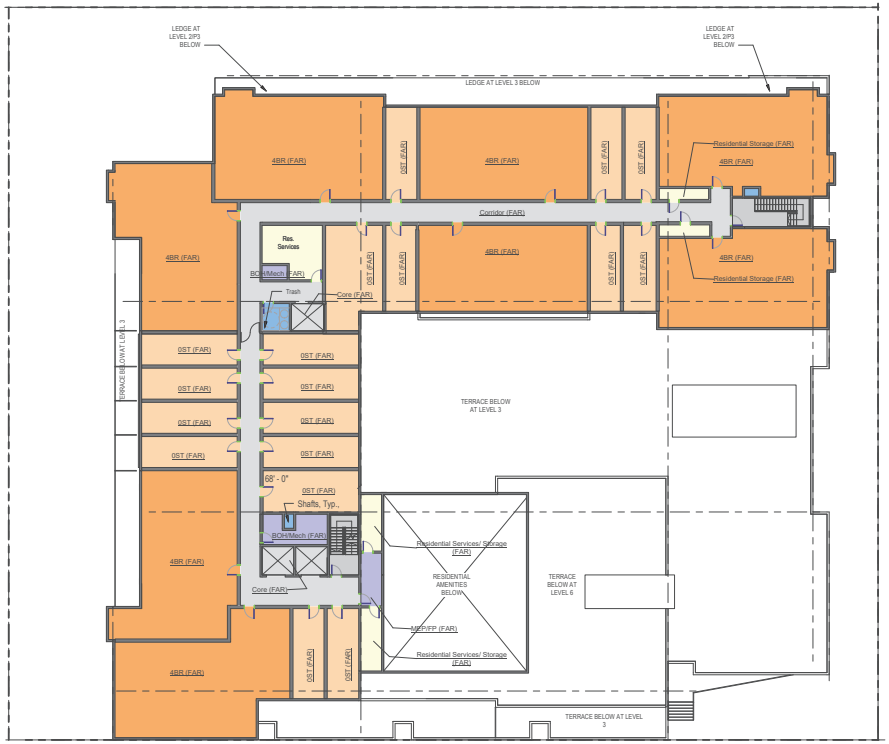
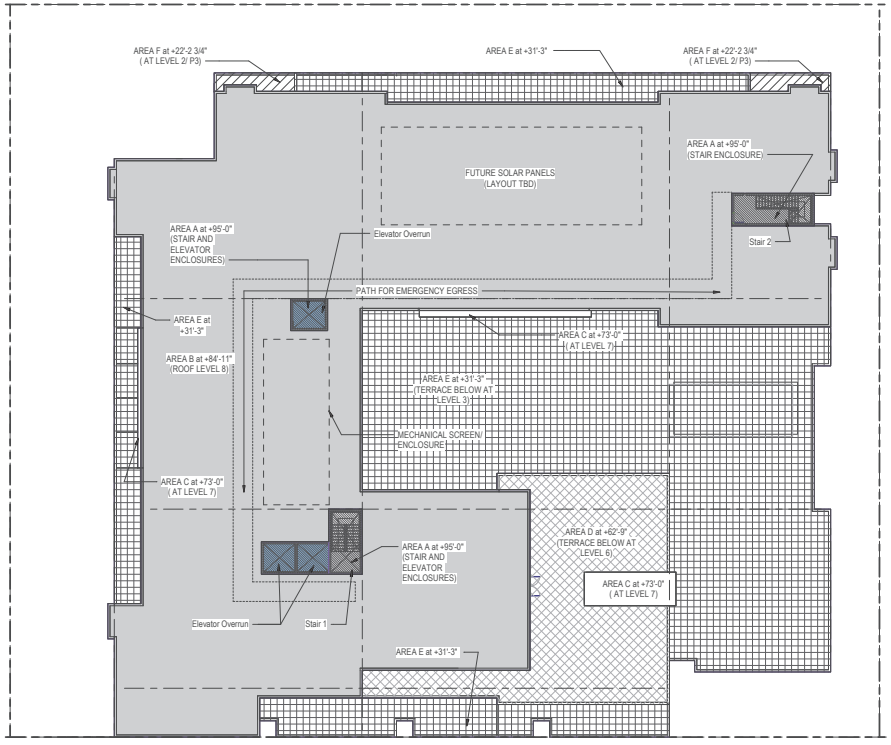


AREA SUMMARY - LEVEL 07

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 07	19,292.2 SF	0.0 SF	740.0 SF	2,811.4 SF	357.8 SF	23,201.4 SF	0.0 SF	0.0 SF	115.0 SF	0.0 SF	23,316.4 SF	0.0 SF
Grand total	19,292.2 SF	0.0 SF	740.0 SF	2,811.4 SF	357.8 SF	23,201.4 SF	0.0 SF	0.0 SF	115.0 SF	0.0 SF	23,316.4 SF	0.0 SF

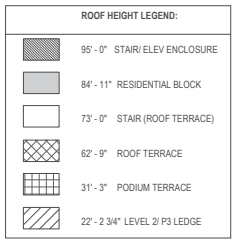
FLOOR PLAN - LEVEL 07



AREA SUMMARY - LEVEL 08 (ROOF)

Level	RESID. UNITS (FAR)	RESID. AMENITIES (FAR)	RESID SERVICES/ STORAGE (FAR)	RESID. COMMON (FAR)	RESID. UTILITIES (FAR)	RESID. GSF (FAR)	NON-RESIDENTIAL GSF (FAR)	RESID COMMON (NOT INCL. IN FAR)	UTILITIES (NOT INCL. IN FAR)	PARKING GSF (NOT INCL. IN FAR)	TOTAL BLDG GSF	PROJECT OPEN SPACE (NOT INCL. IN FAR)
Level 08 (Roof)	0.0 SF	0.0 SF	0.0 SF	460.4 SF	0.0 SF	460.4 SF	0.0 SF	0.0 SF	318.1 SF	0.0 SF	778.5 SF	0.0 SF
Grand total	0.0 SF	0.0 SF	0.0 SF	460.4 SF	0.0 SF	460.4 SF	0.0 SF	0.0 SF	318.1 SF	0.0 SF	778.5 SF	0.0 SF

FLOOR PLAN - LEVEL 08 (ROOF)



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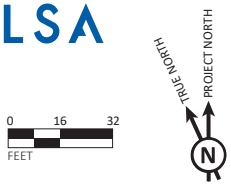

FIGURE 1-10

Menlo Flats Project Initial Study

Conceptual Eighth Level Floor and Roof Plan

SOURCE: Greystar; HM; BKF, 7/21/2020

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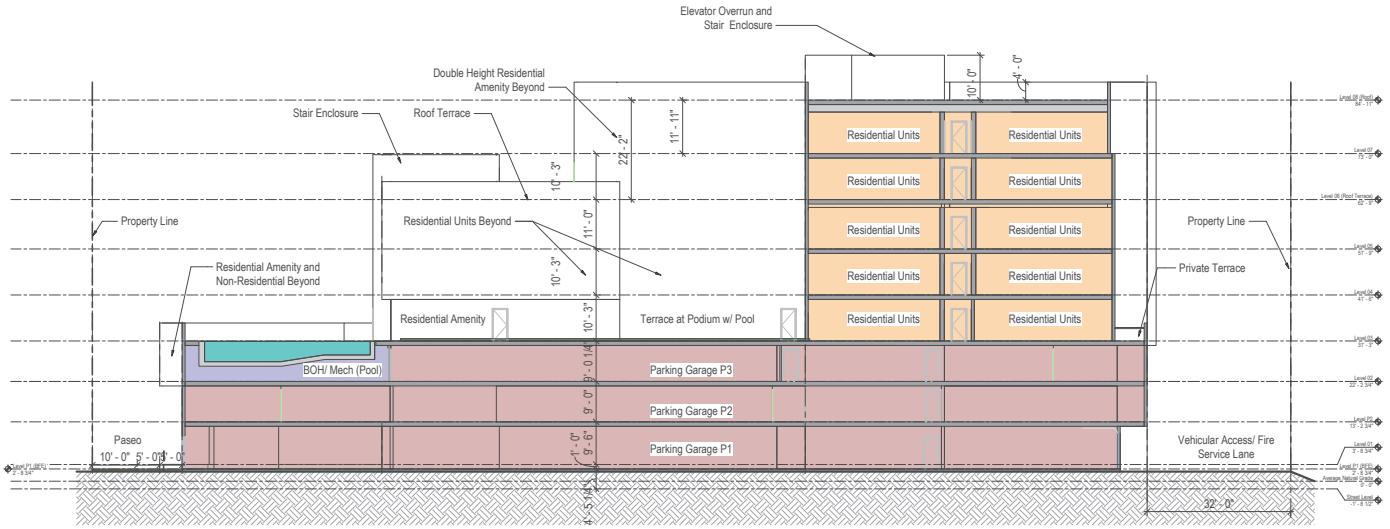
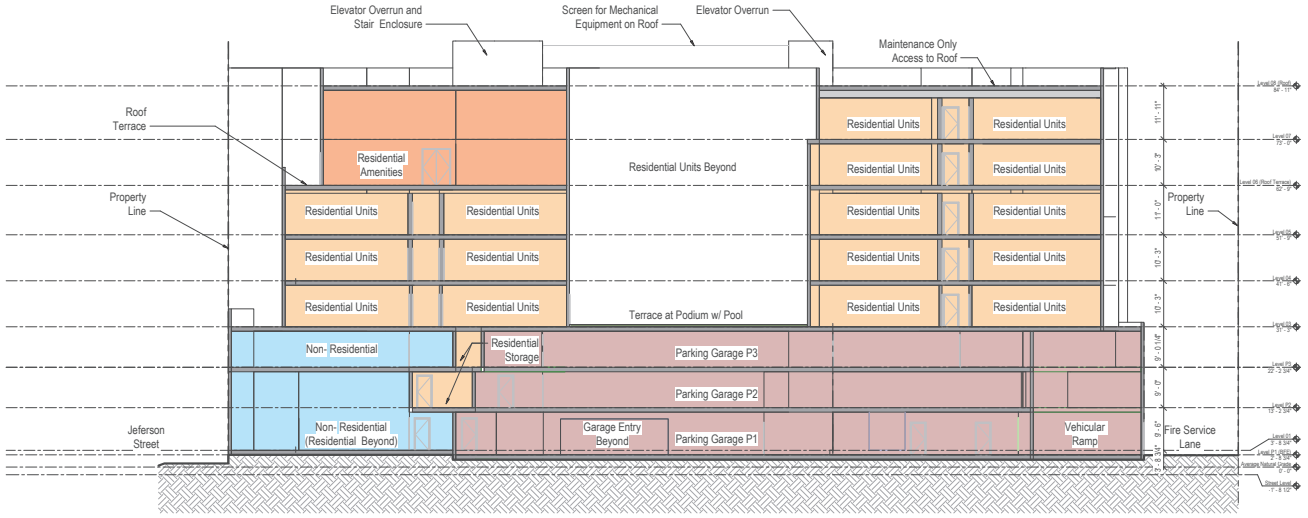


EAST WEST BUILDING SECTION



SOUTH NORTH BUILDING SECTION

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FIGURE 1-11

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FEET

Menlo Flats Project Initial Study
Conceptual Building Sections

SOURCE: Greystar; HM; BKF, 7/21/2020

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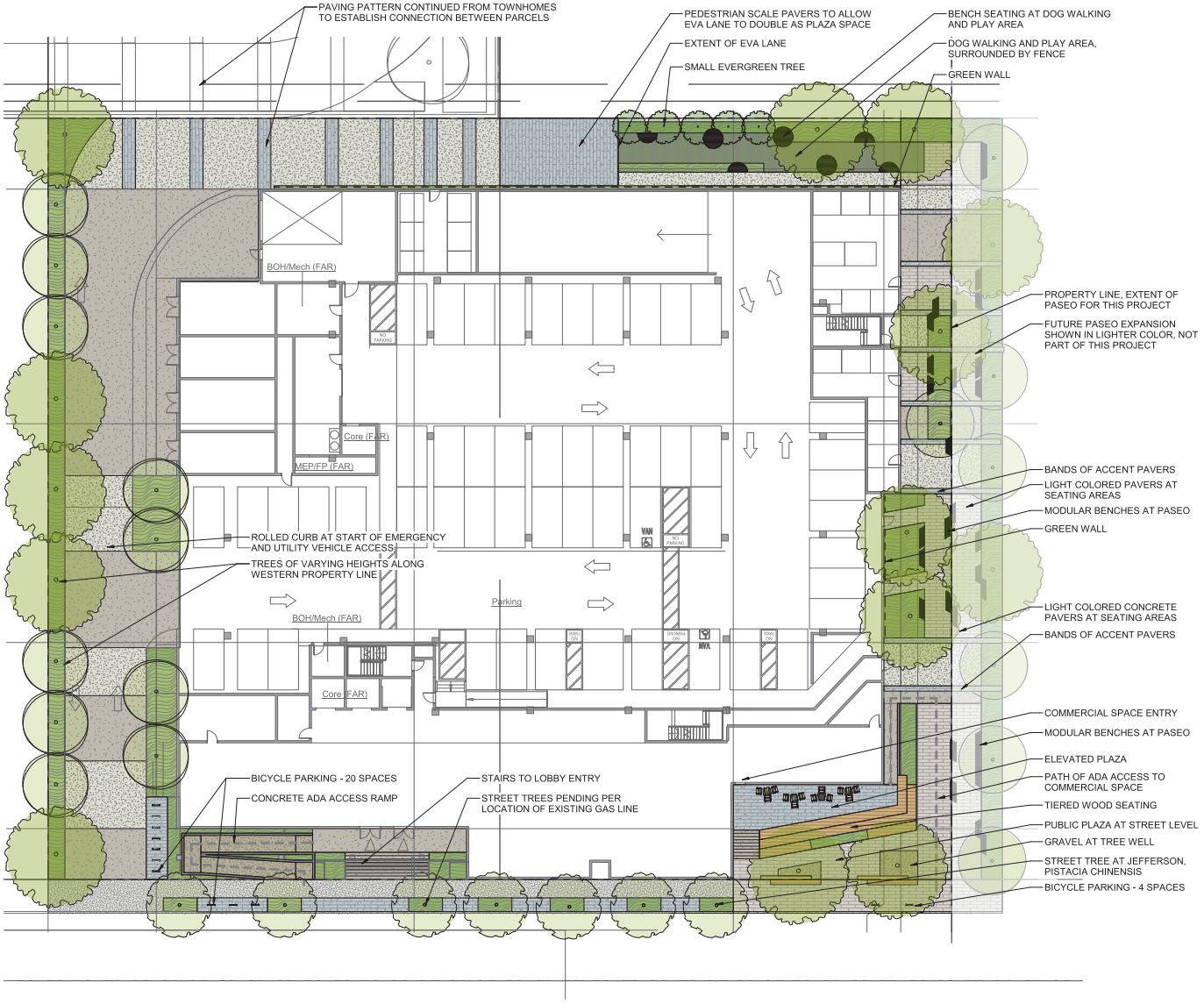

FIGURE 1-12

LSA

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FEET

TRUE NORTH
PROJECT NORTH
N

SOURCE: Greystar; HM; BKF, 7/21/2020

P:\CMK2001 Menlo Flats\PRODUCTS\Initial Study\Figures\Figure 1-12.ai (10/15/2020)

Menlo Flats Project Initial Study

Conceptual Street Level Landscape Plan

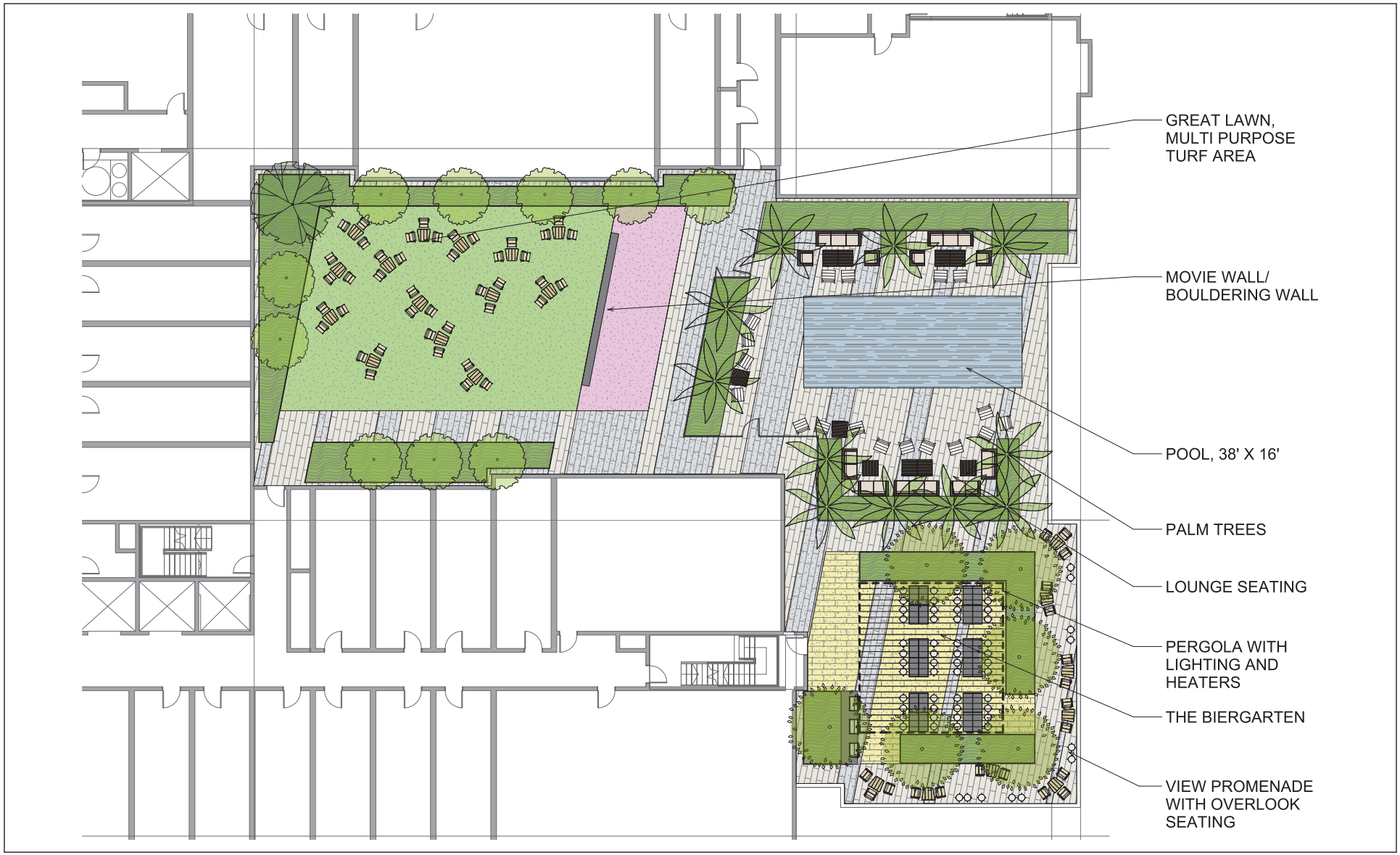

FIGURE 1-13

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FEET

TRUE NORTH
PROJECT NORTH
N

SOURCE: Greystar; HM; BKF, 7/21/2020

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Menlo Flats Project Initial Study
Conceptual Fourth Level Landscape Plan

Building Program

The proposed project would result in the redevelopment of the project site with an eight-story mixed-use building with ground and second floor commercial space and three levels of above ground parking. The ground floor of the proposed building would be raised approximately 3 feet above grade to accommodate flood plain design requirements. A ground-level pedestrian paseo would be located along the eastern side of the proposed building, and a publicly accessible plaza would be located at the southeast corner.

The proposed building would contain a total of approximately 154,729 square feet of residential uses on the fourth through eight floors (approximately 158 residential units) and approximately 15,000 square feet of commercial uses on the ground and third floors. The building would have a maximum height of approximately 84 feet, 11 inches and would front to Jefferson Drive.[13] The ground floor of the proposed building would include a lobby, residential amenity space, approximately 5,826 square feet of commercial space, the first level of the parking garage, and stairwells and elevators providing access to the residential portion of the building. The second level of the parking garage would be located between the ground floor and second floor of the building. The second floor of the building would include the third floor of the parking garage and the remaining approximately 9,172 square feet of commercial space. The fourth level would include 34 residential units and an approximately 11,375-square-foot amenities deck that would include a pool, social areas, an outdoor room, outdoor kitchen, and dining area. The fifth and sixth floors would include 36 residential units each and the seventh and eighth floors would include 26 residential units each. The seventh floor would also include approximately 3,279 square feet of outdoor terrace space. Residential units would consist of 113 studio units at an average size of 345 square feet and 45 four-bedroom units at an average size of 1,625 square feet.

The proposed project would include density above the maximum bonus level residential density. This is attained through application of the density bonus provision of the City's BMR Housing Program that allows one additional market rate unit for each BMR unit provided. The proposed project includes 21 BMR units, or 15.2 percent of 138 units. This allows the proposed project to add an additional 21 market rate units for a total project of 159 rental units (138 base units plus 21 additional market rate units).[14] The BMR units included as a part of the proposed project are currently proposed to be all be affordable to low income households.[15] Density and gross floor area above the maximum allowed density and gross floor area ratio would be achieved through the density bonus provision of the City's BMR Housing Program. Requests for density bonuses of a maximum of 15 percent are subject to approval of the reviewing body (i.e., Planning Commission or

[13] The roof level would be approximately 84 feet, 11 inches from the existing natural grade, and approximately 81 feet, 3 inches above the proposed ground level of the project site. The maximum height of the proposed project does not include stair and elevator overruns, which would extend to approximately 94 feet, 11 inches in height above the existing grade.

[14] The City's BMR Program also allows an increase in gross floor area up to a maximum of 15 percent. The base gross floor area for the proposed project would be 135,169 square feet, and with the density bonus would be 154,729 square feet, a 14.5 percent increase.

[15] Low income households are those earning between 51 and 80 percent of the area median income.

City Council) associated with the required application. In addition, this program would allow exemptions for the total parking requirement for the residential units.

Open Space and Landscaping

A total of approximately 20,929 square feet of open space would be provided across the entire project site, including private residential open space, common open space, and publicly-accessible open space. Private residential open space would consist of private terraces, totaling approximately 1,382 square feet. The total common open space of approximately 14,525 square feet would include the approximately 11,375-square-foot amenity deck on the fourth floor and the approximately 3,279-square-foot roof terrace.

The City's Zoning Ordinance requires a minimum of approximately 6.25 percent (3,754 square feet) of the project site to be publicly-accessible open space. Approximately 8.35 percent of the project site would consist of publicly-accessible open space, including the approximately 1,647-square-foot public plaza located at the southeast corner of the building and 3,375-square-foot publicly-accessible pedestrian paseo along the eastern boundary of the project site.

All of the existing 11 trees on the project site would be removed, and a minimum of 8 new trees would be planted along the building frontage of Jefferson Drive and within the pedestrian paseo. In addition, landscaping would be provided throughout the project site in the open space areas mentioned above. Figure 1-12 shows the conceptual landscape plan for the ground floor, and Figure 1-13 shows the conceptual landscape plans for fourth level.

Access, Circulation and Parking

Pedestrian access to the proposed buildings would be provided by Jefferson Drive. The main residential and commercial lobbies would be located on the ground floor near the southwest corner of the building. The residential units would be accessed via a stairwell and elevators within the main lobby. An additional pedestrian entrance into the commercial space would be provided from the outdoor plaza in the southeast corner of the proposed building.

The proposed building would include an at-grade, three-level, approximately 81,988-square-foot, 176-space parking garage. Approximately 138 parking spaces would be designated for residents, and 38 spaces would be for non-residential space. The parking garage would be accessed via the service lane located to the west of the proposed building off Jefferson Drive. A total of 232 bicycle parking spaces would be provided throughout the building, consisting of 207 long-term spaces located in a storage room on the ground floor and 21 short-term parking spaces located along the building entry and paseo, as well as 1 long-term commercial bicycle space located in the garage and 3 short-term commercial spaces at the building entry and paseo.

Utilities and Infrastructure

The project site is located in an urban area with existing utilities and infrastructure. The proposed project would be required to install the following utility connections to the satisfaction of the applicable utility providers: water, wastewater, stormwater drainage, power, and telecommunications services. The proposed building would be required to be all-electric and no natural gas

connections would be installed. Connections to existing infrastructure would occur within the adjacent public right-of-way. A 300-kilowatt back-up generator would also be installed within the ground level of the parking garage, for emergency use only (i.e., emergency egress lighting, elevators, telecommunications, etc.). The proposed project would incorporate drought-tolerant, non-invasive plants, efficient irrigation, and low-flow fixtures.

The existing project site includes approximately 55,475 square feet of impervious surfaces and approximately 4,600 square feet of pervious surfaces. The proposed project would result in a net increase in impervious surface coverage of approximately 362 square feet compared to existing conditions, for a total of 55,837 square feet of impervious surface and 4,238 square feet of pervious surface.

The on-site stormwater would be collected, treated per C.3 treatment methods and conveyed to the City's storm drain main within Jefferson Drive. The proposed project would decrease the amount of landscaping and pervious surface area on-site as noted above.

Demolition, Grading and Construction

The proposed project would include demolition of the existing building and surface parking lot on the project site. Construction debris, such as old foundations, pavements, and the structure, would be collected and hauled off site for disposal. Approximately 5,400 cubic yards of demolition waste would be generated by the proposed project.

Approximately 5,000 cubic yards of soils are anticipated to be imported to the site to raise the grade to meet Federal Emergency Management Agency (FEMA) requirements. Foundation footings may extend up to 4 feet below grade.

If approved, construction of the proposed project is anticipated to begin in October 2021. The proposed project would include phased construction, which would consist of a two-month demolition phase, a three-month grading phase, and approximately 24 months of building construction. Overall, construction of the proposed project is anticipated to last approximately 29 months, and is anticipated to be fully operational and occupied by early 2024.

9. Surrounding Land Uses and Setting:

The project site is located in the northern area of the City, within the Bayfront Area near Bedwell Bayfront Park and the Bay. The Bayfront Area is generally bounded by US 101, the Bay, and the County of San Mateo, Redwood City, and East Palo Alto. The site is generally surrounded by a mix of uses, including older buildings and new construction, as depicted in Figure 1-2 and further described below. Figure 1-14 and Figure 1-15 include photos of surrounding land uses; refer to Figure 1-4 for photo viewpoint locations.

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Photo 3: Synergy Badminton Club, as seen from Constitution Drive, north of the project site

Photo 4: Light industrial buildings east of the project site, as seen from Jefferson Drive

LSA

FIGURE 1-14

Menlo Flats Project Initial Study
Photos of Surrounding Land Uses

SOURCE: LSA, 2020

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Photo 5: Facebook Campus Entrance, as seen from Jefferson Drive, south of the project site

Photo 6: Light industrial building west of the project site, as seen from Jefferson Drive

LSA

FIGURE 1-15

Menlo Flats Project Initial Study
Photos of Surrounding Land Uses

SOURCE: LSA, 2020

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- **North of the Project Site.** The project site is currently bordered to the north by the Synergy Badminton Club (Photo 3), as well as additional office and light industrial uses. The City has received a development application which, if approved, would result in construction of an approximately 483-unit apartment and townhome development within three buildings for the neighboring parcels located at 180 through 186 Constitution Drive to the north of the site and 141 Jefferson Drive to the west. Further north is Constitution Drive, beyond which are office and industrial uses and SR-84.

- **East of the Project Site.** The project site is bordered to the east by two single-story light industrial buildings (Photo 4). Further east of the project site is the east-west segment of Jefferson Drive that intersects with Constitution Drive to the north and the Facebook campus, discussed below.

- **South of the Project Site.** The project site is bordered immediately to the south by the north-south segment of Jefferson Drive. Across Jefferson Drive is the Facebook campus (Photo 5), consisting of approximately 14 buildings along SR 84, begins approximately 0.1 mile south of the project site. Union Pacific Railroad (UPRR) tracks, commonly referred to as the Dumbarton Rail corridor, are also located just south of the Facebook campus. Across the UPRR tracks and approximately 0.6 mile south of the site is the Belle Haven residential neighborhood, which is generally occupied by single family residences.

- **West of the Project Site.** The project site is bordered immediately to the west by a single-story light industrial building at 155 Jefferson Drive (Photo 6). Further east of the project is the 141 Jefferson Drive parcel, discussed above, as well as additional commercial uses and Chrysler Drive.

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

A number of permits and approvals would be required to allow development of the proposed project. As lead agency for consideration of the proposed project, the City of Menlo Park would be responsible for the majority of the approvals required for project development. Other agencies also may have some authority related the proposed project and its approvals. A list of required permits and approvals, including the discretionary actions described above, which may be required by the City and other agencies, is provided in Table 1.A.

Table 1.A: Anticipated Permits and Approvals for Project Implementation

Lead Agency	Permit/Approval
City of Menlo Park	● EIR Certification ● Adoption of Findings and Statement of Overriding Considerations (if required) ● Use Permit ● Architectural Control ● Heritage Tree Removal Permit ● Below Market Rate Housing Agreement ● Building Permit ● Encroachment Permit
Responsible Agencies	
Pacific Gas & Electric (PG&E)	● Undergrounding of electrical infrastructure ● Approval of electric improvements and connection permits
California Department of Transportation (Caltrans)	● Review of traffic circulation effects and consultation on potential traffic improvements that may affect state highway facilities, ramps, and intersections
California Department of Toxic Substances Control (DTSC)	● Approval of Environmental Site Management Plan
California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program	● Approval of National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharge ● Approval of Environmental Site Management Plan
City/County Association of Governments	● Review of potential effects on Routes of Regional Significance
Bay Area Air Quality Management District (BAAQMD)	● Permits for onsite generators, boilers, and other utility equipment
San Mateo County Transportation Authority	● Review of potential effect on public transit
San Mateo County Environmental Health Division	● Review of onsite generators
Menlo Park Fire Protection District	● Residential Site Plan, onsite generators, and other equipment review
West Bay Sanitary District (WBSD)	● Approval of wastewater hookups

Source: LSA (2020).

There will be a fiscal impact analysis conducted regarding the project. In order to qualify for bonus-level development within the R-MU-B zoning district, the proposed project will also be required to complete an appraisal process to identify the value of the community amenities to be provided in exchange for the opportunity to develop at the bonus level. The project sponsor's community amenity proposal is subject to review and approval by the Planning Commission and/or City Council.

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.?

A request form describing the proposed project was sent to the Native American Heritage Commission (NAHC) in West Sacramento requesting a list of tribes eligible to consult with the City, pursuant to Public Resources Code section 21080.3.1. On September 18, 2020, the NAHC responded

in a letter with a list of tribal contacts. The City sent a letter providing the opportunity for consultation pursuant to Assembly Bill 52 (AB 52) for the project to these individuals. No requests for consultation have been received to date.

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2.0 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/Planning	☐ Mineral Resources
☒ Noise	☒ Population/Housing[16]	☐ Public Services
☐ Recreation	☒ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

2.1 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.

Payal Bhagat

Payal Bhagat, Consulting Planner

November 16, 2020
Date

[16] Because the proposed project is a housing project, it is not anticipated to have potentially significant impacts on population and housing; however, this topic area is being identified to comply with the settlement agreement.

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3.0 CEQA ENVIRONMENTAL CHECKLIST

3.1 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?	☐	☐	☒	☐

Pursuant to Public Resources Code Section 21099(d)(1), aesthetic impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. A transit priority area is an area within one-half mile of a major transit stop, which is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

The nearest public transit stop to the project site is served by SamTrans Route 270 and is located approximately 0.7 mile to the west on Haven Avenue. Route 270 operates on an hourly timetable and provides access to the Redwood City Transit Center, located approximately 4.5 miles northwest of the site. The Atherton Caltrain Station is located approximately 2.8 miles south of the site; however, direct local public transit service to this station is not provided within the vicinity of the site. Facebook is currently constructing a new bus stop to serve the Chilco Campus at 180-200 Jefferson Drive, a few blocks from the project site; however, this bus stop serves buses and trams used by Facebook employees only and does not provide public transit service. Therefore, the project site is not within a transit priority area.

Although the proposed project is a mixed-use development located on an infill site, because the project is not located within a transit priority area, the proposed project's potential impacts related to aesthetics are discussed below.

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

As stated in the ConnectMenlo Final EIR (page 4.1-9), scenic corridors are considered public views as seen along a linear transportation route and scenic vistas are views of a specific scenic feature. Scenic vistas are generally interpreted as long-range views, while scenic corridors are short-, middle- and long-range views. The City has not designated any official scenic corridors or vistas. However, the ConnectMenlo Final EIR considered views of the Santa Cruz Mountain Range, views to the Bay, and views of the foothills and San Francisquito Creek within the city as scenic vistas.

The ConnectMenlo Final EIR determined that due to the natural topography and location of the Bayfront Area at the city's northern border, the far-field views of the Santa Cruz Mountain Range, foothills, and San Francisquito Creek would not be impacted by new development occurring within the Bayfront Area. Potential building heights in the Bayfront Area, where the project site is located, could block views of the Bay and its scenic resources from various vantage points. Because the topography in the Bayfront Area is essentially flat, the views from street-level to the scenic resources are currently inhibited by existing conditions such as buildings, structures, overhead utilities, and mature trees/vegetation. The ConnectMenlo Final EIR determined that even before the height increases permitted by ConnectMenlo, the opportunity for views of scenic vistas from street-level public viewing areas was limited. Therefore, the height increases permitted with ConnectMenlo would not cause any further substantial obstruction from the street-level view to any scenic resource.

The developed parcels in the Bayfront Area are not considered public Bay-viewing destination points. Public Bay-viewing destination points include the Bayfront Expressway and the San Francisco Bay Trail. No new development is planned between the Bay and these viewing points; thus, no obstruction of views would occur under ConnectMenlo. Furthermore, potential future development would be subject to the City's existing architectural control process, in accordance with Section 16.68.020 of the Zoning Ordinance, and would be required to comply with existing design standards outlined in the Zoning Ordinance. The design standards, which apply to all new construction, ensure development results in high-quality design.

Because the project site is located within a developed portion of the Bayfront Area and does not provide public views of the Bay, and because the proposed project would be subject to the City's existing architectural control process, the proposed project would have a ***less-than-significant*** impact on scenic vistas and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted in the ConnectMenlo Final EIR (page 4.1-14), the section of Interstate 280 (I-280) within the city is considered a State scenic highway. However, the Bayfront Area is not located within the viewshed of I-280 and development in the Bayfront Area, as identified in the ConnectMenlo EIR, would have a less-than-significant impact.

Because the project site is located in the Bayfront Area, the proposed project would have a less-than-significant impact on scenic resources and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR. In addition, the existing building on the project site was built in 1964 and is not considered to be a historic resource, as noted in Section 3.5, Cultural Resources. Therefore, this impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 ConnectMenlo Final EIR (pages 4.1-15 to 4.1-16) determined that future development occurring under ConnectMenlo would create a shift in uses in the Bayfront Area from light industrial and business park to office, technology, research and development, life sciences and mixed-use with multi-family residential and commercial, and involve notable changes in building intensity and height from 35 feet to 120 feet. However, given the existing commercial, industrial, and residential uses surrounding the areas of potential new growth, the development of future projects would continue to be compatible with the existing visual character and quality of the Bayfront Area and its surroundings.

The proposed project would consist of an eight-story mixed-use building within the Bayfront Area with a maximum height of 84 feet, 11 inches. As noted above, the proposed project would be subject to the City's existing architectural control process, which would ensure the proposed project complies with the existing design standards outlined in the Zoning Ordinance. Therefore, the proposed project would have a ***less-than-significant*** impact related to existing visual character or quality of public views and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As stated in the ConnectMenlo Final EIR (pages 4.1-16 to 4.1-17), the City contains many existing sources of nighttime illumination. These include street and parking area lights, security lighting, and exterior lighting on existing residential, commercial, and institutional buildings. Additional onsite light and glare is caused by surrounding land uses and traffic, specifically from US 101 and the Bayfront Expressway in the Bayfront Area. In addition to new building, security, and lighting for parking areas, buildout of the Bayfront Area would also include lighting aimed at properly illuminating the overall Bayfront Area. Additionally, new larger buildings with more exterior glazing could result in new sources of glare.

New development in the Bayfront Area, including the proposed project, would be required to comply with General Plan policies that ensure new land uses do not generate excessive light levels that would spill on to adjacent sensitive receptors and reduce light and glare spillover from future development to surrounding land uses.

Specifically, Policy LU-2.3 requires that new development with residential units address potential compatibility issues such as light spillover. The proposed project would be required to comply with this policy as part of the site plan review and architectural control process. Therefore, the proposed project would have a ***less-than-significant*** impact related to substantial light or glare and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.2 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 Dept. 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. 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))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. 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 ConnectMenlo Final EIR (page 6-1) determined that impacts related to the conversion of farmland to non-agricultural uses would not occur. There are no agricultural resources located on or near the project site. The project site is classified as "Urban and Built-Up land" by the State

Department of Conservation[17] and, as identified in the ConnectMenlo Final EIR, there are no agricultural resources located on or near the project site.

The physical conditions on and in the vicinity of the site related to agricultural resources have not changed since certification of the ConnectMenlo Final EIR. Development of the proposed project would not convert agricultural land to non-agricultural uses, would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or result in new or more severe impacts beyond those examined in the ConnectMenlo Final EIR. Therefore, the proposed project would have ***no impact*** related to the conversion of farmland.

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

The ConnectMenlo Final EIR (page 6-1) determined that impacts related to existing zoning for agricultural uses or Williamson Act contracts would not occur. The project site is within the R-MU-B zoning district and is not under a Williamson Act contract.[18] The physical conditions on and in the vicinity of the site related to agricultural resources have not changed since certification of the ConnectMenlo Final EIR. Development of the proposed project would not conflict with existing zoning for an agricultural use or a Williamson Act contract and would not result in new or more severe impacts beyond those examined in the ConnectMenlo Final EIR. Therefore, the proposed project would have ***no impact*** related to agricultural uses or Williamson Act contracts***.***

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 ConnectMenlo Final EIR (page 6-1) determined that impacts related to existing zoning for forest land or timberland would not occur. The developed project site is located within an urban area of Menlo Park and is within the City's R-MU-B zoning district. The physical conditions on and in the vicinity of the site related to forest land and timberland resources have not changed since certification of the ConnectMenlo Final EIR. Development of the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland and would not result in new or more severe impacts beyond those examined in the ConnectMenlo Final EIR. Therefore, the proposed project would have ***no impact*** related to forest land and timberland resources.

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

Refer to Section 3.2.c. The proposed project would not result in the loss of forest land or conversion of forestland to non-forest uses and would not result in new or more severe impacts beyond those

[17] California Department of Conservation. 2016. California Important Farmland Finder (map). Website: maps.conservation.ca.gov/dlrp/ciff (accessed September 2020).

[18] California Department of Conservation. 2012. *San Mateo County Williamson Act FY 2006/2007 (map)*. Available online at: ftp.consrv.ca.gov/pub/dlrp/wa (accessed October 2019).

examined in the ConnectMenlo Final EIR. Therefore, the proposed project would have ***no impact*** related to the loss 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 3.2.a and 3.2.c. The project site is located within an existing urban environment and would not result in the extension of infrastructure into an undeveloped area, the development of urban uses on a previously undeveloped greenfield site, or other physical changes that would result in the conversion of farmland to non-agricultural uses or forest land to non-forest uses. The proposed project would not adversely affect agricultural or forestry resources and would not result in new or more severe impacts beyond those examined in the ConnectMenlo Final EIR. Therefore, the proposed project would have ***no impact*** related to agricultural or forestry resources.

3.3 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. through c. ***(Potentially Significant Impact)***

The ConnectMenlo Final EIR found that future development would result in a substantial long-term increase in criteria air pollutants. The ConnectMenlo Final EIR identified Mitigation Measures AQ-2a, AQ-2b, and AQ-2b2 (page 4.2-41 to 4.2-42), which require a technical assessment evaluating potential project operation- and construction phase-related air quality impacts and compliance with the Bay Area Air Quality Management District's (BAAQMD) basic control measures for reducing construction emissions. In addition, based on the proposed project's location in proximity to US 101, Marsh Road, and SR 84, and consistent with the requirements of Mitigation Measure AQ-3b from the ConnectMenlo Final EIR, a health risk assessment is required. These assessments will be completed as part of the EIR; therefore, this impact is ***potentially significant***.

As noted in Section 3.17, a transportation evaluation will be prepared. This evaluation may identify new or more significant impacts related to transportation, and therefore air quality, than were previously analyzed in the ConnectMenlo Final EIR. Development activity associated with implementation of the proposed project could increase pollutant concentrations in Menlo Park through increased vehicle trips and construction. This increase could contribute to existing air pollution in the San Francisco Bay Area Air Basin and has the potential to exceed regional air emission thresholds established by the BAAQMD. Construction activities associated with project development, including building demolition, grading, and ground disturbance, could increase concentrations of particulate matter and could expose sensitive receptors to toxic air contaminants. Therefore, the criteria identified above for topics 3.a through 3.c are ***potentially significant*** and will be evaluated in an EIR. The EIR will recommend appropriate mitigation measures, if necessary.

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

The ConnectMenlo Final EIR concluded that buildout potential analyzed under ConnectMenlo could include potential odor sources that could affect new sensitive receptors, such as composting, greenwaste, and recycling operations; food processing; and painting/coating operations. Responses to odors are subjective, and vary by individual and type of land use. Residential and office uses are not included in Table 4.2-9 of the ConnectMenlo Final EIR (page 4.2-51), which lists uses that could be required to undergo environmental review to ensure sensitive land uses are not exposed to objectionable odors, and the proposed project would not be a source of odors. Therefore, the proposed project would not result in other emissions, such as those leading to odors, that would adversely affect a substantial number of people, and this impact would be ***less-than-significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.4 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 Wildlife 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 Wildlife 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?	☐	☐	☐	☒

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 Wildlife or U.S. Fish and Wildlife Service? ***(Less-Than-Significant Impact)***

The ConnectMenlo Final EIR (pages 4.3-19 to 4.3-23) determined that the potential for occurrence of special-status species in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known to occur in the Menlo Park vicinity. ConnectMenlo included goals, policies, and programs and bird-safe regulations for the Bayfront Area that would help protect special-status species and birds and minimize impacts.

The project site is currently developed and does not include any sensitive habitat, nor is it located near any sensitive habitats, and therefore a project-specific baseline biological resources assessment pursuant to Mitigation Measure BIO-1 from the ConnectMenlo Final EIR would not be required.

In addition, the proposed project would be required to comply with the bird-safe design measures included in the building regulations for the Bayfront Area. Therefore, the proposed project would not result in direct or indirect adverse effects on special-status plant or wildlife species, this impact would be ***less than significant***, and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 Wildlife or U.S. Fish and Wildlife Service? ***(Less-Than-Significant Impact)***

As stated in the ConnectMenlo Final EIR (pages 4.3-24 to 4.3-24), sensitive natural communities within the city consist of areas of coastal salt marsh vegetation in the baylands, native valley oaks in Saint Patrick's Seminary, and possibly areas of riparian scrubs and woodland along San Francisquito Creek and other drainages. The project site is currently developed and is not located within or in the immediate vicinity of one of these areas, and therefore would have a ***less-than-significant*** impact related to riparian habitat and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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? ***(Less-Than-Significant Impact)***

The ConnectMenlo Final EIR (page 4.3-26) determined that development could have a significant adverse effect on wetlands by allowing development on previously undeveloped parcels in the Bayfront Area with mapped wetlands, which are along University Avenue. The project site is currently developed and does not support any federally protected wetlands. Compliance with all applicable requirements associated with the protection of water quality in stormwater runoff would further ensure that there are no impacts to wetlands within or beyond the Bayfront Area as a result of the proposed project. Compliance with stormwater quality requirements is discussed in Section 3.10, Hydrology and Water Quality, of this Initial Study. Therefore, the proposed project would have a ***less than significant*** impact related to wetlands and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

The ConnectMenlo Final EIR (page 4.3-27) determined that development and land use activities consistent with ConnectMenlo would result in a reduction in the remaining natural habitat within the city. However, most wildlife in these areas are already acclimated to human activity in the urbanized portions of the city. As noted above, the project site is currently developed and does not contain, nor is it located near, any sensitive habitats. Ornamental landscaping and trees located throughout the project site would be removed. Vegetation and landscaping generally have the potential to support nests of common native bird species. All native birds and their nests, regardless of their regulatory status, are protected under the federal Migratory Bird Treaty Act and California Fish and Game Code.

However, because the project site is located in a busy urban area and vegetation on the project site is limited, potential impacts to nesting birds would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(Less-Than-Significant Impact)***

There are a total of approximately 11 existing trees on the project site, 4 of which are considered Heritage Trees, as defined by the City's Municipal Code.[19] All existing trees on the site would be removed with the proposed project. The City's Tree Preservation Ordinance requires a permit to remove protected trees and replacement of protected trees at a 2:1 ratio. The proposed project would include the planting of a minimum of 8 new trees; therefore, the proposed project would not conflict with the City's Tree Preservation Ordinance. Since the applicant submitted a complete development permit application and associated heritage tree removal permit application in compliance with the requirements of Senate Bill 330 (SB 330), the proposed tree removals are being reviewed in compliance with the Heritage Tree Ordinance that was in effect prior to July 1, 2020. In addition, the proposed project would include the installation of new landscaping that would comply with Municipal Code Chapter 12.44, Water-Efficient Landscaping, and therefore would not conflict with any local policies or ordinances protecting biological resources. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted in the ConnectMenlo Final EIR (pages 4.3-27 to 4.3-28), portions of the City are within the Stanford University Habitat Conservation Plan (Stanford HCP).[20] However, the Stanford HCP only applies to land owned by Stanford University. The project site is not owned by Stanford University, and therefore is not located within the boundaries of an adopted conservation plan. Therefore, the proposed project would not conflict with the provisions of a habitat conservation plan, natural community plan or other approved local, regional or State habitat conservation plan. There would be ***no impact*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

[19] Hort Sceince | Barlett Consulting. 2020. op. cit.

[20] Stanford University. 2015. *Stanford University Habitat Conservation Plan*. December 22.

3.5 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 Impact)***

As noted in the ConnectMenlo Final EIR (pages 4.4-12 to 4.4-15), the two main categories of historical resources that are subject to adverse impacts, and that may be adversely affected by development allowed under ConnectMenlo, are historical archaeological deposits and historical architectural resources. Refer to Section 3.5.b, below for a discussion of archaeological deposits.

There are several recognized historic properties within the city; however, none of these are located within the Bayfront Area, where the project site is located. The ConnectMenlo Final EIR Mitigation Measure CULT-1 requires site-specific historic resources evaluations for individual projects that are proposed on sites with a building more than 50 years old or any site adjoining with a building more than 50 years old. The existing building on the project site was constructed in 1964, and therefore meets the 50-year-old threshold. A Historic Resources Assessment prepared for the project site determined that the building does not appear to be eligible for listing in the National Register of Historical Places or the California Register of Historical Resources.[21] In addition, adjoining properties include buildings that are 50 years or older; however, as noted above, none of the recognized historic properties within the City are located within the Bayfront Area or within the immediate project vicinity. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5 and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR; therefore, this impact would be ***less than significant***.

*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)***

The ConnectMenlo Final EIR (pages 4.4-16 through 4.4-18) determined that it is highly improbable that archaeological deposits associated with the historic period of Menlo Park and Native American prehistoric archeological sites exist on the locations identified for future development, because

[21] Menlo Park, City of. 2020a. *Request for Evaluation for Potential Historic Significance, 165 Jefferson Drive.* July 23.

these locations are concentrated on sites either already developed, and/or in close proximity to existing development, where development will have a lesser impact on historical archeological resources.

However, future projects that require substantial excavation reaching significant depths below the ground surface could result in the disturbance of unidentified subsurface materials that have the potential to contain prehistoric archaeological resources, including unrecorded Native American prehistoric archaeological sites and this is a ***potentially significant*** impact.

The ConnectMenlo Final EIR identified Mitigation Measure CULT-2a, which is presented below, to ensure this impact would be reduced to a less-than-significant level.

> **Connect Menlo Final EIR Mitigation Measure CULT-2a:** If a potentially significant subsurface cultural resource is encountered during ground disturbing activities, all construction activities within a 100-foot radius of the find shall cease until a qualified archeologist determines whether the resource requires further study. All developers in the study area shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of the CEQA criteria by a qualified archeologist. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also perform appropriate technical analyses; prepare a comprehensive report complete with methods, results, and recommendations; and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Menlo Park, Northwest Information Center (NWIC), and State Historic Preservation Office (SHPO), if required.

With implementation of ConnectMenlo Mitigation Measure CULT-2a, impacts to archaeological deposits would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

*c. Would the project disturb any human remains, including those interred outside of formal cemeteries? **(Less-Than-Significant with Mitigation Incorporated)***

The ConnectMenlo Final EIR (page 4.4-20) determined that human remains associated with pre-contact archaeological deposits could exist within the City and could be encountered at the time potential future development occurs. The associated ground-disturbing activities, such as site grading and trenching for utilities, have the potential to disturb human remains interred outside of formal cemeteries and therefore this is a ***potentially significant*** impact.

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e), which state the mandated procedures of conduct following the discovery of human remains. The ConnectMenlo Final EIR

identified Mitigation Measure CULT-4, which is presented below, to ensure this impact would be reduced to a less-than-significant level.

> **Connect Menlo Final EIR Mitigation Measure CULT-4:** Procedures of conduct following the discovery of human remains have been mandated by Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (CEQA). According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

With implementation of ConnectMenlo Mitigation Measure CULT-4, impacts to pre-contact human remains would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.6 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)***

Energy conservation was evaluated in Section 4.14.5 of the ConnectMenlo Final EIR (pages 4.14-67 through 4.14-81), consistent with CEQA Guidelines Appendix F. The ConnectMenlo Final included a brief discussion of energy use and conservation, including consideration of the City's Climate Change Action Plan. The ConnectMenlo Final EIR determined that development pursuant to ConnectMenlo would be subject to new requirements under rule making developed at the State and local level regarding greenhouse gas (GHG) emissions. Specifically, the ConnectMenlo Final EIR found that individual projects would be required to adhere to the Heavy Duty National Program, which has been adopted by the United States Environmental Protection Agency (USEPA). The Heavy Duty National Program establishes fuel efficiency and GHG emission standards in the heavy-duty highway sector, which include combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). In addition, as required by Mitigation Measure AQ-2b1 in the ConnectMenlo Final EIR, individual development projects would be required to comply with the current BAAQMD's basic control measures for reducing construction emissions, which would also improve the energy efficiency of the project during construction.

The ConnectMenlo Final EIR determined that new development pursuant to ConnectMenlo would be constructed using energy efficient modern building materials and construction practices, in accordance with the CALGreen Building Code, the California Public Utility Commission's Long Term Energy Efficiency Strategic Plan, and Chapter 12.18 of the Menlo Park Municipal Code which contains the Green Building Ordinance. In addition, the ConnectMenlo Final EIR found that new buildings would also use new modern appliances and equipment, in accordance with the 2006 Appliance Efficiency Regulations.

As discussed in the ConnectMenlo Final EIR, implementation of ConnectMenlo inherently furthers objectives of energy conservation by focusing activities in areas of existing infrastructure and services. In addition, the Land Use, Circulation, and Open Space/Conservation elements of ConenctMenlo contain goals, policies, and programs that would require local planning and development decisions to consider impacts to energy resources.

As a part of ConnectMenlo, all new building within the Bayfront Area are required to comply with specific green building requirements for LEED certification, provide outlets for Electric Vehicle (EV) charging, provide on-site renewable energy generation, and enroll in the USEPA's Energy Star Building Portfolio Manager.

Similar to buildout of ConnectMenlo, the proposed project would increase the demand for energy during construction of the proposed project and would increase the demand for electricity and gasoline during operation of the proposed project. The proposed project would not increase the demand for natural gas as the City's reach codes would require the buildings to be all electric. The discussion and analysis provided below is based on data included in the California Emissions Estimator Model (CalEEMod) output, which is included in Appendix B.

The anticipated construction schedule assumes that the proposed project would be built over 29 months. The proposed project would require demolition, 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 project. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. In order to increase energy efficiency on the site during project construction, equipment idling times would be restricted to 5 minutes or less and construction workers would be required to shut off idle equipment, consistent with ConnectMenlo Final EIR Mitigation Measure AQ-2b1. In addition, 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, construction energy impacts would be less than significant and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Similar to buildout of ConnectMenlo, energy use consumed during operation of the proposed project would be associated with electricity consumption and fuel used for vehicle trips associated with the proposed project. Although the proposed project would include the installation of a 300kW generator, this equipment would only be used in case of an emergency to provide electrical services to project residents. Energy consumption was estimated for the proposed project using default energy intensities by building type in CalEEMod. In addition, the proposed buildings would be constructed to current CALGreen standards, which was included in CalEEMod inputs. Electricity usage estimates associated with the proposed project are shown in Table 3.A.

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 2,117,288 vehicle miles traveled (VMT) per year.[22]

[22] It should be noted that a Transportation Impact Analysis (TIA) will be prepared as part of the EIR. The TIA and EIR may include a refined estimate of VMT; however, any variation in estimated VMT would not affect the analysis or conclusions related to energy as presented in this section.

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 22.0 mpg in 2015.[23] Therefore, using the USEPA fuel economy estimates for 2015, the proposed project would result in the consumption of approximately 96,240 gallons of gasoline per year. Table 3.A below, shows the estimated potential increased electricity and gasoline demand associated with the proposed project.

Table 3.A: Estimated Annual Energy Use of Proposed Project

Land Use	Electricity Use (kWh per year)	Gasoline (gallons per year)
Residential	488,004	68,614
Retail	82,998	27,626
Parking Structure	46,303	0
Open Space	0	0
Total	**617,305**	**96,240**

Source: LSA (September 2020).

As shown in Table 3.A, the estimated potential increased electricity demand associated with the proposed project is 617,305 kilowatt-hours (kWh) per year. In 2018, California consumed approximately 284,436 gigawatt-hours (GWh) or 284,436,261,624 kWh.[24] Of this total, San Mateo County consumed 4,254 GWh or 4,254,640,150 kWh.[25] Therefore, electricity demand associated with the proposed project would only be approximately 0.01 percent of San Mateo County's total electricity demand.

In addition, the proposed project would result in energy usage associated with gasoline to fuel project-related trips. As shown above in Table 3.A, vehicle trips associated with the proposed project would consume approximately 96,240 gallons of gasoline per year. In 2015, vehicles in California consumed approximately 15.1 billion gallons of gasoline.[26] Therefore, gasoline demand generated by vehicle trips associated with the proposed project would be a minimal fraction of gasoline and diesel fuel consumption in California.

Consistent with ConnectMenlo requirements, the proposed project would comply with specific green building requirements for LEED certification, provide outlets for EV charging, provide on-site renewable energy generation, enroll in the USEPA's Energy Star Building Portfolio Manager, use new

[23] U.S. Department of Transportation. "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.gov/archive/publications/national_transportation_statistics/table_04_23/ (accessed September 2020).

[24] California Energy Commission. 2018. Energy Consumption Data Management Service. Electricity Consumption by County. Available online at: http://www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed September 2020).

[25] Ibid.

[26] California Energy Commission. 2017. California Gasoline Data, Facts, and Statistics. Available online at: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics (accessed September 2020).

modern appliances and equipment, and comply with current CALGreen standards, which would help to reduce energy consumption.

The proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. Therefore, construction and operation period impacts related to consumption of energy resources would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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

As previously stated, the proposed project would be required to comply with the CALGreen Code, which includes provisions related to insulation and design aimed at minimizing energy consumption. In addition, as described in the ConnectMenlo Final EIR, new development as envisioned in ConnectMenlo would be constructed using modern and energy efficient building materials and construction practices, in accordance with the CALGreen Building Code, the California Public Utility Commission's Long Term Energy Efficiency Strategic Plan, and Chapter 12.18 of the Menlo Park Municipal Code, which contains the Green Building Ordinance. In addition, the ConnectMenlo Final EIR found that new buildings would also use new modern appliances and equipment, in accordance with the 2006 Appliance Efficiency Regulations.

As discussed in the ConnectMenlo Final EIR (page 4.14-77), implementation of ConnectMenlo inherently furthers objectives of energy conservation by focusing activities in areas of existing infrastructure and services. In addition, the Land Use, Circulation, and Open Space/Conservation elements of ConnectMenlo contain goals, policies, and programs that would require local planning and development decisions to consider impacts to energy resources. As a part of ConnectMenlo, all new buildings within the Bayfront Area are required to comply with specific green building requirements for LEED certification, provide outlets for EV charging, provide on-site renewable energy generation, and enroll in the USEPA's Energy Star Building Portfolio Manager.

The ConnectMenlo Final EIR also found that future development under ConnectMenlo, as part of the City's project approval process, would be required to comply with existing regulations, including General Plan policies and Zoning Ordinance regulations that have been prepared to promote energy conservation and efficiency by implementing sustainable building practices and reducing automobile dependency. Furthermore, the ConnectMenlo Final EIR found that with continued implementation of the City's Climate Action Plan (CAP), compliance with the CALGreen Building Code, and the other applicable State and local energy efficiency measures cited above, significant energy conservation and savings would be realized from future development under ConnectMenlo.

In addition, as discussed in the ConnectMenlo Final EIR, as infill development, ConnectMenlo inherently furthers objectives of energy conservation related to transportation by focusing activities in areas of existing infrastructure and services. Transportation features that are priorities of ConnectMenlo promote non-motorized transportation within and to anticipated development within the Bayfront Area, as well as city-wide, thereby potentially reducing energy consumption that would otherwise be related to motorized vehicle use (i.e., automobiles).

Consistent with ConnectMenlo requirements, the proposed project would comply with specific green building requirements for LEED certification, provide outlets for electric vehicle charging, provide on-site renewable energy generation, enroll in the USEPA's Energy Star Building Portfolio Manager, use new modern appliances and equipment, and comply with current CALGreen standards, which would help to reduce energy consumption. The proposed project would also be consistent with the ConnectMenlo energy conservation policies, as noted above, and the City's CAP by complying with specific green building requirements for LEED certification, providing outlets for EV charging, and enrolling in the USEPA's Energy Star Building Portfolio Manager. In addition, the project site consists of an infill site in an urban area and the proposed project would provide residential uses to help balance high job-generating uses in the project vicinity.

The proposed project would also implement Transportation Demand Management (TDM) measures, which would help reduce transportation energy usage consistent with ConnectMenlo requirements.

In addition, as indicated above, energy usage on the project site during construction would be temporary in nature and energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. 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 energy conservation plans. Thus, as shown above, the proposed project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and would not result in any irreversible or irretrievable commitments of energy. Therefore, the proposed project would be consistent with applicable plans related to renewable energy and energy efficiency. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.7 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?	☐	☒	☐	☐

The information presented in this section is based on data and findings provided in the Preliminary Geotechnical Investigation[27] prepared for the project site, unless otherwise noted.

[27] Rockridge Geotechnical, Inc. 2018. *Preliminary Geotechnical Investigation to Support Due Diligence Evaluation, Menlo Flats, 165 Jefferson Drive, Menlo Park, California.* December 19.

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. ii. Strong seismic ground shaking? iii.Seismic-related ground failure, including liquefaction? iv. Landslides? ***(No Impact)***

The California Supreme Court concluded in its *CBIA vs. BAAQMD* decision that "CEQA generally does not require an analysis of how existing environmental conditions will affect a project's future users or residents." With this ruling, CEQA no longer considers the impact of the environment on a project (such as the impact of existing seismic hazards on new project occupants) to be an environmental impact, unless the project could exacerbate an existing environmental hazard. The proposed project would not change or exacerbate existing seismic hazards and, therefore, would not exacerbate existing hazards related to surface fault rupture and seismic ground shaking. As such, the following discussions of seismic hazards related to surface fault rupture and seismic ground shaking are provided for informational purposes only.

Fault Rupture. Surface fault rupture occurs when the ground surface is broken due to fault movement during an earthquake. Fault rupture is generally expected to occur along active fault traces.

Areas susceptible to fault rupture are delineated by the California Geological Survey Alquist-Priolo Earthquake Fault Zones and require specific geological investigations prior to development to reduce the threat to public health and safety and to minimize the loss of life and property posed by an earthquake-induced ground failure.

The ConnectMenlo Final EIR (page 4.5-9) determined that no Alquist-Priolo Earthquake Fault Zones have been mapped within the Bayfront Area. There are no mapped faults going through or adjacent to the project site, and the project site is not located within an Earthquake Fault Zone. The closest active fault to the project site is the Monte Vista-Shannon Fault, which is located approximately 5.2 miles southwest. Therefore, the proposed project would have ***no impact*** related to fault rupture and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Ground Shaking. 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.

In the future, the proposed project would likely experience severe ground shaking during moderate and large magnitude earthquakes produced along the San Andreas Fault or other active Bay Area fault zones. Using information from recent earthquakes, improved mapping of active faults, ground motion modeling, and a new model for estimating earthquake probabilities, there is a 72 percent chance that at least one earthquake of Magnitude 6.7 or greater will occur in the Bay Area before

2043. The Hayward Fault, located approximately 13 miles northeast of the project site, has the highest likelihood of an earthquake greater than or equal to Magnitude 6.7 in the Bay Area, estimated at 14.3 percent.

The risk of ground shaking impacts is reduced through adherence to the design and materials set forth in building codes. The City of Menlo Park has adopted the 2019 California Building Code (Title 24, California Code of Regulations), which provides for stringent construction requirements on projects in areas of high seismic risk. The Preliminary Geotechnical Investigation prepared for the project site recommends seismic design parameters to be used in accordance with the 2019 California Building Code to account for earthquake ground motions.

As noted in the ConnectMenlo Final EIR (page 4.5-11), the design and construction for the proposed project is required to conform with, or exceed, current best standards for earthquake resistant construction in accordance with the most current California Building Code and with the generally accepted standards of geotechnical practice for seismic design in Northern California.

Seismic hazards cannot be completely eliminated, even with site-specific geotechnical investigation/design and advanced building practices. However, the seismic design standards of the California Building Code are intended to prevent catastrophic building failure in the most severe earthquakes currently anticipated. Therefore, compliance with current building codes would ensure that there would be ***no impact*** associated with ground shaking and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Seismic-Related Ground Failure and Liquefaction. The potential for different types of ground failure to occur during a seismic event is discussed below. As noted above, the ConnectMenlo Final EIR determined that compliance with existing regulations, including General Plan policies that have been prepared to minimize impacts related to strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landsliding, would ensure that impacts related to seismic-related ground failure and liquefaction would be less than significant. Because geotechnical and soil conditions can vary by geographic location, a site-specific analysis is presented below.

> ***Liquefaction.*** Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils lose strength and acquire a "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy. Based on testing at the project site, some of the fine grained soils encountered with a low plasticity may be prone to liquefaction settlement. Total settlement that could occur at the ground surface as a result of liquefaction is estimated to range from approximately 0.25 to 1.25 inches.
>
> The Preliminary Geotechnical Investigation provided a preliminary recommendation that the proposed buildings be supported on a shallow foundation system bearing on a ground improvement system. Final grading, foundation, and building plans must be designed in accordance with the California Building Code, which requires preparation of and compliance with the recommendations of a site-specific geotechnical investigation. These designs would

include measures that would address the potential for differential settlement related to liquefaction. Therefore, compliance with the California Building Code would ensure that there would be ***no impact*** *as* the potential impacts associated with liquefaction would not occur and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Lateral Spreading. Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial soils are transported downslope or in the direction of a free face by earthquake and gravitational forces. There is the potential for lateral spreading to occur at the site due to the free-face slope approximately 800 feet north of the project site along the San Francisco Bay shoreline. However, the Preliminary Geotechnical Investigation determined that liquefiable layers appear to have sufficient cohesion and/or relative density to resist lateral spreading. Additionally, as noted above, final grading, foundation, and building plans must be designed in accordance with the California Building Code, which requires preparation of and compliance with the recommendations of a site-specific geotechnical investigation. These designs would include measures that would address the potential for ground failure related to lateral spreading. Therefore, compliance with the California Building Code would ensure that that there would be ***no impact*** as the potential impacts associated with liquefaction would not occur and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Surface Settlement. Settlement can occur when non-saturated, cohesionless soil is densified by earthquake vibrations. The fill and native soils above the ground water at the project site are typically composed of stiff to very stiff clays, and therefore the potential for settlement of these surface soils during a major earthquake is low. In addition, recompaction of any poorly-compacted or undocumented fills encountered during earthwork construction, as recommended by the Geotechnical Investigation, would further reduce the risk of differential compaction during a major earthquake. Therefore, the proposed project would have ***no impact*** related to surface settlement and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Landslides. Seismically-induced landslides occur as the rapid movement of large masses of soil on unstable slopes during an earthquake. The Seismic Hazard Zones mapped by the California Geological Survey (CGS) delineate areas susceptible to seismically-induced landslides that require additional investigation to determine the extent and magnitude of potential ground failure. According to CGS, the project site is not located within a Seismic Hazard Zone for seismically-induced landslides.[28] Therefore, the proposed project would have ***no impact*** related to landslides and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

[28] California Geological Survey, 2006. *Seismic Hazard Zones; Palo Alto Quadrangle.* October 18.

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

The Geotechnical Investigation does not identify topsoil on the project site. The project site is developed and has been mapped as an "urban land" area by the Natural Resources Conservation Service.[29] Areas designated as "urban land" have essentially no exposed soil and are covered by streets, parking lots, buildings, and other structures. The redevelopment of the project site would involve demolition and construction activities, such as grading and excavation, which could result in temporary soil erosion when the disturbed soils are exposed to wind or rainfall. However, this would be temporary and limited to the period of grading. Upon completion of construction, the project site would be covered with structures, pavement, and landscaping and would not include areas of exposed soil. In addition, the ConnectMenlo Final EIR determined that compliance with the City's Engineering Division's Grading and Drainage Control Guidelines would reduce the impacts from erosion and the loss of topsoil to the extent practicable (page 4.5-11). Therefore, the proposed project would result in ***less-than-significant*** impacts related to soil erosion or loss of top soil and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As previously discussed in Section 3.7.a, above, the soils at the project site are susceptible to liquefaction, seismically-induced settlement, and lateral spreading, but they are not susceptible to landslides. As noted in the ConnectMenlo Final EIR, the proposed project's required compliance with the California Building Code would reduce the potential risks to people and structures as a result of liquefaction, seismically-induced settlement, and lateral spreading to a ***less-than-significant*** level and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Subsidence. Subsidence or collapse can result from the removal of subsurface water resulting in either catastrophic or gradual depression of the surface elevation of the project site. Since the proposed project would connect to the Menlo Park Municipal Water (MPMW) water system, there would be ***no*** impact as groundwater extraction that could potentially result in subsidence is not expected on the project site and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Consolidation. Consolidation of soils is a process by which the soil volume decreases as water is expelled from saturated soils under static loads. As the water moves out from the pore space of the soil, the solid particles realign into a denser configuration that results in settlement. Consolidation typically occurs as a result of new buildings or fill materials being placed over compressible soils.

[29] Natural Resources Conservation Service. Web Soils Survey, USDA Mapping. Website: websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed September 2020).

Final grading, foundation, and building plans must be designed in accordance with the California Building Code. These designs would include foundation alternatives, such as conventional shallow spread footing foundations combined with ground improvement methods (e.g., Geopiers or drilled displacement columns) or deeper foundation options (e.g., auger-cast piles) to transfer structural building loads to deeper, dense supporting strata below the soft, compressible clay layers onsite. Therefore, compliance with the existing building codes would ensure that the potential impacts associated with consolidation would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 percent change of the soil volume.

The ConnectMenlo Final EIR determined that expansive soils are most prevalent in the neighborhoods that lie closest to the Bay (page 4.5-13). Testing at the project site determined that the near-surface soils encountered at the project site are highly expansive and subject to expansion and contraction during wetting/drying cycles.

As stated in the ConnectMenlo Final EIR, final grading, foundation, and building plans must be designed in accordance with the California Building Code. As noted in Section 3.7.a, the City has adopted the 2019 California Building Code, and the proposed project would be required to comply with the current code in effect, which includes the City's recently adopted reach code. Project designs would include measures to excavate the existing soils that are susceptible to expansion and either replace the materials with engineered fill or further evaluate the possible reuse of the materials as engineered fill.

Compliance with the existing building codes would ensure that the potential impacts associated with expansive soils would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

e. Would the project 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? ***(No Impact)***

The project site would be served by a wastewater conveyance system maintained by the West Bay Sanitary District (WBSD). Wastewater from the WBSD's collection system is conveyed to the Silicon Valley Clean Water (SVCW) Waste Water Treatment Plant (WWTP) in Redwood Shores. Development of the proposed project would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would have ***no impact*** related to septic tanks or alternative waste water disposal systems and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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

The ConnectMenlo Final EIR (pages 4.4-18 through 4.4-20) determined that no known fossils, unique paleontological resources, or unique geologic features are present within the study area; however, geological formations underlying Menlo Park have the potential for containing paleontological resources (i.e., fossils).[30] Demolition, site preparation, and construction activities would result in a ***potentially significant*** impact as excavation could reach significant depths below the ground surface where no such excavation has previously occurred and unrecorded fossils of potential scientific significance and other unique geologic features could exist.

The ConnectMenlo Final EIR identified Mitigation Measure CULT-3,[31] which is presented below, to ensure this impact would be reduced to a less-than-significant level.

> **ConnectMenlo Final EIR Mitigation Measure CULT-3:** In the event that fossils or fossil bearing deposits are discovered during ground disturbing activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a City-approved qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Menlo Park for review and approval prior to implementation, and all construction activity shall adhere to the recommendations in the excavation plan.

With implementation of ConnectMenlo Mitigation Measure CULT-3, impacts to paleontological resources would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

[30] Menlo Park, City of. 2016a. op. cit.

[31] In December 2018, after certification of the ConnectMenlo Final EIR, the CEQA Guidelines were revised. As a part of this revision, the consideration of impacts to paleontological resources was moved from Cultural Resources to Geology and Soils. For ease of reference, this document identifies Mitigation Measures consistent with their labelling in the ConnectMenlo Final EIR.

3.8 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?	☒	☐	☐	☐

a. and b. ***(Potentially Significant Impact)***

The ConnectMenlo Final EIR (pages 4.6-28 through 4.6-35) identified two significant and unavoidable impacts related to GHG emissions as a result of implementation of ConnectMenlo (Impact GHG-1 and GHG-2). The ConnectMenlo Final EIR identified Mitigation Measure GHG-1, which requires the City to update its Climate Action Plan (CAP) prior to January 1, 2020. However, because there were no post-2020 federal or State measures that would assist the City in achieving the efficiency target at the ConnectMenlo buildout year of 2040, these impacts remained significant and unavoidable.

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 carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site operation of the proposed project (i.e., residential-based trips, including commuting) would generate GHG emissions from area and mobile sources as well as indirect emissions from sources associated with energy consumption. As noted in Section 3.17, Transportation, a transportation evaluation of the proposed project will be prepared, which could indicate more significant impacts related to transportation, and therefore GHGs, than were previously analyzed in the ConnectMenlo Final EIR. Mobile-source GHG emissions would also include project-generated vehicle trips associated with activities such as landscaping and maintenance on the project site, and other sources. Therefore, the proposed project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and therefore could cause a ***potentially significant*** impact. The criteria identified above for topics 3.8.a and 3.8.b will be evaluated in the EIR. Mitigation measures for project-specific impacts will be recommended if necessary.

3.9 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)***

The proposed project includes the demolition of the existing structure and surface parking lot on the project site and the construction of a new mixed-use residential building and associated site improvements. The ConnectMenlo Final EIR (pages 4.7-18 through 4.7-21) determined that these types of land uses typically do not involve transport, use, or disposal of significant quantities of hazardous materials. Generally, small quantities of hazardous materials, such as paints, cleaning chemicals, and fertilizers would be used for routine maintenance and landscaping. Additionally, as noted in Section 1.0, Project Description, the proposed project would include a 300kW back-up generator. However, this generator would not be used under normal conditions and would only be used in the event of an emergency to provide electrical service to project residents. As shown in Table 1.A, the proposed generator would require review and approval by multiple regulatory agencies, including the City, BAAQMD, San Mateo County Environmental Health, and the Menlo Park Fire Protection District, which would ensure installation in compliance with manufacturer requirements and that the proposed generator would not pose a hazard to people living or working in the area. Therefore, a significant hazard to the public or environment through the routine

transport, use, or disposal of hazardous materials would not occur, potential impacts related to operational use of hazardous materials would be ***less than significant***, and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

During the construction period, hazardous materials such as fuel, lubricants, paint, sealants, and adhesives would be transported to and used at the project site. However, compliance with existing regulations that govern the transportation of hazardous materials and the use and disposal of such materials would ensure that the proposed project would not result in spills or leaks that could create a significant hazard to the public or the environment during and after construction by ensuring that these materials are properly handled, and if spills or leaks occur, they are properly and promptly cleaned up and the materials disposed of at an appropriate waste-handling facility. Therefore, potential impacts of the proposed project associated with routine transport, use, or disposal of hazardous materials would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 with Mitigation Incorporated)***

The public and/or the environment could be affected by the release of hazardous materials from the project site into the environment by: 1) exposing workers and/or the public to potentially contaminated soil and groundwater during construction and/or operation of the project; or 2) exposing workers and/or the public to hazardous building materials (e.g., Polychlorinated Biphenyls [PCBs], lead paint, asbestos) during demolition of the existing commercial structure. In addition, the proposed emergency generator could create a hazard if it were improperly installed. However, as noted above in Section 3.9.a, the proposed generator would require approval from multiple regulatory agencies to ensure it is installed properly.

The ConnectMenlo Final EIR (pages 4.7-21 through 4.7-23) determined that future development associated with ConnectMenlo could occur on properties that possibly are contaminated. Future development would be required to comply with existing regulations, including General Plan policies that have been identified to minimize impacts related to accidents and spills of hazardous materials. In particular, Policy S-1.18, which requires developers to conduct an investigation of soils, groundwater and buildings affected by hazardous material potentially released from prior land uses in areas historically used for commercial or industrial uses, and to identify and implement mitigation measures to avoid adversely affecting the environment or the health and safety of residents or new uses.

A Phase I Environmental Site Assessment (Phase I ESA) was prepared for the project site in January 2019.[32] The Phase I ESA reviewed past uses of the project site and surrounding vicinity to evaluate whether past uses or releases of hazardous materials may have impacted the project site. The Phase I ESA indicated that historical site operations included the use of chlorinated solvents. Additionally,

[32] Ramboll US Corporation. 2019. *Phase I Environmental Site Assessment, 165 Jefferson Drive, Menlo Park, California.* January 30.

limited subsurface investigations conducted at the site in the 1980s and 1990s indicated that volatile organic compounds (VOCs) were present above the San Francisco Regional Water Quality Control Board's (Regional Water Board) Environmental Screening Levels for residential and commercial/industrial land uses in soil, soil vapor, and groundwater. Detected VOCs include trichloroethylene (TCE), dichloroethene (DCE), tricholoethane (TCA), Freon, and xylenes.

A Phase II ESA was prepared for the project site in April 2020.[33] The Phase II ESA found that soil samples on the project site contained concentrations of metals, which were above their respective Environmental Screening Levels (ESLs) for residential land use and VOCs, which were less than their respective ESLs for residential land use. Groundwater samples at the project site contained TCE, PCE and DCE above residential ESLs. Soil vapor samples at the project site contained TCE, PCE, benzene, chloroform, bromodichloromethane, and vinyl chloride which were above their respective ESLs, which is a ***potentially significant*** impact.

The Phase II ESA did not recommend any specific measures to reduce exposure to existing hazardous conditions. However, the ConnectMenlo Final EIR identified Mitigation Measures HAZ-4a and HAZ-4b (page 4.7-26), which are presented below, to ensure that impacts associated with potential exposure to hazardous soil, soil vapor and groundwater conditions during project construction and operation would be reduced to a less-than-significant level.

> **ConnectMenlo Final EIR Mitigation Measure HAZ-4a:** Construction at any site in the City with known contamination shall be conducted under a project-specific Environmental Site Management Plan (ESMP) that is prepared in consultation with the Regional Water Quality Control Board (RWQCB) or the Department of Toxic Substances Control (DTSC), as appropriate. The purpose of the ESMP is to protect construction workers, the general public, the environment, and future site occupants from subsurface hazardous materials previously identified at the site and to address the possibility of encountering unknown contamination or hazards in the subsurface. The ESMP shall summarize soil and groundwater analytical data collected on the project site during past investigations; identify management options for excavated soil and groundwater, if contaminated media are encountered during deep excavations; and identify monitoring, irrigation, or other wells requiring proper abandonment in compliance with local, State, and federal laws, policies, and regulations.
>
> The ESMP shall include measures for identifying, testing, and managing soil and groundwater suspected of or known to contain hazardous materials. The ESMP shall: 1) provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively; 2) describe required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with State and federal worker safety regulations; and 3) designate personnel responsible for implementation of the ESMP.

[33] Ramboll US Corporation. 2020. *Phase II Investigation Report, Menlo Flats, 165 Jefferson Drive, Menlo Park, California*. April 1.

ConnectMenlo Final EIR Mitigation Measure HAZ-4b: For those sites throughout the city with potential residual contamination in soil, gas, or groundwater that are planned for redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into an occupied building, project design shall include vapor controls or source removal, as appropriate, in accordance with regulatory agency requirements. Soil vapor mitigations or controls could include vapor barriers, passive venting, and/or active venting. The vapor intrusion assessment and associated vapor controls or source removal can be incorporated into the ESMP (Mitigation Measure HAZ-4a).

With implementation of ConnectMenlo Mitigation Measures HAZ-4a and HAZ-4b, the proposed project would have a ***less-than-significant impact with mitigation*** related to the release of hazardous materials into the environment and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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? ***(No Impact)***

The proposed project would not involve handling or emissions of acutely hazardous materials, substances, or wastes. The Tide Academy, a high school within the Sequoia Union High School District, began operation in Fall 2019 at 150 Jefferson Drive, and is located approximately 0.1-mile southwest of the project site. However, as noted in Sections 3.9.a and 3.9.b, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste, and therefore ***no impact*** related to hazardous emissions within proximity to a school would occur and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 with Mitigation Incorporated)***

The provisions of Government Code Section 65962.5 require the California Department of Toxic Substances Control (DTSC), the State Water Resources Control Board, the California Department of Health Services, and the California Department of Resources Recycling and Recovery (formerly the California Integrated Waste Management Board) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of the California Environmental Protection Agency (Cal/EPA). Based on a review of regulatory databases performed as part of the Phase I ESA prepared for the project site, including listed hazardous materials release sites compiled pursuant to Government Code Section 65962.5, the project site is listed as a hazardous materials release site related to the historical uses of the project site, including potential contaminants of concern for soil and groundwater. The Phase II ESA performed for the site confirmed these findings. However, the project site is not an active site included on the State's Hazardous Waste and Substances Site List

(Cortese List), and as noted in Section 3.9.b. implementation of ConnectMenlo Final EIR Mitigation Measures HAZ-4a and HAZ-4b, which are described above, would ensure the proposed would not result in the release of hazardous materials. Therefore, this impact would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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? ***(No Impact)***

The ConnectMenlo Final EIR (page 4.7-27) determined that the study area would not be subject to any airport safety hazards, and no impact would occur. The project site is located approximately 4 miles west of the Palo Alto Airport and approximately 4.5 miles east of the San Carlos Airport. The project site is not located within an airport land use plan, or within 2 miles of a public airport.[34,35] Therefore, the proposed project would have ***no impact*** as no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 ConnectMenlo Final EIR (pages 4.7-27 through 4.7-29) determined that implementation of ConnectMenlo does not include potential land use changes that would impair or physically interfere with the ability to implement the City's Emergency Operation Plan.

The proposed project would be consistent with the policies outlined in ConnectMenlo and would not obstruct emergency evacuation routes. The proposed project would not substantially alter the adjacent roadways and, therefore, would not be expected to impair the function of nearby evacuation routes. Therefore, the proposed project would have a ***less-than-significant*** impact on implementation of an adopted emergency response plan or emergency evacuation plan and new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted in the ConnectMenlo Final EIR (pages 4.7-29 through 4.7-30), the City is located in a highly urbanized area, is not surrounded by woodlands or vegetation, and does not contain areas of moderate, high, or very high Fire Hazard Severity Zones for the Local Responsibility area, nor does it contain any areas of moderate, high, or very high Fire Hazard Severity for the State Responsibility area. Future development within the City, including the proposed project, would be required to comply with the existing regulations as described in Section 4.7.1.1 of the ConnectMenlo Final EIR. In particular, all development in the study area would be constructed pursuant to the California

[34] Santa Clara County Airport Land Use Commission. 2008. *Comprehensive Land Use Plan, Santa Clara County, Palo Alto Airport.* November 19.

[35] City/County Association of Governments of San Mateo County. 2015. *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport.* October 2015.

Building Code, California Fire Code, and the Menlo Park Fire Protection District Code. Therefore, because the project site is in an urban area, is not within or adjacent to a wildland fire hazard area, and would be required to comply with existing regulations, the proposed project would not expose people or structures to a significant loss, injury, or death involving wildland fires and this impact would be ***less than significant*** as no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.10 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)***

As noted in the ConnectMenlo Final EIR (pages 4.8-27 through 4.8-29), water quality in stormwater runoff is regulated locally by the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), which includes the C.3 provisions set by the Regional Water Board. Adherence to these regulations requires new development or redevelopment projects to incorporate treatment measures, an agreement to maintain them, and other appropriate source control and site design features that reduce pollutants in runoff to the maximum extent practicable. As the project site would include more than 1 acre of ground disturbance, a SWPPP would also be required. Many of the requirements consider Low Impact Development (LID) practices such as the use of on-site infiltration through landscaping and vegetated swales that reduce pollutant loading. Incorporation of these measures can even improve existing conditions.

In addition, all projects must comply with the requirements of the City's Municipal Code Chapter 7.42, Stormwater Management Program. The City of Menlo Park Public Works Department also requires development or redevelopment projects that replace or introduce more than 10,000 square feet of impervious surfaces to prepare a Hydrology Report that requires site design measures to maximize pervious areas, source control measures to keep pollutants out of stormwater, use of construction Best Management Practices (BMPs), and post construction treatment measures. Additionally, as part of the Zoning Ordinance update, ConnectMenlo includes design standards for development in the Bayfront Area. These design standards require future development to provide on-site infiltration of stormwater runoff and implement sustainable stormwater features in open space areas.

Construction and demolition activities of the proposed project would involve disturbance, grading, and excavation of soil, which could result in temporary erosion and movement of sediments into the storm drain system, particularly during precipitation events. The potential for chemical releases is present at most construction sites due to the use of paints, solvents, fuels, lubricants, and other hazardous materials associated with heavy construction equipment. Once released, these hazardous materials could be transported to nearby surface waterways in stormwater runoff, wash water, and dust control water, potentially reducing the quality of the receiving waters. The release of sediments and other pollutants during construction and demolition could adversely affect water quality in receiving waters. In order to prevent pollution runoff during the construction period, BMPs from the SMCWPPP would be implemented. These BMPs include, but are not limited to, temporary erosion controls, performing clearing and earth moving activities only during dry weather, and storing, handling, and disposing of construction materials/wastes properly to prevent contact with stormwater.

As noted above, the proposed project would be required to comply with the City's Stormwater Management Program and would be required to prepare a Hydrology Report and a SWPPP. The proposed project would incorporate site design measures to reduce stormwater runoff during the operation period, including directing runoff onto vegetated areas, maximizing permeability by clustering development and preserving open space, and using micro-detention. In addition, the proposed project would also implement source controls to reduce pollution runoff during the operation period, including marking on-site inlets with the words "No Dumping! Flows to Bay," plumbing interior parking garage floor drains to the sanitary sewer and providing landscaping that is drought and/or disease resistant and minimizes runoff.

Compliance with existing stormwater control regulations, preparation of a SWPPP, and implementation of site design measures, source control measures, and BMPs would reduce potential construction and operation phase impacts on water quality to a ***less-than-significant*** level and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted in the ConnectMenlo Final EIR (pages 4.8-30 through 4.8-32), the San Mateo Subbasin of the Santa Clara Valley Groundwater Basin underlies the City. Development throughout the City associated with implementation of ConnectMenlo could result in an overall decrease in groundwater recharge through the increase in impervious surfaces or dewatering during the construction phase.

The proposed project would result in an increase of impervious surfaces on the project site from 55,475 square feet of existing impervious surface coverage to 55,837 square feet of impervious surface coverage. However, the proposed project would include stormwater control features, as described above, that would enhance infiltration of stormwater to the subsurface and would therefore increase the amount of groundwater recharge compared to existing conditions.

The proposed project would connect to the MPMW water system and would not use groundwater at the site. Although no use of groundwater is proposed as part of the project, dewatering would likely be required during construction due to the depth of excavations performed and the shallow water table within the Bayfront Area. This dewatering would be temporary and would focus on the uppermost shallow groundwater zone (a zone that contains a relatively small amount of groundwater that is generally not utilized for water supply). Therefore, potential impacts related to depletion of groundwater supplies would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

c. Would the project 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? ***(Less-Than-Significant Impact)***

The proposed project would not result in the alteration of the course of a stream or river, but would slightly alter the existing drainage pattern on the site with the introduction of new building footprints and surface pavements. The completed project would result in a slight increase in impervious surface coverage compared to existing conditions. However, the project would reflect pre-project drainage conditions by directing runoff to the existing 36-inch storm drain main within Jefferson Drive. Potential impacts associated with alteration of the existing drainage pattern are discussed below.

Erosion. As described above, the proposed project would reflect pre-project drainage conditions by directing runoff towards the corresponding City drainage facilities that currently serve the project site. As described in the ConnectMenlo Final EIR (pages 4.8-32 through 4.8-33), all stormwater runoff from the project site would be treated in accordance with the City's Storm Water Management Program, ensuring that storm water is treated for sediments prior to discharge from

the site, particularly during construction activities. The project applicant would be required to submit an erosion control plan to the City.

Consequently, the potential of the proposed project to result in substantial erosion or siltation on- or off-site associated with altering the drainage pattern of the project site would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

On- or Off-Site Flooding. As noted above, the completed project would reflect pre-project drainage conditions and would result in no net increase in the rate or amount of stormwater runoff, and therefore would not result in on- or off-site flooding. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Stormwater Runoff. As described above and in the ConnectMenlo Final EIR (page 4.8-34), all stormwater runoff from the project site would be treated in accordance with the City's Storm Water Management Program, which also requires no net increase in the rate or amount of stormwater runoff. Therefore, the proposed project would not create or contribute runoff water exceeding the capacity of the storm drain system or provide an additional source of polluted runoff. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Flood Flows. As noted in Section 3.10.d, below, the project site is located within a flood zone. However, the ground floor of each building would be raised approximately 3 feet above grade to accommodate flood plain design requirements and the proposed building would generally occupy the same footprint as the existing structure on the site. Additionally, as discussed above in Section 3.10.a, although the proposed project would alter the existing drainage pattern on the site, the proposed project would be required to comply with SMCWPPP requirements and implement on-site infiltration of stormwater runoff and sustainable stormwater features in open space areas, which would reduce the potential for on-site flooding to occur. In addition, as described above, the completed project would reflect pre-project drainage by directing runoff to the existing 36-inch storm drain main within Jefferson Drive. The project site and surrounding parcels are generally level and landscaped, and therefore are not part of an overland release pattern as they all would direct runoff to on-site stormwater infrastructure. Although the proposed project would alter the existing drainage pattern on the site by raising the base flood elevation, the proposed project would not impede flood flows or redirect flood flows in a manner which would result in on- or off-site flooding. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

*d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? **(Less-Than-Significant Impact)***

The ConnectMenlo Final EIR (pages 4.8-36 through 4.8-37) determined that compliance with the City's existing stormwater regulations, described above, implementation of LID design guidelines, and engineering review of drainage calculations and development plans by the City's Public Works Department would ensure that there are no significant increases in peak flow rates or stormwater runoff volume.

The project site is located within a special flood zone, as mapped by FEMA, with a base flood elevation of 11 feet.[36] As noted in Section 1.0, Project Information, the grade of the project site would be raised approximately 3 feet to meet FEMA requirements, which would ensure the project site is not inundated by flood flows in the event of a 100-year storm event.

Therefore, because the proposed project would be elevated out of the flood zone, comply with existing stormwater regulations, and implement site design measures, source control measures, and SMCWPPP's construction BMPs, the proposed project would not risk release of pollutants due to project inundation. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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

As noted above, the proposed project would be required to comply with the City's existing stormwater regulations, and would include implementation of site design measures, source control measures, and SMCWPPP's construction BMPs. In addition, the proposed project would connect to the MPMW water system and would not use groundwater at the site, and would raise the grade of the site out of the flood zone. Therefore, the proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

[36] Federal Emergency Management Agency. 2015. *National Flood Insurance Program, Flood Rate Insurance Map, San Mateo County, California.* Map No. 06081C0306F. August 13.

3.11 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 physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. The ConnectMenlo Final EIR (pages 4.9-11 through 4.9-13) concluded that implementation of ConnectMenlo would not include any new major roadways or other physical features through existing residential neighborhoods or other communities that would create new barriers in the City, but rather would implement measures to increase connectivity. Therefore, because the proposed project would be consistent with ConnectMenlo, as described below, and would not substantially alter any existing roadways or include any new barriers, this impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

*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 located within the R-MU-B zoning district. The purpose and intent of the R-MU-B zoning district, identified in the Zoning Ordinance, is to: 1) provide high density housing to nearby employment; 2) encourage mixed use development with a quality living environment and neighborhood-serving retail and services on the ground floor that are oriented to the public and promote a live/work/play environment with pedestrian activity; and 3) blend with and complement existing neighborhoods through site regulations and design standards that minimize impacts to adjacent uses.[37] The R-MU-B district allows for bonus level development along Jefferson Drive to be a maximum of 85 feet in height. Additionally, because the project site is located within a special flood zone, as noted in Section 3.10.d, an additional 10-foot increase in maximum building height is allowed, for a total maximum building height of 95 feet. As noted in Section 1.0, Project Information, the proposed project would be a maximum of approximately 84 feet, 11 inches in height and an average of approximately 66.6 feet across the project site. The proposed project would be consistent with the mix and intensity of development contemplated by ConnectMenlo.

[37] Menlo Park, City of. 2019b. op. cit.

Therefore, the proposed project would have a ***less-than-significant*** impact related to land use and planning as it would be generally consistent with the applicable goals, policies, and programs included in ConnectMenlo, and therefore would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigation an environmental effect.

The City's General Plan requires that all City-controlled signalized intersections shall be maintained at level of service (LOS) D or better during peak hours, except at the intersection of Ravenswood Avenue and Middlefield Road and the intersections along Willow Road from Middlefield Road to US 101. As discussed further in Section 3.17, Transportation, the City's General Plan Level of Service Policy Standards and Transportation Impact Analysis (TIA) Guidelines require evaluation of intersection level of service for projects that may adversely impact intersection operations. While not adopted for the purpose of mitigating an environmental effect, compliance with the General Plan LOS standards will be evaluated in the Transportation chapter of the EIR, for assessment of local congestion and planning purposes. Any conflicts with the General Plan Level of Service Policy will be identified and improvements may be recommended as conditions of approval.

3.12 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)***

The ConnectMenlo Final EIR (page 6-2) determined that future development associated with ConnectMenlo would not have an impact on mineral resources as there are no mineral resource recovery operations within the city. Therefore, the proposed project would have ***no impact*** related to the availability of a known mineral resource and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

Refer to Section 3.12.a. The proposed project would have ***no impact*** related to locally-important mineral resource recovery sites and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.13 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?	☐	☐	☐	☒

*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? **(Potentially Significant Impact)***

Construction Period. Demolition, site preparation, and construction would require the use of heavy construction equipment including pile drivers, bulldozers, scrapers, loaders, excavators, cranes, and trucks which could have a ***potentially significant*** construction-period noise impact. Demolition and site preparation phases are typically the loudest phases of construction due to the types of equipment used. There are sensitive receptors within 200 feet of the project site, which could be exposed to construction period noise.

The ConnectMenlo Final EIR identified Mitigation Measure NOISE-1c (page 4.10-24), which is presented below, to ensure that construction-period noise impacts would be reduced to a less-than-significant level.

> **ConnectMenlo Final EIR Mitigation Measure NOISE-1c:** Project applicants for all development projects in the city shall minimize the exposure of nearby properties to excessive noise levels from construction-related activity through CEQA review, conditions of approval and/or enforcement of the City's Noise Ordinance. Prior to issuance of demolition, grading, and/or building permits for development projects, a note shall be provided on development plans indicating that during on-going grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction-related noise:
>
> - Construction activity is limited to the daytime hours between 8:00 a.m. to 6:00 p.m. on Monday through Friday, as prescribed in the City's municipal code.

- All internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers, air intake silencers, and/or engine shrouds that are no less effective than as originally equipped by the manufacturer.
- Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling is located as far as feasible from nearby noise-sensitive receptors.
- Limit unnecessary engine idling to the extent feasible.
- Limit the use of public address systems.
- Construction traffic shall be limited to the haul routes established by the City of Menlo Park.

With implementation of ConnectMenlo Mitigation Measure NOISE-1c, impacts related to the operation of construction equipment would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Operation Period. Mitigation Measure NOISE-1a requires the preparation of an acoustical study for development of new noise-sensitive uses, which include residential uses. The ConnectMenlo Final EIR (pages 4.10-19 through 4.10-24) determined that transportation-related noise, including an increase in traffic, would be less than significant with compliance with General Plan Policies N-1.6 and N-1.9 and Programs N-1.B and N-1.C. However, as noted in Section 3.17, a transportation evaluation for the proposed project will be prepared, which could result in new or more severe impacts related to transportation, and therefore transportation-related noise, than was previously analyzed in the ConnectMenlo Final EIR. The proposed project could result in an increase in ambient noise levels generated by mobile sources within and around the site, and could expose proposed and existing sensitive land uses in the surrounding neighborhood to unacceptable noise levels. Therefore, impacts related to operation-period noise would be ***potentially significant***, and this topic will be included in the EIR. Mitigation measures for potential project-specific impacts will be recommended, as necessary.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels? ***(Less Than Significant with Mitigation Incorporated)***

The proposed project would generate a ***potentially significant*** level of vibration during the construction period.

The ConnectMenlo Final EIR identified Mitigation Measure NOISE-2a (page 4.10-28), which is presented below, to ensure this impact would be reduced to a less-than-significant level.

> **ConnectMenlo Final EIR Mitigation Measure NOISE-2a:** To prevent architectural damage citywide as a result of construction-generated vibration:

- Prior to issuance of a building permit for any development project requiring pile driving or blasting, the project applicant/developer shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. The maximum levels shall not exceed 0.2 inch/second, which is the level that can cause architectural damage for typical residential construction. If maximum levels would exceed these thresholds, alternative methods such static rollers, non-explosive blasting, and drilling piles as opposed to pile driving shall be used.

To prevent vibration-induced annoyance as a result of construction-generated vibration:

- Individual projects that involve vibration-intensive construction activities, such as blasting, pile drivers, jack hammers, and vibratory rollers, within 200 feet of sensitive receptors shall be evaluated for potential vibration impacts. A vibration study shall be conducted for individual projects where vibration-intensive impacts may occur. The study shall be prepared by an acoustical or vibration engineer holding a degree in engineering, physics, or allied discipline and who is able to demonstrate a minimum of two years of experience in preparing technical assessments in acoustics and/or groundborne vibrations. The study is subject to review and approval of the Community Development Department.

Vibration impacts to nearby receptors shall not exceed the vibration annoyance levels (in RMS inches/second) as follows:

- Workshop = 0.126
- Office = 0.063
- Residential Daytime (7:00 AM – 10:00 PM) = 0.032
- Residential Nighttime (10:00 PM – 7:00 AM) = 0.016

If construction-related vibration is determined to be perceptible at vibration-sensitive uses, additional requirements, such as use of less-vibration-intensive equipment or construction techniques, shall be implemented during construction (e.g., nonexplosive blasting methods, drilled piles as opposed to pile driving, preclusion for using vibratory rollers, use of small- or medium-sized bulldozers, etc.). Vibration reduction measures shall be incorporated into the site development plan as a component of the project and applicable building plans, subject to the review and approval of the Community Development Department.

With implementation of ConnectMenlo Mitigation Measure NOISE-2a, impacts construction period vibration would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

Refer to Section 3.9.e. The project site is not located within the vicinity of a private airstrip or an airport land use plan, or within 2 miles of a public use airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels and there would be ***no impact***. No new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.14 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. 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)? ***(Potentially Significant Impact)***

The proposed project would result in the removal of existing commercial office uses and construction of new residential and commercial uses on the project site. Pursuant to a settlement agreement between the cities of East Palo Alto and Menlo Park, any project located in the City's R-MU zone that proposes to develop at the bonus level, which applies to the proposed project, shall prepare an EIR with an analysis of transportation and housing impacts, at a minimum.[38] Therefore, this topic is considered ***potentially significant***[39] and will be included in the EIR, and mitigation measures will be recommended, if necessary.

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ***(Less-Than-Significant Impact)***

The proposed project is not anticipated to directly displace substantial numbers of people, as the project itself would provide additional housing opportunities within the City. Nevertheless, as discussed above under Section 3.14.a, pursuant to a settlement agreement between the cities of East Palo Alto and Menlo Park, this topic will be further discussed in the EIR.

38 Menlo Park, City of. 2017. *Staff Report Number 17-305-CC*. December 5.

39 Because the proposed project is a housing project, it is not anticipated to have a significant impact on population and housing; however, this topic area is being identified to comply with the settlement agreement and is therefore considered "potentially significant."

3.15 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? ii. Police protection? iii. Schools? Iv. Parks? V. Other public facilities? ***(Less-Than-Significant Impact)***

The following section addresses the proposed project's potential effects on: fire service, police service, schools, parks, and other public facilities. Impacts to public services would occur if the propose project increases demand for services such that new or expanded facilities would be required, and these new facilities would themselves cause environmental impacts.

Fire Protection. The ConnectMenlo Final EIR (pages 4.12-8 through 4.12-12) states that future development throughout the City pursuant to ConnectMenlo would be required to comply with existing regulations, including General Plan policies and Zoning Ordinance regulations that have been prepared to minimize impacts related to fire protection services and the need for new facilities throughout the City. In particular, General Plan Policy S-1.30 requires coordination with the Menlo Park Fire Protection District (MPFPD), which provides fire protection services throughout the city, in the planning process and requires all development applications to be reviewed and approved by the MPFPD prior to approval.

Primary service to the project site would be provided by Station 77, which is located at 1467 Chilco Street. This station is located approximately 1 mile west of the project site. Station 77 houses one engine company and is continually staffed by three firefighting personnel.[40]

As noted in the ConnectMenlo Final EIR (page 4.12-8), ConnectMenlo does not in and of itself require the expansion of Station 77. The expansion of Station 77 was already planned and budgeted for prior to ConnectMenlo. Station 5 would also serve the project site and is located approximately 2 miles south of the project site. Station 5 also houses one engine company and is continually staffed by three firefighting personnel.

Consistent with the ConnectMenlo Final EIR ongoing compliance with State and local laws, compliance with the MPFPD permitting process, and payment of applicable development fees would ensure that impacts of new development related to the need for remodeled or expanded MPFPD facilities would be less-than-significant. Because the proposed project would comply with all applicable laws and would also be required to pay all applicable fees, the proposed project would not result in the need for remodeled of expanded MPFPD facilities. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Police Protection. The ConnectMenlo Final EIR (pages 4.12-15 through 4.12-18) states that future development pursuant to ConnectMenlo would be required to comply with existing regulations, including General Plan policies and Zoning regulations that have been prepared to minimize impacts related to police protection services. The Menlo Park Police Department (MPPD) indicated that full buildout of ConnectMenlo would require an additional 17 police officers to maintain a staffing ratio of 1.29 officers per 1,000 residents. However, as part of the ConnectMenlo Final EIR, the MPPD confirmed that no expansion or addition of facilities would be required to accommodate the additional sworn officers or equipment.

In addition, as part of the zoning update, ConnectMenlo includes TDM standards for development in the Bayfront Area. These TDM standards require future development to reduce associated vehicle trips to at least 20 percent below standard generation rates. Each individual project sponsor will be required to prepare a TDM and provide an impact analysis to the satisfaction of the City's Transportation Manager. The reduction in trips would help to alleviate roadway congestion that could interfere with MPPD access and response times.

The MPPD has indicated that it can address maintaining adequate response times through staffing, rather than facility expansion, and therefore it was determined that implementation of ConnectMenlo would result in a less-than-significant impact related to the need for remodeled or expanded MPPD facilities. Therefore, because the proposed project is consistent with the type and intensity of development anticipated in the ConnectMenlo Final EIR, the proposed project would not result in the need for remodeled or expanded MPPD facilities. This impact would be ***less than***

[40] Menlo Park Fire Protection District. 2020. Stations (map). Website: www.menlofire.org/maps/stations (accessed September 2020).

significant and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Schools. The ConnectMenlo Final EIR (pages 4.12-35 through 4.12-40) determined that any development associated with ConnectMenlo would be subject to payment of development impact fees, which under Senate Bill 50 (SB 50) are deemed to be full and complete mitigation. In addition, future development would be required to comply with existing regulations, including General Plan policies and Zoning regulations that have been prepared to minimize impacts related to schools. Therefore, because the proposed project would comply with existing regulations prepared to minimize impacts related to schools and would be subject to the mandatory payment of developer impact fees pursuant to SB 50, the proposed project would have a ***less-than-significant impact*** related to the need for remodeled or expanded school facilities and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Parks. Refer to Section 3.16.a. The proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo and would include private and public open space, and therefore the proposed project would not result in substantial or accelerated physical deterioration of recreational facilities. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Other Public Facilities. The ConnectMenlo Final EIR (pages 4.12-44 through 4.12-46) determined that future development, as part of the City's project approval process, would be required to comply with existing regulations, including General Plan policies that have been prepared to minimize impacts related to public facilities. The City, throughout the 2040 buildout horizon, would implement the General Plan programs that require the adoption of development impact fees to address infrastructure and service needs in the community. Therefore, because the proposed project would be required to pay development impact fees, impacts related to the need for remodeled or expanded public facilities would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.16 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 ConnectMenlo Final EIR (pages 4.12-23 through 4.12-26) determined that the increase in residents associated with future development under ConnectMenlo would lead to an increase in the demand for recreational opportunities and facilities within the city. However, the demand would be distributed throughout the city. The City has an adopted goal of maintaining a ratio of 5 acres of developed parkland per 1,000 residents. At full buildout, with an estimated population of approximately 14,150 new residents, the ratio of parkland per 1,000 residents would be approximately 5.2 acres.

In addition to the existing parkland within the city, the proposed project would include a total of 20,929 square feet of open space, which would include common courtyards, a roof terrace, a pool, landscaping, and a publicly-accessible plaza, which would make up approximately 8 percent of the project site. Therefore, because the proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo and would include private and public open space, the proposed project would not result in substantial or accelerated physical deterioration of recreational facilities. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

*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 Impact)***

The proposed project would include redevelopment of the project site with residential and commercial uses. The proposed project does not include or require the construction or expansion of existing public recreational facilities. Therefore, development of the proposed project and associated recreational opportunities for use by project residents and commercial tenants would be ***less than significant*** as it would not result in additional environmental effects beyond those described in this document and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.17 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. through d. ***(Potentially Significant Impact)***

The ConnectMenlo Final EIR (pages 4.13-56 through 4.13-73) identified significant and unavoidable impacts related to increased delays of peak hour motor vehicle traffic at some study intersections and to routes of regional significance. Per Mitigation Measure TRANS-1b (pages 4.13-70 through 4.13-72), new development would be required to contribute fair share contributions to the City's updated Transportation Impact Fee (TIF) program (adopted in December 2019) to guarantee funding for identified roadway and infrastructure improvements. Any project proposed prior to the adoption of an updated TIF is required to conduct a project-specific Transportation Impact Analysis (TIA) to determine the impacts and necessary transportation mitigations that are to be funded by that project. Regardless, the settlement agreement, as noted in Section 1.0, Project Information, requires a transportation analysis to be completed. Therefore, this impact is considered to be ***potentially significant*** and will be evaluated in the EIR.

A transportation evaluation will be prepared for the proposed project and will be included in the EIR. For purposes of disclosing potential transportation impacts, projects in the City of Menlo Park use the City's current transportation impact analysis (TIA) guidelines[41] to ensure compliance with both State and local requirements. Up until July 1, 2020, the City's TIA guidelines used roadway congestion or level of service (LOS) as the primary study metric. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts within CEQA in an effort to meet the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. OPR identified vehicle miles traveled (VMT) as the required transportation metric and beginning July 1, 2020, VMT (not LOS) is the legally required threshold for transportation impacts pursuant to CEQA. Adoption of local VMT threshold requires

[41] City of Menlo Park. 2020b. Transportation Impact Analysis Guidelines. https://www.menlopark.org/DocumentCenter/View/302/Transportation-Impact-Analysis-Guidelines?bidId=. Accessed on July 10, 2020. June.

City Council approval; the City Council approved the VMT thresholds for incorporation into the updated TIA guidelines on June 16, 2020. Therefore, the EIR will include an assessment of VMT impacts using local VMT thresholds included in the updated TIA guidelines.

Consistent with the City's updated General Plan and TIA guidelines, this study also includes a level of service analysis to evaluate compliance with local policies. LOS results will be reported for informational purposes only in the EIR, but can form the basis for a condition of approval by decision makers needing to find compliance with City policies. The TIA is currently anticipated to include an analysis of 29 intersections, as follows:

1. Marsh Road and Bayfront Expressway (Caltrans)
2. Marsh Road and US-101 Northbound Ramps (Caltrans/CMP)
3. Marsh Road and US-101 Southbound Ramps (Caltrans/CMP)
4. Marsh Road and Scott Drive (City)
5. Marsh Road and Florence Street-Bohannon Drive (City)
6. Marsh Road and Bay Road (City)
7. Marsh Road and Middlefield Road (Town of Atherton)
8. Chrysler Drive and Bayfront Expressway (Caltrans)
9. Chrysler Drive and Constitution Drive (City)
10. Chrysler Drive and Jefferson Drive (City)
11. Chrysler Drive and Independence Drive (City)
12. Chilco Street and Bayfront Expressway (Caltrans)
13. Chilco Street and Constitution Drive (City)
14. Ringwood Avenue and Bay Road (City)
15. Ringwood Avenue and Middlefield Road (City)
16. Ravenswood Avenue and Middlefield Road (City)
17. Willow Road and Bayfront Expressway (Caltrans)
18. Willow Road and Hamilton Avenue (Caltrans)
19. Willow Road and Ivy Drive (Caltrans)
20. Willow Road and O'Brien Drive (Caltrans)
21. Willow Road and Newbridge Street (Caltrans)
22. Willow Road and US-101 Northbound Ramps (Caltrans)
23. Willow Road and US-101 Southbound Ramps (Caltrans)
24. Willow Road and Bay Road (City)
25. Willow Road and Durham Street (City)
26. Willow Road and Coleman Avenue (City)
27. Willow Road and Gilbert Avenue (City)
28. Willow Road and Middlefield Road (City)
29. University and Bayfront Expressway (Caltrans)

The analysis will also consider impacts related to vehicular, bicycle, pedestrian, and transit facilities and access. Mitigation measures will be recommended if necessary.

3.18 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)***

As noted in the ConnectMenlo Final EIR (page 4.4-21), no tribal cultural resources have been identified in the Bayfront Area. However, as noted in Section 3.5, Cultural Resources, impacts from future development in the study area could impact unknown archeological resources including Native American artifacts and human remains. Impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures CULT-2a (page 4.4-17) and CULT-4 (page 4.4-20) from the ConnectMenlo Final EIR, which are described in Section 3.5, Cultural Resources, of this Initial Study.

AB 52 provides for consultation between lead agencies and Native American tribal organizations during the CEQA process. Prior to the release of an Environmental Impact Report or Negative

Declaration/Mitigated Negative Declaration for public review, a lead agency must provide the opportunity to consult with local tribes.

A request form describing the proposed project was sent to the NAHC in West Sacramento requesting a list of tribes eligible to consult with the City, pursuant to Public Resources Code section 21080.3.1. On September 18, 2020 the NAHC responded in a letter with a list of tribal contacts. The City sent a letter providing the opportunity for consultation pursuant to AB 52 for the project to these individuals. No requests for consultation have been received to date. Therefore, the City considers the AB 52 consultation process to be concluded. With implementation of Mitigation Measures CULT-2a and CULT-4 from the ConnectMenlo Final EIR as outlined in Section 3.5, Cultural Resources, this impact would be ***less than significant with mitigation incorporated*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.19 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)***

Domestic Water. As noted in the ConnectMenlo Final EIR (pages 4.14-24), the MPMW receives 100 percent of its potable water from the San Francisco Public Utilities Commission (SFPUC). The City does not own or operate a water treatment plant (WTP). The water purchased from the SFPUC may be treated at one or more WTPs operated by SFPUC. SFPUC periodically makes improvements to its WTPs in order to improve system reliability and accommodate projected growth in its regional service areas. As noted above, the proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo. In addition, the West Bay Sanitary District (WSBD) plans to build a Recycled Water Facility that would provide the ConnectMenlo area with recycled water, which would further reduce demand for water from SFPUC.[42] Therefore, the proposed project would not prompt a need to expand treatment facilities or regional water system conveyance and storage facilities. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

[42] West Bay Sanitary District. 2019. *Bayfront Recycled Water Facilities Plan*. February.

The proposed project would connect to existing water delivery systems within the vicinity of the project site. It is anticipated that these pipelines would have sufficient capacity to support delivery of water to the proposed project. However, as noted in Table 1.A, the project sponsor would be required to coordinate with the City and the MPFPD to assess water flow requirements, and ensure the existing water delivery infrastructure is sufficient to serve the proposed project. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR

Wastewater. As noted in the ConnectMenlo Final EIR (pages 4.14-36 through 4.14-46), the SVCW WWTP treats raw wastewater from the City and discharges to the deep water channel of the Bay. The SVCW WWTP has an average dry weather design flow of 29 million gallons per day (MGD) and a peak wet weather flow of 71 MGD. In general, conveyance systems and treatment plants are designed and constructed to accommodate future capacity expansion including additional base flows due to approved growth plus estimated wet weather flows. The ConnectMenlo Final EIR determined that the increase in wastewater flows from implementation of ConnectMenlo would add to the capacity demands on the WWTP and its conveyance system, however, the effect is not substantial and would be integrated into the ongoing planning and budgeting processes to improve the conveyance system, treatment processes and capacity. As noted above, the proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo. Therefore, the proposed project would not prompt a need to expand the SVCW WWTP. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

The proposed project would connect to the existing sanitary sewer systems within the vicinity of the site. It is anticipated that these pipelines would have sufficient capacity to support the proposed project's wastewater flows. However, as noted in Table 1.A, the project applicant would be required to coordinate with the WBSD to assess wastewater flow requirements, and ensure the existing wastewater infrastructure is sufficient to serve the proposed project. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Stormwater Drainage. Refer to Section 3.10. The proposed project would include new connections to the existing stormwater infrastructure within the vicinity of the site. Development of the proposed project would result in an increase of impervious surfaces on the site from 55,475 square feet of existing impervious surface coverage to 55,837 square feet of impervious surface coverage. However, the proposed project would include stormwater control features, as described previously, that would reduce the total stormwater runoff from the project site. Runoff would be treated in accordance with the SMCWPPP before flowing to the City's storm drain system.

The proposed project would include the following elements to reduce the demand for and impacts to stormwater infrastructure: stormwater treatment systems in the southeast and southwest corners of the project site; drought-tolerant landscaping; flow-through planters; and energy-efficient appliances and efficient irrigation systems. Therefore, the proposed project would not require in the relocation or construction of new stormwater drainage facilities that are not already evaluated in Section 3.10, Hydrology and Water Quality, of this Initial Study. This impact would be

less than significant and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Electricity, Natural Gas, and Telecommunications. As noted in the ConnectMenlo Final EIR (pages 4.14-76 through 4.14-81), new development under ConnectMenlo would continue to be served by Pacific Gas & Electric (PG&E) or Peninsula Clean Energy (PCE) when it commences transmission of energy over PG&E facilities. Buildout of ConnectMenlo would not significantly increase energy demands within the service territory and would not require new energy supply facilities. The proposed project would also be all-electric and would not use natural gas, pursuant to the City's recently adopted reach code that would apply to the proposed project. As noted above, the proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo and the proposed buildings would be all electric.

Therefore, the proposed project would not prompt a need to expand electrical or natural gas facilities. This impact would be less than significant and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

Similar to electrical power services, the project site is already served with telecommunications infrastructure. Telecommunication service would continue to be provided to the project site with implementation of the proposed project. In addition, the proposed project would include undergrounding of existing utilities, and would be required to coordinate with the applicable telecommunications provider. Therefore, the proposed project would not require the relocation or construction of new telecommunications infrastructure beyond that which is already analyzed. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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 ConnectMenlo Final EIR (page 4.14-24 through 4.14-27) determined that there would be an increase in water demand as a result of buildout of ConnectMenlo – average daily demand would be 343 million gallons per year (MGY), which represents 21 percent of the planning level water demand forecasted in the Urban Water Management Plan (UWMP). The ConnectMenlo Final EIR concluded that water supply is adequate to meet increased demands in normal years and would be sufficient to supply the additional demand generated by the increase in development associated with implementation of ConnectMenlo.

During single- and multiple-dry years by 2040, MPMW's total annual water demand, including development associated with ConnectMenlo, is estimated to exceed total annual supply by approximately 333 MGY and 506 MGY, respectively. However, with MPMW's Water Shortage Contingency Plan in place, the shortages in multiple dry years would be managed through demand reductions of up to 50 percent.

In addition, as part of the Zoning update, ConnectMenlo includes green and sustainable building standards in the Bayfront Area. These standards require all new buildings within the Bayfront Area to be maintained without the use of well water and include dual plumbing systems for the use of potential future recycled water. Under the Zoning update, no potable water shall be used for decorative features, unless the water recirculates, and single pass cooling systems are prohibited. Also, future development with a gross floor area of 100,000 square feet or more must submit a proposed water budget for review by the City's Public Works Director prior to certification of occupancy. The ConnectMenlo Final EIR determined that implementation of MPMW's Water Shortage Contingency Plan and green and sustainable building standards would ensure this impact would be less than significant.

As noted above, the proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo. Therefore, there would be sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, single- and multiple-dry years.

This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted above, the SVCW WWTP has an average dry weather design flow of 29 MGD and a peak wet weather flow of 71 MGD. The SVCW WWTP has an average currently dry weather flow of 16 MGD. The ConnectMenlo Final EIR determined that full buildout of ConnectMenlo would result in an estimated net increased wastewater generation rate of 309 MGY, or 0.85 MGD, which would not be significant relative to currently available excess dry weather design capacity flow of 13 MGD.

The proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo. Therefore, there would be sufficient wastewater treatment capacity available to serve the proposed project's projected demand in addition to the provider's existing commitments. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)***

As noted in the ConnectMenlo Final EIR (pages 4.14-52 through 4.14-56), the majority (approximately 74.4 percent or 21,658 tons) of solid waste from the City is transported to the Corinda Los Trancos Landfill (Ox Mountain Landfill). The three other landfills that received the second, third, and fourth most waste accounted for 20.5 percent (or 5,966 tons) combined. The ConnectMenlo Final EIR determined that the estimated additional solid waste generated by development associated with implementation of ConnectMenlo would be approximately 58.3 tons

per day, which represents less than 1.5 percent of the daily capacity of the Ox Mountain Landfill, and less than 2 percent of the permitted daily capacity of the landfill with the smallest daily capacity that could receive waste as a result of implementation.

The ConnectMenlo Final EIR determined that the Ox Mountain Landfill is likely to reach its permitted maximum capacity prior to 2040 (the anticipated buildout horizon for implementation of ConenctMenlo). However, the other three landfills that serve the City are not estimated to close until 2048, 2077, and 2107. In addition, there are 15 other landfills that received waste from Menlo Park in 2014. If one or more of the four landfills were unavailable in the future, it is likely the City's solid waste volume would be increased at one or more of the other landfills that already serve the City.

As a part of the Zoning Update, ConnectMenlo includes green and sustainable building standards in the Bayfront Area that require all applicants to submit a zero-waste management plan to the City. The zero-waste management plan must clearly outline the applicant's plan to reduce, recycle, and compost waste from demolition, construction and occupancy phases of the building. Zero waste is defined as 90 percent overall diversion of non-hazardous waste from landfill and incineration.

The proposed project would be consistent with the type and intensity of development and population projections assumed for the project site in ConnectMenlo and would be required to comply with existing regulations related to solid waste. Therefore, there would be solid waste capacity available to serve the proposed project. This impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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

Refer to Section 3.19.d. The proposed project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste and this impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.20 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 ConnectMenlo Final EIR (pages 4.7-29 through 4.7-30) determined that the Bayfront Area, which includes the project site, does not contain areas of moderate, high, or very high Fire Hazard Severity for the Local Responsibility Area, nor does it contain any areas of moderate, high, or very high Fire Hazard Severity for the State Responsibility Area (SRA). In addition, as noted in Section 3.9.f, the proposed project would not impair the implementation of, or physically interfere with, and adopted emergency response plan. Therefore, this impact would be ***less than significant*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

*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? **(No Impact)***

Refer to Section 3.20.a. Additionally, as noted in Section 1.0, Project Information, the proposed project site is generally level, and is bound by existing development on all sides. Therefore, there would be ***no impact*** as 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 and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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? ***(No Impact)***

Refer to Section 3.20.a. The proposed project is not located within an SRA for fire service and is not within a very high fire hazard severity zone. Therefore, there would be ***no impact*** as the proposed project would not require the installation or maintenance of associated infrastructure and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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? ***(No Impact)***

Refer to Section 3.20.a and 3.20.b. The project site is generally level and is not located within an SRA for fire service or a very high fire hazard severity zone. Therefore, there would be ***no impact*** as the proposed project would not expose people or structures to significant risks as a result of post-fire slope instability or drainage and runoff changes and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

3.21 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)***

The project site consists of an infill site in an urban area. The site does not support habitat for special-status plant or animal species. With implementation of Mitigation Measures CULT-2a and CULT-4 from the ConnectMenlo Final EIR, 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 or prehistory. Therefore, this impact would be ***less than significant with mitigation*** and no new or more severe impacts would occur beyond those examined in the ConnectMenlo Final EIR.

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)? ***(Potentially Significant Impact)***

As discussed in this Initial Study, potentially significant impacts related to air quality, greenhouse gas emissions, noise, and transportation may result from the proposed project. These impacts, as well

as any cumulatively considerable impacts that may result from the proposed project related to these issues, are therefore considered ***potentially significant*** and will be evaluated in an EIR. In addition, the topic of population and housing will also be discussed.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ***(Potentially Significant Impact)***

The proposed project's potential to result in environmental effects that could directly or indirectly impact human beings have been evaluated in this Initial Study. With implementation of the recommended mitigation measures identified in the ConnectMenlo Final EIR, most environmental effects that could adversely affect human beings would be less than significant. The proposed project's environmental effects related to transportation, air quality and greenhouse gas emissions, or noise that could directly or indirectly impact human beings are ***potentially significant*** and will be evaluated in the EIR.

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APPENDIX A

CONNECTMENLO FINAL EIR: MITIGATION MONITORING AND REPORTING PROGRAM

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Mitigation Monitoring or Reporting Program

This Mitigation Monitoring or Reporting Program (MMRP) has been prepared for the proposed Menlo Park General Plan (Land Use & Circulation Elements) and M-2 Area Zoning Update (proposed project). The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the proposed project. The MMRP includes the following information:

- The full text of the mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

The mitigation measures in this MMRP shall be applied to all future development anywhere in the city unless otherwise specified in the specific mitigation measure. The City of Menlo Park must adopt this MMRP, or an equally effective program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
Air Quality						
AQ-2a: Prior to issuance of a building permits, all development projects in the city that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines shall prepare and submit to the City's Planning Division a technical assessment evaluating potential project-related operational air quality impacts. The evaluation shall be prepared in conformance with the BAAQMD methodology for assessing air quality impacts. If operational-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in BAAQMD's CEQA Guidelines, the project applicant is required to incorporate mitigation measures into the development project to reduce air pollutant emissions during operation. The identified measures shall be incorporated into all appropriate construction documents, subject to the review and approval of the Planning Division prior to building permit issuance.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Once for the preparation of the technical assessment	Initials:_____ Date:_____
AQ-2b1: Prior to building permit issuance, the City shall require applicants for all development projects in the city to comply with the current Bay Area Air Quality Management District's (BAAQMD) basic control measures for reducing construction emissions of PM10 (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines).	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Prior to approval and during scheduled site visits	Initials:_____ Date:_____
AQ-2b2: Prior to issuance of a building permit, development projects in the City that are subject to CEQA and exceed the screening sizes in the BAAQMD's CEQA Guidelines shall prepare and submit to the City of Menlo Park a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with the BAAQMD methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Once for the preparation of the technical assessment	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
identified in the BAAQMD CEQA Guidelines, the project applicant is required to incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds (e.g., Table 8-2, Additional Construction Mitigation Measures Recommended for projects with Construction Emissions Above the Threshold of the BAAQMD CEQA Guidelines, or applicable construction mitigation measures subsequently approved by BAAQMD). These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans), subject to the review and approval of the Planning Division prior to building permit issuance.						
AQ-3a: As part of the discretionary review process for development applications, applicants for all non-residential projects within the City that: 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered TRUs, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of a proposed project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City's Planning Division. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds 10 in one million (10E-06), PM2.5 concentrations exceed 0.3 µg/m3, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. Mitigation measures may include but are not limited to: ▪ Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible. ▪ Electrifying warehousing docks.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Once for the preparation of the HRA	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
▪ Requiring use of newer equipment and/or vehicles. ▪ Restricting off-site truck travel through the creation of truck routes. Mitigation measures identified in the project-specific HRA shall be incorporated into the site development plan as a component of a proposed project, subject to the review and approval of the Community Development Department.						
AQ-3b: As part of the discretionary review process, applicants for all residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) anywhere in the City within 1,000 feet of a major sources of toxic air contaminants (TACs) (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City's Planning Division. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM2.5 concentrations exceed 0.3 µg/m3, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to: ▪ Air intakes located away from high volume roadways and/or truck loading zones. ▪ Heating, ventilation, and air conditioning systems of the	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Once for the preparation of the HRA	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
buildings provided with appropriately sized maximum efficiency rating value (MERV) filters. Measures identified in the HRA shall be incorporated into the site development plan as a component of the proposed project subject to the review and approval of the Community Development Department. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the City, subject to the review and approval of the Community Development Department.						
AQ-5: Implementation of Mitigation Measures AQ-2a through AQ-3b.						Initials:_____ Date:_____
Biological Resources						
BIO-1: As part of the discretionary review process for development projects, new construction and building additions regardless of size, in addition to appropriate CEQA review, the City shall require all project applicants to prepare and submit project-specific baseline biological resources assessments (BRA) if the project would occur on or adjacent to a parcel containing natural habitat with features such as mature and native trees, unused structures that could support special-status bat species, other sensitive biological resources, and/or active nests of common birds protected under the Migratory Bird Treaty Act (MBTA). Sensitive biological resources triggering the need for the baseline BRA shall include: wetlands, occurrences or suitable habitat for special-status species, sensitive natural communities, and important movement corridors for wildlife such as creek corridors and shorelines. The baseline BRA shall be prepared by a qualified biologist. The baseline BRA shall provide a determination on whether any sensitive biological resources are present on the site, including jurisdictional wetlands and waters, essential habitat for special-	Project applicant	During the building permit and site development review process and prior to permit issuance	A qualified biologist approved by the City of Menlo Park Planning Division	Plan review and approval	Once for the preparation of a biological assessment and again, if determined further assessment is required as specified in this mitigation measure	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
status species, and sensitive natural communities. If jurisdictional wetlands and/or waters are suspected to be present on the site, a jurisdictional delineation confirmed by the U.S. Army Corps of Engineers (USACE) will be provided as part of the baseline BRA. The baseline BRA shall also include consideration of possible sensitive biological resources on any adjacent undeveloped lands that could be affected by the project, and lands of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge). The baseline BRA shall incorporate guidance from relevant regional conservation plans, including, but not limited to, the then current Don Edwards San Francisco Bay National Wildlife Refuge Comprehensive Conservation Plan, South Bay Salt Pond Restoration Project, Tidal Marsh Recovery Plan and the United States Fish and Wildlife Service (USFWS) Recovery Plan for the Pacific Coast Population of the Western Snowy Plover, for determining the potential presence or absence of sensitive biological resources; however, the presence or absence of sensitive biological resources will be determined by on-site surveys. If the adjacent property is the Refuge, Refuge staff shall be contacted regarding the presence or absence of sensitive biological resources. If sensitive biological resources are determined to be present on the site or may be present on any adjacent parcel containing natural habitat, coordination with the appropriate regulatory and resource agencies must occur. Appropriate measures, such as preconstruction surveys, establishing no-disturbance zones and restrictive time periods during construction, protective development setbacks and restrictions, and applying bird-safe building design practices and materials, shall be developed by the qualified biologist in consultation with the regulatory and resource agencies to provide adequate avoidance, or provide						

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
compensatory mitigation if avoidance is infeasible. With respect to fully protected species, if the BRA for any development project determines that any of the following Fully Protected Species are present, then neither take of such species will be permitted nor will mitigation measures including species collection or relocation. The Fully Protected Species include American Peregrine Falcon (*Falco peregrinus anatum*), California Black Rail (*Laterallus jamaicensis coturniculus),* California Clapper Rail - Ridgway's Rail (*Rallus longirostris obsoletus*) , California Least Tern (*Sterna albifrons browni*), White-tailed Kite (*Elanus leucurus*), Salt-marsh harvest mouse (*Reithrodontomys raviventris*), and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). The qualified biologist shall consult with the Refuge management and where appropriate, the Endangered Species Office of the USFWS, the National Marine Fisheries Service (NMFS), and California Department of Fish and Wildlife (CDFW) for determining the potential presence or absence of sensitive biological resources and appropriate avoidance or compensatory mitigation measures, if required. Where jurisdictional waters or federally and/or State-listed special-status species would be affected, appropriate authorizations (i.e., the USACE, San Francisco Bay Regional Water Quality Control Board (RWQCB), San Francisco Bay Conservation and Development Commission (BCDC), USFWS, NMFS, Refuge and CDFW), shall be obtained by the project applicant, and evidence of such authorization provided to the City prior to issuance of grading or other construction permits. For sites that are adjacent to undeveloped lands with federally and/or State-listed special status species, or sensitive habitats, or lands of the Refuge, the BRA shall include evaluation of the potential effects of:						

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
▪ additional light, ▪ glare, ▪ shading (i.e., shadow analysis), ▪ noise, ▪ urban runoff, ▪ water flow disruption, ▪ water quality degradation/sedimentation, ▪ attraction of nuisance species/predators (e.g., attraction to refuse) and their abatement (e.g., adverse impacts of rodenticides), ▪ and pesticides, generated by the project, as well as the possibility for increased activity from humans and/or domesticated pets and their effects on the nearby natural habitats. The BRA shall include proposed avoidance, minimization, and mitigation of these adverse impacts. The City of Menlo Park Planning Division may require an independent peer review of the adequacy of the baseline BRA as part of the review of the project to confirm its adequacy. Mitigation measures identified in the project-specific BRA shall be incorporated as a component of a proposed project and subsequent building permit, subject to the review and approval of the Community Development Department and the appropriate regulatory and resource agencies. The following zoning regulations enacted by ordinances (including but not limited to 16.43 O-Office District, 16.43.080 Corporate housing, 16.43.140 Green and sustainable building; 16.44 LS-Life Science District, 16.44.130 Green and sustainable building) to minimize impacts to biological resources are incorporated by reference into this mitigation measure and shall be a component of the project building permits:						

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
1. Setbacks (A) Minimum of two hundred (200) feet from the waterfront; waterfront is defined as the top of the levee. 2. Waterfront and Environmental Considerations. The following provisions are applicable when the property is adjacent to the waterfront or other sensitive habitat. a. Non-emergency lighting shall be limited to the minimum necessary to meet safety requirements and shall provide shielding and reflectors to minimize light spill and glare and shall not directly illuminate sensitive habitat areas. Incorporate timing devices and sensors to ensure night lighting is used only when necessary. b. Landscaping and its maintenance shall not negatively impact the water quality, native habitats, or natural resources. c. Pets shall not be allowed within the corporate housing due to their impacts on water quality, native habitats, and natural resources. 3. Bird-friendly design. a. No more than ten percent (10%) of façade surface area shall have non-bird- friendly glazing. b. Bird- friendly glazing includes, but is not limited to opaque glass, covering the outside surface of clear glass with patterns, paned glass with fenestration, frit or etching patterns, and external screens over nonreflective glass. Highly reflective glass is not permitted. c. Occupancy sensors or other switch control devices shall be installed on non-emergency lights and shall be programmed to shut off during non-work hours and between 10 PM and sunrise.						

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
d. Placement of buildings shall avoid the potential funneling of flight paths towards a building façade. e. Glass skyways or walkways, freestanding (see-through) glass walls and handrails, and transparent building corners shall not be allowed. f. Transparent glass shall not be allowed at the rooflines of buildings, including in conjunction with roof decks, patios and green roofs. g. Use of rodenticides shall not be allowed. If it is determined through the BRA or CEQA review that further assessment/monitoring/reporting is required by appropriate regulatory or resource agencies, it shall be the responsibility of the City to ensure all project requirements are implemented.						
Cultural Resources						
CULT-1: At the time that individual projects are proposed on any site citywide with a building more than 50 years old or any site adjoining a property with a building more than 50 years old, the City shall require the project applicant to prepare a site-specific evaluation to determine if the project is subject to completion of a site-specific historic resources study. If it is determined that a site-specific historic resources study is required, the study shall be prepared by a qualified architectural historian meeting the Secretary of the Interior's Standards for Architecture or Architectural History. At a minimum, the study shall consist of a records search of the California Historical Resources Information System, an intensive-level pedestrian field survey, an evaluation of significance using standard National Register Historic Preservation and California Register Historic Preservation evaluation criteria, and recordation of all identified historic buildings and structures on California Department of Parks and Recreation 523 Site Record forms. The study shall describe the historic context and setting, methods used in the investigation, results of the evaluation, and	Project applicant	During the building permit and site development review process and prior to permit issuance	Qualified archeologist approved by the City of Menlo Park Planning Division	Plan review and approval	Once at time of preliminary assessment and again, if determined further assessment is required as specified in this mitigation measure	Initials:_____ Date:_____

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recommendations for management of identified resources. If applicable, the specific requirements for inventory areas and documentation format required by certain agencies, such as the Federal Highway Administration and California Department of Transportation (Caltrans), shall be adhered to. If the project site or adjacent properties are found to be eligible for listing on the California Register, the project shall be required to conform to the current *Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, and Restoring Historic Buildings,* which require the preservation of character defining features which convey a building's historical significance, and offers guidance about appropriate and compatible alterations to such structures.						
CULT-2a: If a potentially significant subsurface cultural resource is encountered during ground disturbing activities on any parcel in the city, all construction activities within a 100-foot radius of the find shall cease until a qualified archeologist determines whether the resource requires further study. All developers in the study area shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of the California Environmental Quality Act (CEQA) criteria by a qualified archeologist. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also perform appropriate technical analyses; prepare a comprehensive report complete with methods, results, and recommendations; and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Menlo Park, Northwest Information Center (NWIC), and State Historic	Project applicant	During construction	Qualified archaeologist approved by the City of Menlo Park Planning Division	Initiated after a find is made during construction	During regularly scheduled site inspections that would be initiated after a find is made during construction	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
Preservation Office (SHPO), if required.						
CULT-2b: As part of the City's application approval process and prior to project approval, the City shall consult with those Native American Tribes with ancestral ties to the Menlo Park city limits regarding General Plan Amendments in the city and land use policy changes. Upon receipt of an application for proposed project that requires a General Plan Amendment or a land use policy change, the City shall submit a request for a list of Native American Tribes to be contacted about the proposed project to the Native American Heritage Commission (NAHC). Upon receipt of the list of Native American Tribes from the NAHC, the City shall submit a letter to each Tribe on the provided list requesting consultation with the Native American Tribe about the proposed project via the via the City's preferred confirmation of receipt correspondence tracking method (e.g., Federal Express, United States Postal Service Certified Mail, etc.).	The City of Menlo Park	During the project approval process	The City of Menlo Park Planning Division in conjunction with Native American Tribes with ancestral ties to the Menlo Park city limits	Initiated once Native American Tribes request consultation	To be determined by consulting parties	Initials:_____ Date:_____
CULT-3: In the event that fossils or fossil bearing deposits are discovered during ground disturbing activities anywhere in the city, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a City-approved qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Menlo Park for review and	Project applicant	During construction	Qualified paleontologist approved by the City of Menlo Park Planning Division	Initiated after a find is made during construction	During regularly scheduled site inspections initiated after a find is made during construction	Initials:_____ Date:_____

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approval prior to implementation, and all construction activity shall adhere to the recommendations in the excavation plan.						
CULT-4: Procedures of conduct following the discovery of human remains citywide have been mandated by Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (CEQA). According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.	Project applicant	During construction	The San Mateo County Coroner	Initiated after a find is made during construction	During regularly scheduled site inspections initiated after a find is made during construction	Initials:_____ Date:_____
Greenhouse Gas Emissions						
GHG-1: Prior to January 1, 2020, the City of Menlo Park shall update the Climate Action Plan (CAP) to address the GHG reduction goals of Executive Order B-30-15 and Executive Order S-03-05 for GHG sectors that the City has direct or indirect jurisdictional control over. The City shall identify a GHG emissions reduction target for year 2030 and 2040 that is consistent with the GHG reduction goals identified in Executive Order B-30-15 and	City of Menlo Park	Prior to January 1, 2020	City of Menlo Park Planning Division	Update the Climate Action Plan (CAP)	Once for update to the CAP	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
Executive Order S-03-05. The CAP shall be updated to include measures to ensure that the City is on a trajectory that aligns with the state's 2030 GHG emissions reduction target.						
GHG-2: Implement of Mitigation Measure GHG-1.						
Hazards and Hazardous Materials						
HAZ-4a: Construction at the sites of any site in the City with known contamination, shall be conducted under a project-specific Environmental Site Management Plan (ESMP) that is prepared in consultation with the Regional Water Quality Control Board (RWQCB) or the Department of Toxic Substances Control (DTSC), as appropriate. The purpose of the ESMP is to protect construction workers, the general public, the environment, and future site occupants from subsurface hazardous materials previously identified at the site and to address the possibility of encountering unknown contamination or hazards in the subsurface. The ESMP shall summarize soil and groundwater analytical data collected on the project site during past investigations; identify management options for excavated soil and groundwater, if contaminated media are encountered during deep excavations; and identify monitoring, irrigation, or other wells requiring proper abandonment in compliance with local, State, and federal laws, policies, and regulations. The ESMP shall include measures for identifying, testing, and managing soil and groundwater suspected of or known to contain hazardous materials. The ESMP shall: 1) provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively; 2) describe required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with State and federal worker safety regulations; and 3) designate personnel responsible for implementation of the ESMP.	Project applicant	During the building permit and site development review process and prior to permit issuance	The appropriate "Oversight Agency" designated by the City of Menlo Park Planning Division	Plan review and approval	Prior to construction and during regularly scheduled site inspections	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
HAZ-4b: For those sites throughout the city with potential residual contamination in soil, gas, or groundwater that are planned for redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into an occupied building, project design shall include vapor controls or source removal, as appropriate, in accordance with regulatory agency requirements. Soil vapor mitigations or controls could include vapor barriers, passive venting, and/or active venting. The vapor intrusion assessment and associated vapor controls or source removal can be incorporated into the ESMP (Mitigation Measure HAZ-4a).	Project applicant	During the building permit and site development review process and prior to permit issuance	Licensed environmental professional in accordance with RWQCB, DTSC, and SMCEHD approved by the City of Menlo Park Planning Division	Plan review and approval	Prior to construction and during regularly scheduled site inspections	Initials:_____ Date:_____
Land Use Planning						
LU-2: As part of the discretionary review process for development projects, all proposed development anywhere in Menlo Park is required to demonstrate consistency with the applicable goals, policies, and programs in the General Plan and the supporting Zoning standards to the satisfaction of the City of Menlo Park's Community Development Department. A future project is consistent with the General Plan and Zoning standards if, considering all its aspects, it will further the goals, policies and programs of the General Plan and supporting Zoning standards and not obstruct their attainment.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Menlo Park Planning Division	Plan review and approval	Once prior to plan review and approval	Initials:_____ Date:_____
Noise						
NOISE-1a: To meet the requirements of Title 24 and General Plan Program N1.A, project applicants shall perform acoustical studies prior to issuance of building permits for citywide development of new noise-sensitive uses. New residential dwellings, hotels, motels, dormitories, and school classrooms must meet an interior noise limit of 45 dBA CNEL or L_{dn}. Developments in areas exposed to more than 60 dBA CNEL must demonstrate that the structure	Project applicant	Prior to the issuance of construction permits	City of Menlo Park Planning Division	Plan review and approval	Once for preparation of acoustical studies as outlined in the mitigation measure	Initials:_____ Date:_____

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has been designed to limit interior noise in habitable rooms to acceptable noise levels. Where exterior noise levels are projected to exceed 60 dBA CNEL or L_{dn} at the façade of a building, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the 45 dBA noise limit. Project applicants for all new multi-family residential projects subject to the review and approval of the Community Development Department, prior to building permit issuance, must perform acoustical studies within the projected Ldn 60 dB noise contours, so that noise mitigation measures can be incorporated into project design and site planning, subject to the review and approval of the Community Development Department.						
NOISE-1b: Stationary noise sources and landscaping and maintenance activities citywide shall comply with Chapter 8.06, Noise, of the Menlo Park Municipal Code.	Project applicant	Prior to the issuance of construction permits	City of Menlo Park Planning Division	Plan review and approval	During construction	Initials:_____ Date:_____
NOISE-1c: Project applicants for all development projects in the city shall minimize the exposure of nearby properties to excessive noise levels from construction-related activity through CEQA review, conditions of approval and/or enforcement of the City's Noise Ordinance. Prior to issuance of demolition, grading, and/or building permits for development projects, a note shall be provided on development plans indicating that during on-going grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction-related noise: ▪ Construction activity is limited to the daytime hours between 8:00 a.m. to 6:00 p.m. on Monday through Friday, as prescribed in the City's municipal code. ▪ All internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers, air intake silencers, and/or engine shrouds that are no less	Project applicant	Prior to the issuance of construction permits	City of Menlo Park Planning Division	Plan review and approval	During construction	Initials:_____ Date:_____

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
effective than as originally equipped by the manufacturer. ▪ Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses. ▪ Stockpiling is located as far as feasible from nearby noise-sensitive receptors. ▪ Limit unnecessary engine idling to the extent feasible. ▪ Limit the use of public address systems. ▪ Construction traffic shall be limited to the haul routes established by the City of Menlo Park.						
NOISE-2a: To prevent architectural damage citywide as a result of construction-generated vibration: ▪ Prior to issuance of a building permit for any development project requiring pile driving or blasting, the project applicant/developer shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. The maximum levels shall not exceed 0.2 inch/second, which is the level that can cause architectural damage for typical residential construction. If maximum levels would exceed these thresholds, alternative methods such static rollers, non-explosive blasting, and drilling piles as opposed to pile driving shall be used To prevent vibration-induced annoyance as a result of construction-generated vibration: ▪ Individual projects that involve vibration-intensive construction activities, such as blasting, pile drivers, jack hammers, and vibratory rollers, within 200 feet of sensitive receptors shall be evaluated for potential vibration impacts. A vibration study shall be conducted for individual projects where vibration-intensive impacts may occur. The study shall be prepared by an acoustical or vibration engineer holding a degree in engineering, physics, or allied discipline and who is able to demonstrate a minimum of two years of experience in	Project applicant	Prior to the issuance of construction permits	City of Menlo Park Planning Division	Plan review and approval	During construction	Initials:_____ Date:_____

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
preparing technical assessments in acoustics and/or groundborne vibrations. The study is subject to review and approval of the Community Development Department. Vibration impacts to nearby receptors shall not exceed the vibration annoyance levels (in RMS inches/second) as follows: ▪ Workshop = 0.126 ▪ Office = 0.063 ▪ Residential Daytime (7AM–10PM)= 0.032 ▪ Residential Nighttime (10PM to 7 AM) = 0.016 If construction-related vibration is determined to be perceptible at vibration-sensitive uses, additional requirements, such as use of less-vibration-intensive equipment or construction techniques, shall be implemented during construction (e.g., nonexplosive blasting methods, drilled piles as opposed to pile driving, preclusion for using vibratory rollers, use of small- or medium-sized bulldozers, etc.). Vibration reduction measures shall be incorporated into the site development plan as a component of the project and applicable building plans, subject to the review and approval of the Community Development Department.						
NOISE-2b: To reduce long-term vibration impacts of future development citywide on existing or potential future sensitive uses: ▪ Locate sensitive uses away from vibration sources. ▪ Design industrial development to minimize vibration impacts on nearby uses. Where vibration impacts may occur, reduce impacts on residences and businesses through the use of setbacks and/or structural design features that reduce vibration to levels at or below the guidelines of the Federal Transit Administration near rail lines and industrial uses. ▪ Work with the railroad operators (e.g., Caltrain, Union Pacific, etc.) to reduce, to the extent possible, the contribution of railroad train noise and vibration to Menlo Park's noise environment.	Project applicant	Prior to the issuance of construction permits	City of Menlo Park Planning Division	Plan review and approval	Once prior to plan review and approval	Initials:_____ Date:_____

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MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
Transportation and Circulation						
TRANS-1a: Widen impacted roadway segments at appropriate locations throughout the city to add travel lanes and capacity to accommodate the increase in net daily trips.	City of Menlo Park	Ongoing	City of Menlo Park Transportation Division	Ongoing	Ongoing	Initials:_____ Date:_____
TRANS-1b: The City of Menlo Park shall update the existing Transportation Impact Fee (TIF) program to guarantee funding for citywide roadway and infrastructure improvements that are necessary to mitigate impacts from future projects based on the then current City standards. The fees shall be assessed when there is new construction, an increase in square footage in an existing building, or the conversion of existing square footage to a more intensive use. The fees collected shall be applied toward circulation improvements. The fees shall be calculated by multiplying the proposed square footage, dwelling unit, or hotel room by the appropriate rate. Transportation Impact fees shall be included with any other applicable fees payable at the time the building permit is issued. The City shall use the Transportation Impact Fees to fund construction (or to recoup fees advanced to fund construction) of the transportation improvements identified below, among other things that at the time of potential future development may be warranted to mitigate traffic impacts. It should be noted that any project proposed prior to the adoption of an updated TIF will be required to conduct a project-specific Transportation Impact Assessment to determine the impacts and necessary transportation mitigations that are to be funded by that project. As part of the update to the TIF program, the City shall also prepare a "nexus" study that will serve as the basis for requiring development impact fees under Assembly Bill (AB) 1600 legislation, as codified by California Code Government Section 66000 et seq., to support implementation of the proposed	City of Menlo Park	Ongoing	City of Menlo Park Transportation Division	Ongoing	Ongoing	Initials:_____ Date:_____

MITGATION MONITORING OR REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
project. The established procedures under AB 1600 require that a "reasonable relationship" or nexus exist between the improvements and facilities required to mitigate the impacts of new development pursuant to the proposed project. The following examples of improvements and facilities would reduce impacts to acceptable level of service standards and these, among other improvements, could be included in the TIF program impact fees nexus study: ▪ **Sand Hill Road (westbound) and I-280 Northbound On-ramp (#1)**: Modify the signal-timing plan during the PM peak hour to increase the maximum allocation of green time to the westbound approach during the PM peak hour. ▪ **Sand Hill Road (eastbound) and I-280 Northbound Off-ramp (#2)**: Add an additional northbound right-turn lane on the off-ramp to improve operations to acceptable LOS D during the AM peak hour. ▪ **El Camino Real and Ravenswood Avenue (#28):** One eastbound right-turn lane on Menlo Avenue to improve conditions. ▪ **Willow Road and Newbridge Street (#33):** Implement measures on Chilco Street south of Constitution Drive to reduce or prevent cut-through traffic through the Belle Haven neighborhood, such as peak-hour turn restrictions from Constitution Drive to southbound Chilco Street, and measures to enhance east/west circulation from Willow Road via O'Brien Drive and the proposed mixed-use collector street opposite Ivy Drive, extending east to University Avenue, to discourage use of Newbridge Street. ▪ **Willow Road and Hamilton Avenue (#36):** Provide primary access to potential future development sites east of Willow Road via O'Brien Drive and/or the proposed Mixed-Use Collector that would intersect Willow Road between Hamilton Avenue and O'Brien Drive. Implement measures on Chilco Street south of Constitution Drive to prevent cut-through						

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
traffic through the Belle Haven neighborhood, such as peak-hour turn restrictions from Constitution Drive to southbound Chilco Street. Although the provision of an eastbound left-turn lane on Hamilton Avenue where it approaches Willow Road would reduce the delay, this potential mitigation is not recommend because it would encourage cut-through traffic via Chilco Street and Hamilton Avenue, potentially affecting the Belle Haven neighborhood. Therefore, to avoid facilitating the use of Chilco Street and Hamilton Avenue as cut-through routes in the adjacent residential neighborhood, mitigating this traffic impact is not recommended at this time, consistent with City policies that discourage cut-through traffic in residential neighborhoods. The improvements should be incorporated into the updated fee program for ongoing consideration. ▪ **Bayfront Expressway and Willow Road (#37):** Evaluate the potential for grade separation to allow conflicting movements to occur simultaneously. The evaluation must consider traffic improvements, along with potential secondary impacts caused by potential right-of-way acquisition, impacts to adjacent wetlands and the Dumbarton Rail corridor, as well as potential impacts or benefits for multi-modal accommodation. If found feasible, the updated fee program should incorporate fair-share contributions from future development towards grade separation. ▪ **Bayfront Expressway and University Avenue (#38):** Evaluate the potential for grade separation to allow conflicting movements to occur simultaneously. The evaluation must consider traffic improvements, along with potential secondary impacts caused by potential right-of-way acquisition, impacts to adjacent wetlands and the Dumbarton Rail corridor, as well as potential impacts or benefits for multi-modal accommodation. If found feasible, the updated fee program should incorporate fair-share contributions from future development towards grade separation.						

MITGATION MONITORING OR REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
▪ **Chilco Street and Constitution Drive (#45):** Install a traffic signal and signalized crosswalks at the intersection. Construct three southbound lanes on the one-block segment of Chilco Street, between Bayfront Expressway and Chilco Street, to include two southbound left-turn lanes to accommodate the volume of left-turning vehicles entering the project site. In addition, during the AM peak hour, provide a "split-phase" signal operation on Chilco Street. Construct a northbound left-turn lane on Chilco Street approaching Constitution Drive. Construct two outbound lanes on Chilco Street between Constitution Drive and Bayfront Expressway. If the Facebook Campus Expansion Project is approved, this mitigation measure would be required to be constructed as a requirement of that project.						
▪ **Chrysler Drive and Constitution Drive (#46):** Construct a southbound left-turn on Chrysler Drive, approaching Constitution Drive.						
▪ **University Avenue and Adams Drive (#47):** Install a traffic signal at this intersection.						
▪ **University Avenue and Bay Road (#51):** Realign the eastbound and westbound approaches to allow replacement of the east/west "split-phase" signal on Bay Street with standard protected signal phases in order to allow eastbound and westbound pedestrian crossings to occur simultaneously, which would allow for an increase in green time allocated to northbound/southbound movements on University Avenue and reduce peak-hour delay at this intersection. This intersection is located in the City of East Palo Alto and under the control of Caltrans. If this measure if found feasible by the City of East Palo Alto, the improvements should be incorporated into the City of Menlo Park's updated fee program to collect fair-share contributions from future development towards such improvements.						
▪ **University Avenue and Donohoe Street (#54):** Mitigating this						

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
impact would require providing additional westbound lane capacity on Donohoe Street, including an extended dual left-turn pocket, dedicated through lane, and dual right-turn lanes; providing a southbound right-turn lane on University Avenue and lengthening the northbound turn pockets. However, this mitigation is likely to be infeasible given right-of-way limitations, proximity to existing US 101 on- and off-ramps, and adjacent properties. In addition, this intersection is located in the City of East Palo Alto and under the control of Caltrans. If this measure if found feasible by the City of East Palo Alto, the improvements should be incorporated into the City of Menlo Park's updated fee program to collect fair-share contributions from future development towards such improvements. ▪ **University Avenue and US 101 Southbound Ramps (#56):** Mitigating this impact would require modifications to the US 101 Southbound On/Off Ramps and at this location This intersection is located in the City of East Palo Alto and under the control of Caltrans. If this measure if found feasible by the City of East Palo Alto, the improvements should be incorporated into the City of Menlo Park's updated fee program to collect fair-share contributions from future development towards such improvements. ▪ **Chilco Street and Hamilton Avenue (#60):** Installation of a traffic signal would mitigate this impact to less than significant levels, but would have the undesirable secondary effect of encouraging the use of Chilco Street as a cut-through route, which conflicts with City goals that aim to reduce cut-through traffic in residential neighborhoods. Therefore, to avoid facilitating cut-through traffic, mitigating this traffic impact by increasing capacity is not recommended at this time, but should be incorporated into the updated fee program for ongoing consideration.						
TRANS-6a: The City of Menlo Park shall update the Transportation Impact Fee (TIF) program to provide funding for citywide bicycle	City of Menlo Park	Ongoing	City of Menlo Park	Ongoing	Ongoing	Initials:_____ Date:_____

MITGATION MONITORING OR REPORTING PROGRAM

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
and pedestrian facilities that are necessary to mitigate impacts from future projects based on the then current City standards. The fees shall be assessed when there is new construction, an increase in square footage in an existing building, or the conversion of existing square footage to a more intensive use. The fees collected shall be applied toward improvements that will connect development sites within the area circulation system, including the elimination of gaps in the citywide pedestrian and bicycle network. The fees shall be calculated by multiplying the proposed square footage, dwelling unit, or hotel room by the appropriate rate. Transportation Impact fees shall be included with any other applicable fees payable at the time the building permit is issued. The City shall use the transportation Impact fees to fund construction (or to recoup fees advanced to fund construction) of the transportation improvements identified in this mitigation measure, among other things that at the time of potential future development may be warranted to mitigate traffic impacts. It should be noted that any project proposed prior to the adoption of an updated TIF will be required to conduct a project-specific Transportation Impact Assessment to determine the impacts and necessary pedestrian or bicycle facilities mitigations that are to be funded by that project. As part of the update to the TIF program, the City shall also prepare a "nexus" study that will serve as the basis for requiring development impact fees under Assembly Bill (AB) 1600 legislation, as codified by California Code Government Section 66000 et seq., to support implementation of the proposed project. The established procedures under AB 1600 require that a "reasonable relationship" or nexus exist between the bicycle and pedestrian improvements and facilities required to mitigate the traffic impacts of new development pursuant to the proposed project. The following examples of pedestrian and bicycle improvements would reduce impacts to acceptable standards,			Transportation Division			

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
and these, among others improvements, could be included in the updated TIF program, also described under TRANS-1: ▪ **US 101 Pedestrian & Bicycle Overcrossing at Marsh Road, and Marsh Road Corridor Pedestrian & Bicycle Improvements (Haven Avenue to Marsh Road/Bay Road):** Provide pedestrian and bicycle circulation between the Bayfront Area east of US 101 with the area circulation system west of US 101 along Marsh Road, including access to schools and commercial sites west of Marsh Road that are accessed via Bay Road and Florence Street. Improvements should facilitate pedestrian and bicycle circulation between Haven Avenue and across US 101 near Marsh Road. The recommended improvement would include a dedicated pedestrian and bicycle crossing adjacent to Marsh Road. Alternatively, the provision of continuous sidewalks with controlled pedestrian crossings and Class IV protected bicycle lanes on the Marsh Road overpass, if feasible, could mitigate this impact. ▪ **Ringwood Avenue Corridor Pedestrian & Bicycle Improvements (Belle Haven to Middlefield Road):** Eliminate pedestrian and bicycle facility gaps on primary access routes to the Ringwood Avenue bicycle/pedestrian overcrossing of US 101 (located near the terminus of Ringwood Avenue and Market Place). Improvements should include complete sidewalks on the north side of Pierce Road and bicycle facility improvements on the proposed Ringwood Avenue-Market Place-Hamilton Avenue bicycle boulevard (see Street Classification Map in Chapter 3, Project Description). These improvements would also enhance pedestrian and bicycle access to Menlo-Atherton High School. ▪ **University Avenue Pedestrian Improvements:** Eliminate gaps in the sidewalk network on those portions of University Avenue that are within the Menlo Park City limits. The TIF Program should also include a contribution towards elimination of sidewalk gaps outside the City limits (within the City of East Palo Alto) to ensure that continuous sidewalks are provided on						

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Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
the west University Avenue between Adams Drive and the Bay Trail, located north of Purdue Avenue. ▪ **Willow Road Bikeway Corridor (Bayfront Expressway to Alma Street):** Provide a continuous bikeway facility that eliminates bicycle lane gaps, provides Class IV bicycle lanes on the US 101 overpass and where Willow Road intersects US 101 northbound and southbound ramps, and upgrades existing Class II bicycle lanes to Class IV protected bicycle lanes where feasible, particularly where the speed limit exceeds 35 miles per hour (mph). ▪ **Willow Road Pedestrian Crossings (Bayfront Expressway to Newbridge Street):** Provide enhanced pedestrian crossings of Willow Road at Hamilton Avenue, Ivy Drive (including proposed new street connection opposite Ivy Drive), O'Brien Drive and Newbridge Street. Enhanced crossings should include straightened crosswalks provided on each leg, high visibility crosswalk striping, accessible pedestrian signals, and pedestrian head-start signal timing (leading pedestrian intervals) where feasible. These enhanced crossings would provide improved access between the Belle Haven neighborhood and potential future development between Willow Road and University Avenue. ▪ **Dumbarton Corridor Connections:** Through separate projects, Samtrans is currently considering the potential for a bicycle/pedestrian shared-use trail along the Dumbarton Corridor right-of-way between Redwood City and East Palo Alto, through Menlo Park. If found feasible, the City's TIF Program should incorporate walking and bicycling access and connections to the proposed trail, including a potential rail crossing between Kelly Park and Onetta Harris Community Center and Chilco Street and pedestrian and bicycle improvements on streets that connect to the Dumbarton Corridor: Marsh Road, Chilco Street, Willow Road, and University Avenue.						

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
TRANS-6b: The City of Menlo Park shall update the existing Shuttle Fee program to guarantee funding for citywide operations of City-sponsored shuttle service that is necessary to mitigate impacts from future projects based on the then current City standards. The fees shall be assessed when there is new construction, an increase in square footage in an existing building, or the conversion of existing square footage to a more intensive use. The fees collected shall be applied toward circulation improvements and right-of-way acquisition. The fees shall be calculated by multiplying the proposed square footage, dwelling unit, or hotel room by the appropriate rate. Shuttle fees shall be included with any other applicable fees payable at the time the building permit is issued. The City shall use the Shuttle fees to fund operations of City-sponsored shuttle service to meet the increased demand. As part of the update to the Shuttle Fee program, the City shall also prepare a "nexus" study that will serve as the basis for requiring development impact fees under Assembly Bill (AB) 1600 legislation, as codified by California Code Government Section 66000 et seq., to support implementation of the proposed project. The established procedures under AB 1600 require that a "reasonable relationship" or nexus exist between the transit improvements and facilities required to mitigate the transit impacts of new development pursuant to the proposed project. The types of transit-related improvements and facilities that would reduce impacts to acceptable standards including increasing the fleet of City-sponsored Shuttles and adding additional transit stop facilities within one-quarter mile from residential and employment centers These, among other improvements, could be included in the Shuttle Fee program impact fees nexus study.	City of Menlo Park	Ongoing	City of Menlo Park Transportation Division	Ongoing	Ongoing	Initials:_____ Date:_____
TRANS-6c: The City should continue to support the Dumbarton Corridor Study, evaluating the feasibility of providing transit service to the existing rail corridor and/or operational	City of Menlo Park	Ongoing	City of Menlo Park Transportation	Ongoing	Ongoing	Initials:_____ Date:_____

MITGATION MONITORING OR REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Trigger/Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency	Verified Implementation
improvements to Bayfront Expressway, Marsh Road and Willow Road, such as a dedicated high-occupancy vehicle (HOV) lane, bus queue-jump lanes, or transit-signal priority that could reduce travel time for current bus operations.			Division			
Utilities and Service Systems						
UTIL-10: The City shall continue its reduction programs and diversion requirements in an effort to further reduce solid waste that is diverted to the landfill and lower its per capita disposal rate citywide. In addition, the City shall monitor solid waste generation volumes in relation to capacities at receiving landfill sites to ensure that sufficient capacity exists to accommodate future growth. The City shall ensure any waste management firm it contracts with has access to a new landfill site(s) to replace the Ox Mountain landfills, at such time that this landfill is closed.	City of Menlo Park	Ongoing	City of Menlo Park Planning Division	Ongoing	Ongoing	Initials:_____ Date:_____

APPENDIX B

CALEEMOD OUTPUT SHEETS

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Menlo Flats

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	158.00	Dwelling Unit	1.35	154,729.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Unenclosed Parking with Elevator	176.00	Space	0.00	81,988.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on 5 year average (PG&E 2015)

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Construction of the proposed project is anticipated to begin in October 2021, would last approximately 29 months, and is anticipated to be fully operational and occupied by early 2024.

Grading - 5,400 cubic yards of import.

Demolition - The proposed project would result in the demolition of an existing 24,311 square foot office building.

Trips and VMT - For soil import haul trips, assuming 16 cubic yards of material per load consistent with CalEEMod defaults.

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 30 minutes per month.

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment

Mobile Land Use Mitigation -

Vehicle Trips - Based on trip generation prepared for the project.

Area Mitigation - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Energy Mitigation - Assuming compliance with 2019 Title 24 standards, installation of high efficiency lighting, on-site renewable energy generating 10 percent of electricity use, and energy-efficient appliances.

Water Mitigation - Assuming low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	4.00	33.00
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tblConstructionPhase	NumDays	4.00	32.00
tblConstructionPhase	PhaseEndDate	8/12/2022	1/15/2024
tblConstructionPhase	PhaseEndDate	10/28/2021	11/30/2021
tblConstructionPhase	PhaseEndDate	11/5/2021	1/14/2022

tblConstructionPhase	PhaseEndDate	11/1/2021	12/31/2021
tblConstructionPhase	PhaseStartDate	11/6/2021	1/15/2022
tblConstructionPhase	PhaseStartDate	11/2/2021	12/1/2021
tblConstructionPhase	PhaseStartDate	10/29/2021	12/1/2021
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00
tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	12.38	1.83
tblGrading	AcresOfGrading	11.50	1.83
tblGrading	AcresOfGrading	12.00	1.83
tblGrading	MaterialExported	0.00	5,400.00
tblLandUse	LandUseSquareFeet	158,000.00	154,729.00
tblLandUse	LandUseSquareFeet	70,400.00	81,988.00
tblLandUse	LotAcreage	4.16	1.35
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	1.58	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	268.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.02
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	0.60
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	675.00	338.00
tblVehicleTrips	ST_TR	6.39	4.69
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	42.04	29.83

tblVehicleTrips	SU_TR	5.86	4.69
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	20.43	29.83
tblVehicleTrips	WD_TR	6.65	4.69
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	44.32	29.83

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0784	0.8364	0.4917	1.0500e-003	0.1340	0.0387	0.1727	0.0659	0.0359	0.1018	0.0000	93.1368	93.1368	0.0226	0.0000	93.7006
2022	1.4906	2.3529	2.3073	5.8400e-003	0.2921	0.0886	0.3807	0.1049	0.0850	0.1899	0.0000	512.3535	512.3535	0.0583	0.0000	513.8119
2023	0.2648	1.9152	2.1414	5.5200e-003	0.1971	0.0683	0.2654	0.0532	0.0659	0.1191	0.0000	483.2246	483.2246	0.0475	0.0000	484.4117
2024	0.0105	0.0772	0.0887	2.3000e-004	8.3400e-003	2.5400e-003	0.0109	2.2500e-003	2.4500e-003	4.7000e-003	0.0000	20.1932	20.1932	1.9600e-003	0.0000	20.2422
Maximum	**1.4906**	**2.3529**	**2.3073**	**5.8400e-003**	**0.2921**	**0.0886**	**0.3807**	**0.1049**	**0.0850**	**0.1899**	**0.0000**	**512.3535**	**512.3535**	**0.0583**	**0.0000**	**513.8119**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0321	0.8166	0.5577	1.0500e-003	0.0643	0.0235	0.0878	0.0307	0.0235	0.0542	0.0000	93.1368	93.1368	0.0226	0.0000	93.7006
2022	1.3741	2.9912	2.4517	5.8400e-003	0.2387	0.1025	0.3411	0.0761	0.1023	0.1784	0.0000	512.3532	512.3532	0.0583	0.0000	513.8116
2023	0.1759	2.6457	2.2542	5.5200e-003	0.1971	0.0966	0.2937	0.0532	0.0965	0.1496	0.0000	483.2243	483.2243	0.0475	0.0000	484.4114
2024	7.2800e-003	0.1116	0.0940	2.3000e-004	8.3400e-003	4.0800e-003	0.0124	2.2500e-003	4.0800e-003	6.3300e-003	0.0000	20.1932	20.1932	1.9600e-003	0.0000	20.2422
Maximum	**1.3741**	**2.9912**	**2.4517**	**5.8400e-003**	**0.2387**	**0.1025**	**0.3411**	**0.0761**	**0.1023**	**0.1784**	**0.0000**	**512.3532**	**512.3532**	**0.0583**	**0.0000**	**513.8116**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.82**	**-26.70**	**-6.53**	**0.00**	**19.50**	**-14.35**	**11.41**	**28.28**	**-19.61**	**6.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2021	12-31-2021	0.9055	0.8424
2	1-1-2022	3-31-2022	0.8011	0.9012
3	4-1-2022	6-30-2022	0.6025	0.7331
4	7-1-2022	9-30-2022	1.8401	2.0005
5	10-1-2022	12-31-2022	0.6133	0.7453
6	1-1-2023	3-31-2023	0.5413	0.6999
7	4-1-2023	6-30-2023	0.5439	0.7043
8	7-1-2023	9-30-2023	0.5499	0.7120

9	**10-1-2023**	**12-31-2023**	0.5533	0.7155
10	**1-1-2024**	**3-31-2024**	0.0857	0.1162
		Highest	1.8401	2.0005

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8347	0.0154	1.2873	4.3000e-004		0.0249	0.0249		0.0249	0.0249	2.4643	1.9198	4.3841	0.0134	0.0000	4.7183
Energy	7.8100e-003	0.0669	0.0299	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	223.9477	223.9477	0.0144	4.0900e-003	225.5279
Mobile	0.2427	1.0880	2.6072	9.7800e-003	0.8933	8.0300e-003	0.9013	0.2397	7.4900e-003	0.2472	0.0000	899.8553	899.8553	0.0315	0.0000	900.6424
Stationary	1.3000e-004	3.7000e-004	3.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0612	0.0612	1.0000e-005	0.0000	0.0615
Waste						0.0000	0.0000		0.0000	0.0000	17.9586	0.0000	17.9586	1.0613	0.0000	44.4917
Water						0.0000	0.0000		0.0000	0.0000	3.6184	13.2459	16.8643	0.3728	9.0200e-003	28.8718
Total	**1.0853**	**1.1706**	**3.9246**	**0.0106**	**0.8933**	**0.0384**	**0.9316**	**0.2397**	**0.0378**	**0.2775**	**24.0413**	**1,139.0299**	**1,163.0712**	**1.4934**	**0.0131**	**1,204.3134**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8223	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Energy	6.1500e-003	0.0527	0.0235	3.4000e-004		4.2500e-003	4.2500e-003		4.2500e-003	4.2500e-003	0.0000	152.9530	152.9530	9.2900e-003	2.8000e-003	154.0185
Mobile	0.2334	1.0315	2.3887	8.7300e-003	0.7878	7.2200e-003	0.7951	0.2114	6.7400e-003	0.2182	0.0000	802.8546	802.8546	0.0289	0.0000	803.5767
Stationary	1.3000e-004	3.7000e-004	3.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0612	0.0612	1.0000e-005	0.0000	0.0615
Waste						0.0000	0.0000		0.0000	0.0000	4.4897	0.0000	4.4897	0.2653	0.0000	11.1229
Water						0.0000	0.0000		0.0000	0.0000	3.0120	11.7033	14.7153	0.3104	7.5200e-003	24.7154
Total	**1.0619**	**1.0981**	**3.5870**	**9.1300e-003**	**0.7878**	**0.0180**	**0.8058**	**0.2114**	**0.0175**	**0.2289**	**7.5016**	**969.4918**	**976.9934**	**0.6158**	**0.0103**	**995.4610**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.16**	**6.20**	**8.60**	**14.19**	**11.80**	**53.08**	**13.50**	**11.80**	**53.68**	**17.51**	**68.80**	**14.88**	**16.00**	**58.77**	**21.28**	**17.34**

3.0 Construction Detail

Construction Phase

Menlo Flats - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2021	11/30/2021	5	43	
2	Site Preparation	Site Preparation	12/1/2021	12/31/2021	5	23	
3	Rough Grading	Grading	12/1/2021	1/14/2022	5	33	
4	Fine Grading	Grading	1/1/2022	2/15/2022	5	32	
5	Building Construction	Building Construction	1/15/2022	1/15/2024	5	521	
6	Paving	Paving	8/13/2022	8/26/2022	5	10	
7	Architectural Coating	Architectural Coating	8/27/2022	9/9/2022	5	10	

Acres of Grading (Site Preparation Phase): 1.83

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 313,326; Residential Outdoor: 104,442; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,919 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Rough Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Rough Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45
Fine Grading	Graders	1	6.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	111.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	8.00	0.00	338.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	162.00	36.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	32.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	1.8100e-003	0.0000	1.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4235	0.3116	5.2000e-004		0.0224	0.0224		0.0209	0.0209	0.0000	45.3034	45.3034	0.0116	0.0000	45.5930
Total	**0.0429**	**0.4235**	**0.3116**	**5.2000e-004**	**0.0120**	**0.0224**	**0.0344**	**1.8100e-003**	**0.0209**	**0.0227**	**0.0000**	**45.3034**	**45.3034**	**0.0116**	**0.0000**	**45.5930**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4000e-004	0.0150	3.1900e-003	4.0000e-005	9.4000e-004	5.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	4.1988	4.1988	2.1000e-004	0.0000	4.2042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.9000e-004	6.2700e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.8670	1.8670	4.0000e-005	0.0000	1.8681
Total	**1.3000e-003**	**0.0156**	**9.4600e-003**	**6.0000e-005**	**3.1500e-003**	**6.0000e-005**	**3.2000e-003**	**8.5000e-004**	**5.0000e-005**	**9.0000e-004**	**0.0000**	**6.0658**	**6.0658**	**2.5000e-004**	**0.0000**	**6.0723**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3800e-003	0.0000	5.3800e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.4559	0.3314	5.2000e-004		0.0154	0.0154		0.0154	0.0154	0.0000	45.3033	45.3033	0.0116	0.0000	45.5929
Total	**0.0190**	**0.4559**	**0.3314**	**5.2000e-004**	**5.3800e-003**	**0.0154**	**0.0208**	**8.2000e-004**	**0.0154**	**0.0163**	**0.0000**	**45.3033**	**45.3033**	**0.0116**	**0.0000**	**45.5929**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4000e-004	0.0150	3.1900e-003	4.0000e-005	9.4000e-004	5.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	4.1988	4.1988	2.1000e-004	0.0000	4.2042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.9000e-004	6.2700e-003	2.0000e-005	2.2100e-003	1.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.8670	1.8670	4.0000e-005	0.0000	1.8681
Total	**1.3000e-003**	**0.0156**	**9.4600e-003**	**6.0000e-005**	**3.1500e-003**	**6.0000e-005**	**3.2000e-003**	**8.5000e-004**	**5.0000e-005**	**9.0000e-004**	**0.0000**	**6.0658**	**6.0658**	**2.5000e-004**	**0.0000**	**6.0723**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0616	0.0000	0.0616	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0179	0.2003	0.0870	2.0000e-004		8.8000e-003	8.8000e-003		8.1000e-003	8.1000e-003	0.0000	17.3862	17.3862	5.6200e-003	0.0000	17.5267
Total	**0.0179**	**0.2003**	**0.0870**	**2.0000e-004**	**0.0616**	**8.8000e-003**	**0.0704**	**0.0334**	**8.1000e-003**	**0.0415**	**0.0000**	**17.3862**	**17.3862**	**5.6200e-003**	**0.0000**	**17.5267**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6146	0.6146	1.0000e-005	0.0000	0.6149
Total	**2.8000e-004**	**1.9000e-004**	**2.0600e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6146**	**0.6146**	**1.0000e-005**	**0.0000**	**0.6149**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0277	0.0000	0.0277	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6400e-003	0.1719	0.1130	2.0000e-004		4.3100e-003	4.3100e-003		4.3100e-003	4.3100e-003	0.0000	17.3861	17.3861	5.6200e-003	0.0000	17.5267
Total	**5.6400e-003**	**0.1719**	**0.1130**	**2.0000e-004**	**0.0277**	**4.3100e-003**	**0.0320**	**0.0150**	**4.3100e-003**	**0.0194**	**0.0000**	**17.3861**	**17.3861**	**5.6200e-003**	**0.0000**	**17.5267**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6146	0.6146	1.0000e-005	0.0000	0.6149
Total	**2.8000e-004**	**1.9000e-004**	**2.0600e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6146**	**0.6146**	**1.0000e-005**	**0.0000**	**0.6149**

3.4 Rough Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0532	0.0000	0.0532	0.0287	0.0000	0.0287	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1648	0.0728	1.6000e-004		7.3400e-003	7.3400e-003		6.7500e-003	6.7500e-003	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3564
Total	**0.0148**	**0.1648**	**0.0728**	**1.6000e-004**	**0.0532**	**7.3400e-003**	**0.0606**	**0.0287**	**6.7500e-003**	**0.0355**	**0.0000**	**14.2412**	**14.2412**	**4.6100e-003**	**0.0000**	**14.3564**

3.4 Rough Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3000e-004	0.0318	6.7700e-003	9.0000e-005	2.6400e-003	1.0000e-004	2.7400e-003	7.1000e-004	9.0000e-005	8.0000e-004	0.0000	8.9112	8.9112	4.5000e-004	0.0000	8.9225
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6146	0.6146	1.0000e-005	0.0000	0.6149
Total	**1.2100e-003**	**0.0320**	**8.8300e-003**	**1.0000e-004**	**3.3700e-003**	**1.0000e-004**	**3.4700e-003**	**9.0000e-004**	**9.0000e-005**	**1.0000e-003**	**0.0000**	**9.5257**	**9.5257**	**4.6000e-004**	**0.0000**	**9.5374**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0240	0.0000	0.0240	0.0129	0.0000	0.0129	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6700e-003	0.1410	0.0930	1.6000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3563
Total	**4.6700e-003**	**0.1410**	**0.0930**	**1.6000e-004**	**0.0240**	**3.5700e-003**	**0.0275**	**0.0129**	**3.5700e-003**	**0.0165**	**0.0000**	**14.2412**	**14.2412**	**4.6100e-003**	**0.0000**	**14.3563**

3.4 Rough Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3000e-004	0.0318	6.7700e-003	9.0000e-005	2.6400e-003	1.0000e-004	2.7400e-003	7.1000e-004	9.0000e-005	8.0000e-004	0.0000	8.9112	8.9112	4.5000e-004	0.0000	8.9225
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6146	0.6146	1.0000e-005	0.0000	0.6149
Total	**1.2100e-003**	**0.0320**	**8.8300e-003**	**1.0000e-004**	**3.3700e-003**	**1.0000e-004**	**3.4700e-003**	**9.0000e-004**	**9.0000e-005**	**1.0000e-003**	**0.0000**	**9.5257**	**9.5257**	**4.6000e-004**	**0.0000**	**9.5374**

3.4 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0239	0.0000	0.0239	0.0126	0.0000	0.0126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	**5.4200e-003**	**0.0600**	**0.0297**	**7.0000e-005**	**0.0239**	**2.5900e-003**	**0.0265**	**0.0126**	**2.3800e-003**	**0.0149**	**0.0000**	**6.1907**	**6.1907**	**2.0000e-003**	**0.0000**	**6.2408**

3.4 Rough Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0127	2.8900e-003	4.0000e-005	2.3500e-003	4.0000e-005	2.3900e-003	6.0000e-004	4.0000e-005	6.4000e-004	0.0000	3.8217	3.8217	1.9000e-004	0.0000	3.8265
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2574	0.2574	1.0000e-005	0.0000	0.2575
Total	**4.9000e-004**	**0.0128**	**3.7100e-003**	**4.0000e-005**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**6.8000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**4.0791**	**4.0791**	**2.0000e-004**	**0.0000**	**4.0840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0107	0.0000	0.0107	5.6500e-003	0.0000	5.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0300e-003	0.0613	0.0404	7.0000e-005		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	**2.0300e-003**	**0.0613**	**0.0404**	**7.0000e-005**	**0.0107**	**1.5500e-003**	**0.0123**	**5.6500e-003**	**1.5500e-003**	**7.2000e-003**	**0.0000**	**6.1907**	**6.1907**	**2.0000e-003**	**0.0000**	**6.2408**

3.4 Rough Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0127	2.8900e-003	4.0000e-005	2.3500e-003	4.0000e-005	2.3900e-003	6.0000e-004	4.0000e-005	6.4000e-004	0.0000	3.8217	3.8217	1.9000e-004	0.0000	3.8265
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2574	0.2574	1.0000e-005	0.0000	0.2575
Total	**4.9000e-004**	**0.0128**	**3.7100e-003**	**4.0000e-005**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**6.8000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**4.0791**	**4.0791**	**2.0000e-004**	**0.0000**	**4.0840**

3.5 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0732	0.0000	0.0732	0.0398	0.0000	0.0398	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0173	0.1921	0.0950	2.3000e-004		8.2800e-003	8.2800e-003		7.6100e-003	7.6100e-003	0.0000	19.8103	19.8103	6.4100e-003	0.0000	19.9705
Total	**0.0173**	**0.1921**	**0.0950**	**2.3000e-004**	**0.0732**	**8.2800e-003**	**0.0815**	**0.0398**	**7.6100e-003**	**0.0474**	**0.0000**	**19.8103**	**19.8103**	**6.4100e-003**	**0.0000**	**19.9705**

3.5 Fine Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	2.6400e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8237	0.8237	2.0000e-005	0.0000	0.8241
Total	**3.7000e-004**	**2.4000e-004**	**2.6400e-003**	**1.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8237**	**0.8237**	**2.0000e-005**	**0.0000**	**0.8241**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0330	0.0000	0.0330	0.0179	0.0000	0.0179	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.1962	0.1294	2.3000e-004		4.9700e-003	4.9700e-003		4.9700e-003	4.9700e-003	0.0000	19.8103	19.8103	6.4100e-003	0.0000	19.9705
Total	**6.4900e-003**	**0.1962**	**0.1294**	**2.3000e-004**	**0.0330**	**4.9700e-003**	**0.0379**	**0.0179**	**4.9700e-003**	**0.0229**	**0.0000**	**19.8103**	**19.8103**	**6.4100e-003**	**0.0000**	**19.9705**

3.5 Fine Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	2.6400e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8237	0.8237	2.0000e-005	0.0000	0.8241
Total	**3.7000e-004**	**2.4000e-004**	**2.6400e-003**	**1.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8237**	**0.8237**	**2.0000e-005**	**0.0000**	**0.8241**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2061	1.5629	1.5908	2.7600e-003		0.0736	0.0736		0.0711	0.0711	0.0000	226.9711	226.9711	0.0395	0.0000	227.9594
Total	**0.2061**	**1.5629**	**1.5908**	**2.7600e-003**		**0.0736**	**0.0736**		**0.0711**	**0.0711**	**0.0000**	**226.9711**	**226.9711**	**0.0395**	**0.0000**	**227.9594**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0133	0.4451	0.1103	1.2000e-003	0.0295	8.9000e-004	0.0304	8.5400e-003	8.5000e-004	9.3800e-003	0.0000	115.5604	115.5604	5.4800e-003	0.0000	115.6975
Worker	0.0579	0.0384	0.4174	1.4400e-003	0.1600	1.0200e-003	0.1610	0.0426	9.4000e-004	0.0435	0.0000	130.3089	130.3089	2.7200e-003	0.0000	130.3769
Total	**0.0713**	**0.4836**	**0.5277**	**2.6400e-003**	**0.1895**	**1.9100e-003**	**0.1914**	**0.0511**	**1.7900e-003**	**0.0529**	**0.0000**	**245.8693**	**245.8693**	**8.2000e-003**	**0.0000**	**246.0744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1049	2.1662	1.6848	2.7600e-003		0.0914	0.0914		0.0914	0.0914	0.0000	226.9709	226.9709	0.0395	0.0000	227.9592
Total	**0.1049**	**2.1662**	**1.6848**	**2.7600e-003**		**0.0914**	**0.0914**		**0.0914**	**0.0914**	**0.0000**	**226.9709**	**226.9709**	**0.0395**	**0.0000**	**227.9592**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0133	0.4451	0.1103	1.2000e-003	0.0295	8.9000e-004	0.0304	8.5400e-003	8.5000e-004	9.3800e-003	0.0000	115.5604	115.5604	5.4800e-003	0.0000	115.6975
Worker	0.0579	0.0384	0.4174	1.4400e-003	0.1600	1.0200e-003	0.1610	0.0426	9.4000e-004	0.0435	0.0000	130.3089	130.3089	2.7200e-003	0.0000	130.3769
Total	**0.0713**	**0.4836**	**0.5277**	**2.6400e-003**	**0.1895**	**1.9100e-003**	**0.1914**	**0.0511**	**1.7900e-003**	**0.0529**	**0.0000**	**245.8693**	**245.8693**	**8.2000e-003**	**0.0000**	**246.0744**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1980	1.5224	1.6394	2.8700e-003		0.0669	0.0669		0.0646	0.0646	0.0000	236.0789	236.0789	0.0401	0.0000	237.0811
Total	**0.1980**	**1.5224**	**1.6394**	**2.8700e-003**		**0.0669**	**0.0669**		**0.0646**	**0.0646**	**0.0000**	**236.0789**	**236.0789**	**0.0401**	**0.0000**	**237.0811**

3.6 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.3569	0.1027	1.2100e-003	0.0307	4.1000e-004	0.0311	8.8800e-003	3.9000e-004	9.2700e-003	0.0000	116.8147	116.8147	4.8600e-003	0.0000	116.9362
Worker	0.0563	0.0360	0.3993	1.4400e-003	0.1664	1.0400e-003	0.1675	0.0443	9.6000e-004	0.0452	0.0000	130.3311	130.3311	2.5400e-003	0.0000	130.3945
Total	**0.0667**	**0.3929**	**0.5020**	**2.6500e-003**	**0.1971**	**1.4500e-003**	**0.1986**	**0.0532**	**1.3500e-003**	**0.0545**	**0.0000**	**247.1457**	**247.1457**	**7.4000e-003**	**0.0000**	**247.3306**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1091	2.2528	1.7522	2.8700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808
Total	**0.1091**	**2.2528**	**1.7522**	**2.8700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**236.0786**	**236.0786**	**0.0401**	**0.0000**	**237.0808**

3.6 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.3569	0.1027	1.2100e-003	0.0307	4.1000e-004	0.0311	8.8800e-003	3.9000e-004	9.2700e-003	0.0000	116.8147	116.8147	4.8600e-003	0.0000	116.9362
Worker	0.0563	0.0360	0.3993	1.4400e-003	0.1664	1.0400e-003	0.1675	0.0443	9.6000e-004	0.0452	0.0000	130.3311	130.3311	2.5400e-003	0.0000	130.3945
Total	**0.0667**	**0.3929**	**0.5020**	**2.6500e-003**	**0.1971**	**1.4500e-003**	**0.1986**	**0.0532**	**1.3500e-003**	**0.0545**	**0.0000**	**247.1457**	**247.1457**	**7.4000e-003**	**0.0000**	**247.3306**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8100e-003	0.0609	0.0688	1.2000e-004		2.4800e-003	2.4800e-003		2.3900e-003	2.3900e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302
Total	**7.8100e-003**	**0.0609**	**0.0688**	**1.2000e-004**		**2.4800e-003**	**2.4800e-003**		**2.3900e-003**	**2.3900e-003**	**0.0000**	**9.9886**	**9.9886**	**1.6600e-003**	**0.0000**	**10.0302**

3.6 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-004	0.0149	4.1800e-003	5.0000e-005	1.3000e-003	2.0000e-005	1.3200e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	4.9088	4.9088	2.0000e-004	0.0000	4.9138
Worker	2.2400e-003	1.3700e-003	0.0157	6.0000e-005	7.0400e-003	4.0000e-005	7.0800e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.2958	5.2958	1.0000e-004	0.0000	5.2982
Total	**2.6700e-003**	**0.0163**	**0.0198**	**1.1000e-004**	**8.3400e-003**	**6.0000e-005**	**8.4000e-003**	**2.2500e-003**	**6.0000e-005**	**2.3000e-003**	**0.0000**	**10.2046**	**10.2046**	**3.0000e-004**	**0.0000**	**10.2120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6200e-003	0.0953	0.0741	1.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	9.9886	9.9886	1.6600e-003	0.0000	10.0302
Total	**4.6200e-003**	**0.0953**	**0.0741**	**1.2000e-004**		**4.0200e-003**	**4.0200e-003**		**4.0200e-003**	**4.0200e-003**	**0.0000**	**9.9886**	**9.9886**	**1.6600e-003**	**0.0000**	**10.0302**

3.6 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-004	0.0149	4.1800e-003	5.0000e-005	1.3000e-003	2.0000e-005	1.3200e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	4.9088	4.9088	2.0000e-004	0.0000	4.9138
Worker	2.2400e-003	1.3700e-003	0.0157	6.0000e-005	7.0400e-003	4.0000e-005	7.0800e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.2958	5.2958	1.0000e-004	0.0000	5.2982
Total	**2.6700e-003**	**0.0163**	**0.0198**	**1.1000e-004**	**8.3400e-003**	**6.0000e-005**	**8.4000e-003**	**2.2500e-003**	**6.0000e-005**	**2.3000e-003**	**0.0000**	**10.2046**	**10.2046**	**3.0000e-004**	**0.0000**	**10.2120**

3.7 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4400e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

3.7 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.2000e-004	1.3400e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4183	0.4183	1.0000e-005	0.0000	0.4185
Total	**1.9000e-004**	**1.2000e-004**	**1.3400e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4183**	**0.4183**	**1.0000e-005**	**0.0000**	**0.4185**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0587	0.0493	7.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7500e-003**	**0.0587**	**0.0493**	**7.0000e-005**		**2.0600e-003**	**2.0600e-003**		**2.0600e-003**	**2.0600e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

3.7 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.2000e-004	1.3400e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4183	0.4183	1.0000e-005	0.0000	0.4185
Total	**1.9000e-004**	**1.2000e-004**	**1.3400e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4183**	**0.4183**	**1.0000e-005**	**0.0000**	**0.4185**

3.8 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**1.1855**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.8 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.0000e-004	3.3000e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0296	1.0296	2.0000e-005	0.0000	1.0301
Total	**4.6000e-004**	**3.0000e-004**	**3.3000e-003**	**1.0000e-005**	**1.2600e-003**	**1.0000e-005**	**1.2700e-003**	**3.4000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0296**	**1.0296**	**2.0000e-005**	**0.0000**	**1.0301**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**1.1851**	**0.0118**	**9.1600e-003**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.8 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.0000e-004	3.3000e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	1.0296	1.0296	2.0000e-005	0.0000	1.0301
Total	**4.6000e-004**	**3.0000e-004**	**3.3000e-003**	**1.0000e-005**	**1.2600e-003**	**1.0000e-005**	**1.2700e-003**	**3.4000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0296**	**1.0296**	**2.0000e-005**	**0.0000**	**1.0301**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2334	1.0315	2.3887	8.7300e-003	0.7878	7.2200e-003	0.7951	0.2114	6.7400e-003	0.2182	0.0000	802.8546	802.8546	0.0289	0.0000	803.5767
Unmitigated	0.2427	1.0880	2.6072	9.7800e-003	0.8933	8.0300e-003	0.9013	0.2397	7.4900e-003	0.2472	0.0000	899.8553	899.8553	0.0315	0.0000	900.6424

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	741.02	741.02	741.02	1,711,465	1,509,512
City Park	0.00	0.00	0.00		
Strip Mall	447.45	447.45	447.45	689,088	607,775
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,188.47	1,188.47	1,188.47	2,400,553	2,117,288

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
City Park	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
Strip Mall	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
Unenclosed Parking with Elevator	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.0656	92.0656	8.1200e-003	1.6800e-003	92.7693
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	146.6552	146.6552	0.0129	2.6800e-003	147.7760
NaturalGas Mitigated	6.1500e-003	0.0527	0.0235	3.4000e-004		4.2500e-003	4.2500e-003		4.2500e-003	4.2500e-003	0.0000	60.8874	60.8874	1.1700e-003	1.1200e-003	61.2492
NaturalGas Unmitigated	7.8100e-003	0.0669	0.0299	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	77.2926	77.2926	1.4800e-003	1.4200e-003	77.7519

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.37941e+006	7.4400e-003	0.0636	0.0271	4.1000e-004		5.1400e-003	5.1400e-003		5.1400e-003	5.1400e-003	0.0000	73.6105	73.6105	1.4100e-003	1.3500e-003	74.0479
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	69000	3.7000e-004	3.3800e-003	2.8400e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6821	3.6821	7.0000e-005	7.0000e-005	3.7040
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.8100e-003**	**0.0669**	**0.0299**	**4.3000e-004**		**5.4000e-003**	**5.4000e-003**		**5.4000e-003**	**5.4000e-003**	**0.0000**	**77.2926**	**77.2926**	**1.4800e-003**	**1.4200e-003**	**77.7519**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.08954e+006	5.8700e-003	0.0502	0.0214	3.2000e-004		4.0600e-003	4.0600e-003		4.0600e-003	4.0600e-003	0.0000	58.1418	58.1418	1.1100e-003	1.0700e-003	58.4873
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	51450	2.8000e-004	2.5200e-003	2.1200e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7456	2.7456	5.0000e-005	5.0000e-005	2.7619
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.1500e-003**	**0.0527**	**0.0235**	**3.4000e-004**		**4.2500e-003**	**4.2500e-003**		**4.2500e-003**	**4.2500e-003**	**0.0000**	**60.8874**	**60.8874**	**1.1600e-003**	**1.1200e-003**	**61.2492**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	667074	99.4883	8.7700e-003	1.8200e-003	100.2486
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	157200	23.4450	2.0700e-003	4.3000e-004	23.6242
Unenclosed Parking with Elevator	159057	23.7219	2.0900e-003	4.3000e-004	23.9032
Total		**146.6552**	**0.0129**	**2.6800e-003**	**147.7760**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	488004	72.7815	6.4200e-003	1.3300e-003	73.3378
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	82998	12.3784	1.0900e-003	2.3000e-004	12.4730
Unenclosed Parking with Elevator	46302.7	6.9056	6.1000e-004	1.3000e-004	6.9584
Total		**92.0656**	**8.1200e-003**	**1.6900e-003**	**92.7693**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8223	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Unmitigated	0.8347	0.0154	1.2873	4.3000e-004		0.0249	0.0249		0.0249	0.0249	2.4643	1.9198	4.3841	0.0134	0.0000	4.7183

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0124	1.8400e-003	0.1128	3.7000e-004		0.0184	0.0184		0.0184	0.0184	2.4643	0.0000	2.4643	0.0115	0.0000	2.7523
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8347**	**0.0154**	**1.2873**	**4.3000e-004**		**0.0249**	**0.0249**		**0.0249**	**0.0249**	**2.4643**	**1.9198**	**4.3841**	**0.0134**	**0.0000**	**4.7182**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8222**	**0.0135**	**1.1744**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8500e-003**	**0.0000**	**1.9660**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.7153	0.3104	7.5200e-003	24.7154
Unmitigated	16.8643	0.3728	9.0200e-003	28.8718

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.2943 / 6.48991	14.9612	0.3365	8.1300e-003	25.7969
City Park	0 / 0.571911	0.2985	3.0000e-005	1.0000e-005	0.3008
Strip Mall	1.11109 / 0.680989	1.6046	0.0363	8.8000e-004	2.7741
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8643**	**0.3728**	**9.0200e-003**	**28.8718**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.56901 / 6.48991	13.0215	0.2801	6.7800e-003	22.0455
City Park	0 / 0.571911	0.2985	3.0000e-005	1.0000e-005	0.3008
Strip Mall	0.92487 / 0.680989	1.3953	0.0302	7.3000e-004	2.3692
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.7153**	**0.3104**	**7.5200e-003**	**24.7154**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.4897	0.2653	0.0000	11.1229
Unmitigated	17.9586	1.0613	0.0000	44.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	72.68	14.7534	0.8719	0.0000	36.5509
City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**17.9586**	**1.0613**	**0.0000**	**44.4917**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	18.17	3.6884	0.2180	0.0000	9.1377
City Park	0.01	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Strip Mall	3.9375	0.7993	0.0472	0.0000	1.9802
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.4897**	**0.2653**	**0.0000**	**11.1229**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.02	0.6	268	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (175 - 300 HP)	1.3000e-004	3.7000e-004	3.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0612	0.0612	1.0000e-005	0.0000	0.0615
Total	**1.3000e-004**	**3.7000e-004**	**3.4000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0612**	**0.0612**	**1.0000e-005**	**0.0000**	**0.0615**

11.0 Vegetation

APPENDIX C

HOUSING NEEDS ASSESSMENT

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KEYSER MARSTON ASSOCIATES

HOUSING NEEDS ASSESSMENT

MENLO FLATS PROJECT

Prepared for:
City of Menlo Park

Prepared by:
Keyser Marston Associates, Inc.

June 2021

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1.0 EXECUTIVE SUMMARY

This Housing Needs Assessment (HNA) provides an analysis of housing supply and housing demand impacts of the proposed Menlo Flats Project (Project) in the City of Menlo Park (City) and evaluates the potential that the proposed Project could contribute to displacement of existing residents within the City of East Palo Alto and the Belle Haven neighborhood of Menlo Park, two proximate communities identified as having risk factors for displacement. The HNA is part of a range of analyses provided to assist in the decision-making and entitlement process for the proposed Project and accompanies the Environmental Impact Report (EIR). An HNA is, however, not a requirement of the California Environmental Quality Act (CEQA). Preparation of this HNA is required under the terms of a 2017 settlement agreement between the cities of Menlo Park and East Palo Alto[1].

The proposed Project is located on an approximately 1.38 acre site at 165 Jefferson Drive in Menlo Park. The proposed Project includes 158 new multifamily rental units and 15,000 square feet of non-residential space which includes 13,400 square feet of new office space and approximately 1,600 square feet of ground floor community amenity. The proposed Project replaces a single-story, approximately 24,311 square foot commercial office building. A summary of the proposed Project is provided in Table 1-1, below.

Table 1-1. Project Summary

	Residential Units	Building Area
Proposed		
Apartments	158 Units	154,729 SF
Community Amenity (Café)		1,600 SF
Office		13,400 SF
		169,729 SF
Existing Building [To Be Demolished]		
Commercial Building		24,311 SF
Net Change With Project	158 Units	145,418 SF

Note: building area excludes parking structure

[1] In 2016, the City updated its General Plan, specifically the land use and circulation elements, commonly referred to as ConnectMenlo. The City completed and certified a program level EIR for ConnectMenlo, which determined that there would be a less than significant impact on population and housing, except cumulative impacts projected to be reduced to less than significant following an update of ABAG regional forecasts. However, pursuant to the terms of the 2017 City of East Palo Alto v. City of Menlo Park Settlement Agreement, which settled the lawsuit regarding the ConnectMenlo EIR, preparation of this HNA is required.

1.1 Housing Availability

The term "housing availability" is used to refer to the combined net housing supply and housing demand impacts of the proposed Project taking into consideration:

a) Construction of new housing units, which adds to housing availability through additions to the housing supply;

b) Removal of existing jobs, which adds to housing availability by reducing demand for housing by employees; and

c) Addition of new jobs, which reduces housing availability by increasing demand for housing by employees.

HNAs prepared for non-residential projects in Menlo Park have not used the term "housing availability" because these projects impact only the demand, or need, for housing. For purposes of a residential project, a new term is introduced to describe combined effects on supply and demand for housing.

1.2 Net Impact on Housing Availability

The proposed Project is estimated to increase the number of available housing units by 106 units as shown in Table 1-2 and Chart 1. This estimate reflects the combined effect of:

1. The 158 new residential units added to the housing supply by the proposed Project.
2. A 5-unit increase in housing availability from removal of existing on-site jobs, which reduces worker housing demand. Removal of the existing buildings removes an estimated 9 on-site jobs. Removal of 9 jobs translates to a net reduction in employee[2] housing demand of 5 units based on 1.91 workers per housing unit[3]. See Section 4 for supporting analysis.
3. A 28-unit decrease in housing availability due to added housing demand from new on-site workers within the new office and ground floor community amenity / cafe space and on-site property management and maintenance for the residential units. A combined 53 jobs are estimated to be added on-site, which translates into an estimated employee housing demand of 28 units based on 1.91 workers per housing unit. See Section 4 for supporting analysis.

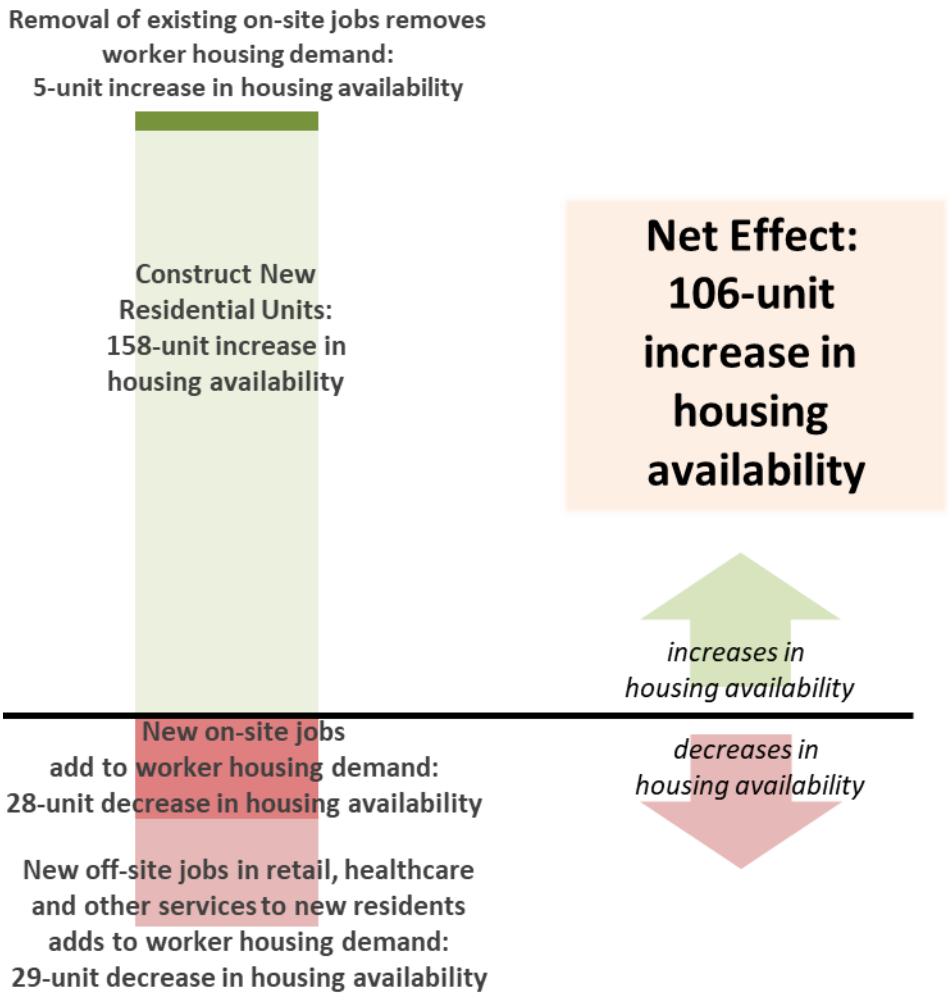
[2] The terms "worker" and "employee" are used interchangeably.

[3] This factor reflects the average number of workers per working household and is derived from U.S. Census data. See additional discussion under Step 2 on page 21.

4. A 29-unit decrease in housing availability due to added housing demand by workers in off-site services to new residents such as restaurants, retail, education, medical care and others. This estimate reflects consideration of "multiplier effects" of household spending by residents of the new units consistent with the 2017 settlement agreement. Analysis supporting this estimate is provided in Section 5.

Table 1-2. Estimated Net Impact of Project on Housing Availability	
New Residential Units	158 Units
Reduced Housing Demand from removal of on-site jobs	5 Units
Less: Added Housing Demand from new on-site jobs	(28 Units)
Less: Added Housing Demand off-site workers in services to new residents	(29 Units)
Net Increase in Available Housing	**106 Units**

Chart 1 - Net Impact on Housing Availability from Proposed Project



1.3 Net Impact on Housing Availability by Income Category

The net impact on housing availability is estimated for each of the following six affordability categories, each expressed in relation to local Area Median Income (AMI):

- Extremely Low Income – households up to 30% of AMI;
- Very Low Income – households over 30% up to 50% of AMI;
- Low Income – households over 50% up to 80% of AMI;
- Moderate Income – households over 80% up to 120% of AMI;
- Above Moderate Income – households over 120% up to 150% of AMI; and
- Over 150% of AMI – households above 150% of AMI.

According to the California Department of Housing and Community Development (HCD), the AMI for a family of four in San Mateo County, is $149,600 as of 2021. Section 2 provides income limits applicable to each of the identified income categories. The affordability categories from 0% through 120% AMI reflect those addressed by statewide housing programs such as the Regional Housing Needs Allocation (RHNA) process. In addition, the Above Moderate Income tier is included in the analysis for consistency with HNAs prepared for prior projects in Menlo Park and to provide decision makers with information regarding a broad spectrum of housing affordability levels. Above Moderate Income households also face affordable housing challenges in Menlo Park as well as in the broader Bay Area. In fact, due to the high cost of housing, housing affordability challenges also extend to households earning over 150% of AMI[4], particularly in the for-sale housing market. The Over 150% of AMI category captures households with incomes that exceed 150% AMI and includes all households not included within one of the other income categories.

Scenarios Addressed

The analysis of housing availability impacts addresses two scenarios proposed by the Project applicant for compliance with the City's Below Market Rate (BMR) affordable housing requirement:

- **Scenario 1** – BMR units are provided at a level affordable to Low Income households.

- **Scenario 2** – BMR units are distributed between the Very Low, Low and Moderate Income categories. Scenario 2 utilizes a provision of the City's BMR housing program

[4] An income of approximately 221% of AMI, is estimated to be needed to afford the median priced home in Menlo Park. The median priced home in Menlo Park is $2.35 million based on home sales from December 2019 through December 2020 from real estate data service provider CoreLogic. Estimates assume a down payment of 30% based on the median down payment for home purchases with a mortgage in Menlo Park estimated from CoreLogic data during this period, 35% of income spent on housing, and a mortgage interest rate of 3.1% based on the average 30-year fixed mortgage rate from January through December 2020 from Freddie Mac Primary Mortgage Market Survey.

guidelines that allows flexibility in the affordability mix of BMR units, provided the mix is roughly equivalent to providing all BMR units at Low Income.

Net Impact on Housing Availability by Income Level

The estimated net impacts on housing availability by income category are presented in Tables 1-3 and 1-4, for Scenario 1 and 2, respectively.

In Scenario 1, with Low Income BMR units, findings represent the net result of:

1) 158 new housing units added to the housing supply including 21 Below Market Rate (BMR) units affordable to Low Income, 98 market rate studio units estimated to be affordable to Moderate Income, and 39 market rate four-bedroom units affordable to the Over 150% AMI category;

2) 5 units of increased housing availability across a range of income levels from removal of existing on-site jobs and related worker housing demand;

3) A 28-unit decrease in housing availability across a range of income levels from addition of new on-site jobs and related worker housing demand; and

4) A 29-unit decrease in housing availability due to new housing demand by workers in services to new residents.

The analysis reflects the Project applicant's proposal for compliance with the City's BMR affordable housing requirement by providing Low Income on-site BMR units.

The net result is a 106-unit increase in available housing across various income categories, comprised of five Low, 90 Moderate and 30 Over 150% AMI units, which gross increase is partially offset by decreases in housing availability for Extremely Low, Very Low and Above Moderate Income households of seven, six and six units, respectively. The calculations are shown in Table 1-3.

Low Income units to be constructed as part of the proposed Project would be deed-restricted Low Income BMR units. The units estimated to be affordable to Moderate Income in Scenario 1 consist of market rate studio units and would **not** be deed-restricted BMR units. Market rate rents for the studio units are estimated to fall within a range that is affordable to Moderate Income households based on the small size of the units. However, as market rate units, the units would not be restricted for occupancy by Moderate Income households and could be occupied by households that have incomes that exceed income criteria for Moderate Income. Market rents are also free to adjust in response to rental market conditions and therefore affordability of the market rate units may adjust as well.

Table 1-3. Net Impacts on Housing Availability by Income Category, Scenario 1 – Low Income BMR Units							
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
1. Increase in available housing from construction of new units	0	0	21	98	0	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	0	1	3	1	0	0	5
3. Decrease in available housing from increase in housing demand by new on-site workers	(2)	(2)	(8)	(5)	(4)	(7)	(28)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	(5)	(5)	(11)	(4)	(2)	(2)	(29)
Net Increase in Housing Availability (1)	**(7)**	**(6)**	**5**	**90**	**(6)**	**30**	**106**

(1) Negative figures represent an increase in housing demand that is not offset by added housing supply.

In Scenario 2, with Very Low, Low and Moderate Income BMR units, the 106-unit net increase in available housing is comprised of three 95 Moderate and 30 Over 150% AMI units, partially offset by decreases in housing availability for Extremely Low, Very Low, Low and Above Moderate Income of seven, two, four and six units, respectively. Calculations for Scenario 2 are shown in Table 1-4 and are the same as Scenario 1 except that the BMR units are a mix of Very Low, Low, and Moderate Income. Moderate Income units to be constructed as part of the proposed Project in Scenario 2 consist of five four-bedroom BMR units deed restricted for occupancy by Moderate Income households and 98 market rate studio units that are estimated to be affordable to Moderate Income but that would **not** be deed-restricted BMR units and could be occupied by households with incomes exceeding the Moderate Income level.

Table 1-4. Net Impacts on Housing Availability by Income Category, Scenario 2 – Very Low, Low and Moderate Income BMR Units							
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
1. Increase in available housing from construction of new units	0	4	12	103	0	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	0	1	3	1	0	0	5
3. Decrease in available housing from increase in housing demand by new on-site workers	(2)	(2)	(8)	(5)	(4)	(7)	(28)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	(5)	(5)	(11)	(4)	(2)	(2)	(29)
Net Increase in Housing Availability (1)	**(7)**	**(2)**	**(4)**	**95**	**(6)**	**30**	**106**

Findings represent the total estimated housing availability impacts throughout the region and include impacts both within Menlo Park as well as in other jurisdictions where workers who hold on-site or off-site jobs live. See Section 1.4 for an estimate of impacts within Menlo Park.

Following is a brief description of the approach used for each component of the analysis.

(1) *Residential units* – the affordability level of new residential units reflects the Project applicant's proposal for compliance with the City's BMR Program guidelines, which as described above, includes two scenarios regarding the affordability mix of the BMR units. For the market rate units, affordability level is based on estimated market rate rents and the household income necessary to afford these rents. See Section 3 for additional description.

(2) *Increase in available housing from removal of on-site jobs* – The decrease in worker housing demand starts with an estimate of the decrease in employment with removal of the existing commercial building. Ratios derived from the U.S. Census are used to translate the decrease in employment to a decrease in worker housing demand. The decrease in worker housing demand by income category is identified by comparing estimated household incomes of workers to household income limits for the six affordability categories addressed in the analysis. Housing demand by income applicable to the existing commercial building is estimated using publicly available data on worker occupations and is reflective of the existing commercial tenant, Theme Party Productions, a company that designs and produces special events. See Section 4 for additional description.

(3) *Decrease in available housing from addition of on-site jobs* – The increase in worker housing demand from addition of new on-site jobs starts with an estimate of the increase in employment in the new office and community amenity / café space and on-site property management of the residential units. Ratios derived from the U.S. Census are used to translate the number of jobs into total worker housing demand. Worker housing demand by income category is estimated using publicly available data on worker compensations and reflect a tech-oriented tenant within the office space. See Section 4 for additional description.

(4) *Decrease in available housing due to added off-site jobs in services to new residents* – The analysis estimates the income of households renting the new residential units, their demand for goods and services such as groceries, restaurants, and healthcare, the off-site jobs created by the additional demand, and the housing needs by income level of workers who will hold these new jobs. See Section 5 for additional description.

1.4 Menlo Park Share of Net Impact on Housing Availability

This section provides an estimate of the share of the proposed Project's impacts on housing availability that occur in the City of Menlo Park. Findings of the prior section represent total estimated impacts regardless of the jurisdiction in which impacts occur. The portion of total housing availability impacts that occur in Menlo Park are estimated using the following approach:

(1) All 158 residential units added by the proposed Project are in the City of Menlo Park; therefore, all 158 units are identified as additional housing supply in Menlo Park.

(2) None of the five total units of increased housing availability from removal of on-site jobs are estimated to be in Menlo Park as application of the existing 5.9% share of Menlo Park workers who live in the City results in fraction that rounds to zero. The City Council has expressed an interest in improving the jobs housing balance and obtaining data to inform the goal of increasing the number of workers who live and work in Menlo Park. Therefore, for informational purposes, the report provides an upper estimate of housing units in Menlo Park based on a 20% commute share, which was a goal identified in the City's 2000 Commercial Linkage Fee Nexus Study. Using this upper estimate, one of the five-unit increase in housing availability from removal of on-site jobs would be estimated to be within Menlo Park.

(3) Two of 28 units of added regional housing demand from new on-site jobs is estimated to be in Menlo Park based on the existing 5.9% share of Menlo Park workers who live in the City. The upper estimate using a 20% commute share would be six units of regional housing demand within Menlo Park.

(4) Two of 29 total units of added regional housing demand from new off-site jobs is estimated to be within Menlo Park based on the existing 5.9% share of Menlo Park workers who live in the City. The upper estimate using a 20% commute share would be six units of regional housing demand within Menlo Park.

The above approach results in a net increase of 154 units of housing availability in Menlo Park, assuming the current commute share is maintained (154 units = 158 new units minus two units of new on-site employee housing demand and two units of new off-site employee housing demand in Menlo park). The upper estimate provided for informational purposes with an increased commute share goal of 20% would result in a net increase in housing availability in Menlo Park of 147 units (147 units = 158 new units plus one unit of added housing availability from removal of on-site jobs minus six units of new on-site employee housing demand and six units of new off-site employee housing demand in Menlo park). The difference between the current commute share and the increased commute share is a total of seven units.

Table 1-5 identifies the breakout of the net impact on housing availability in Menlo Park by income category for the two scenarios regarding provision of BMR units and two commute share alternatives.

Table 1-5. Estimated Menlo Park Share of Net Impacts on Housing Availability							
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Scenario 1 – Low Income BMR Units							
Current Commute Share (5.9%)	-	-	19	97	-	38	154
Increased Commute Share (20%)	(1)	(2)	18	96	(1)	37	147
Scenario 2 – Very Low, Low and Moderate Income BMR Units							
Current Commute Share (5.9%)	-	4	10	102	-	38	154
Increased Commute Share (20%)	(1)	2	9	101	(1)	37	147

Scenario 1 - Low Income BMR Units

In Scenario 1, with Low Income BMR units and assuming the current 5.9% commute share, the estimated 154-unit net increase in housing availability in Menlo Park consists of 19 Low, 97 Moderate and 38 Over 150% AMI units.

With the upper estimate using a 20% commute share assumption, the estimated 147-unit net increase in housing availability in Menlo Park consists of 18 Low, 96 Moderate and 37 Over 150% AMI units, offset by a net decrease in housing availability in the Extremely Low, Very Low and Above Moderate-Income categories of one, two and one units, respectively. Differences from the current commute share scenario are driven by the greater share of new on- and off-site workers assumed to live in Menlo Park with a 20% commute share.

Scenario 2 – Very Low, Low and Moderate Income BMR Units

In Scenario 2, with Very Low, Low and Moderate Income BMR units, the estimated 154-unit net increase in housing availability in Menlo Park consists of four Very Low, ten Low, 102 Moderate and 38 Over 150% AMI units, assuming the current commute share.

With the upper estimate using a 20% commute share, the 147-unit net increase in housing availability in Menlo Park consists of two Very Low, nine Low, 101 Moderate and 37 Over 150% AMI units, partially offset by a one-unit decrease in both the Extremely Low and Above Moderate Income categories.

See Section 6.2 for the supporting analysis.

1.5 Displacement Analysis

Displacement occurs when housing or neighborhood conditions force existing residents to move, or households feel like their move is involuntary. Displacement can be caused by a range of physical, economic and social factors including but not limited to foreclosure, condominium conversion, building deterioration or condemnation, increased taxes, natural disasters, eminent

domain and increases in housing costs[5, 6, 7]. The HNA is focused on economic drivers of displacement, specifically the potential for the proposed Project to affect the local housing market and contribute to increasing housing costs.

While displacement is not an impact for the purposes of the California Environmental Quality Act (CEQA), displacement has become an increasing regional concern in the Bay Area. A map produced by the Urban Displacement Project, a research and action initiative of UC Berkeley that aims to understand and describe the nature of gentrification and displacement, identifies numerous communities as undergoing displacement or at risk of displacement that extend from San Francisco down the Peninsula to many neighborhoods in San Jose and the East Bay.

The displacement analysis addresses the potential for the proposed Project to contribute to displacement of existing residents in two nearby communities, the City of East Palo Alto (East Palo Alto) and Menlo Park's Belle Haven neighborhood (Belle Haven). These communities have risk factors for displacement based on their relatively lower-income existing population that includes a high percentage of households who spend 35% or more of their income on housing. They are identified by the Urban Displacement Project[8] as experiencing on-going gentrification and/or displacement or being at risk of displacement. Another recent study of baseline housing conditions in the Belle Haven neighborhood, City of East Palo Alto, and North Fair Oaks neighborhood, prepared by the UC Berkeley Center for Community Innovation and its Y-PLAN initiative, identified similar conclusions[9].

Because the proposed Project adds to the supply of market rate and affordable housing and results in a net increase in available housing overall, the proposed Project is not anticipated to contribute to displacement in East Palo Alto or Belle Haven. This conclusion is supported by recent research on localized market effects of new housing development indicating a reduction

[5] Zuk, M. et. al. 2017. Gentrification, Displacement, and the Role of Public Investment. Journal of Planning Literature. Journal of Planning Literature 1-14.

[6] Center for Community Innovation (2020). Investment and Disinvestment as Neighbors, A Study of Baseline Housing Conditions in the Bay Area Peninsula.

[7] Bradshaw, K. (2019). Uneven Ground: How unequal land use harms communities in southern San Mateo County. Palo Alto Online. https://paloaltoonline.atavist.com/uneven-ground.

[8] Zuk, M., & Chapple, K. (2019). Urban Displacement Project. http://www.urbandisplacement.org/

[9] Center for Community Innovation (2020). Investment and Disinvestment as Neighbors, A Study of Baseline Housing Conditions in the Bay Area Peninsula.

or moderating effect on market rents in the vicinity[10]. Increasing the availability of market rate and affordable housing will tend to moderate or counteract displacement pressures to some degree by relieving market pressures on existing housing stock.

[10] Asquith, Brian J., Evan Mast, and Davin Reed. 2019. "Supply Shock Versus Demand Shock: The Local Effects of New Housing in Low-Income Areas." Upjohn Institute Working Paper 19-316. W. E. Upjohn Institute for Employment Research. https://doi.org/10.17848/wp19-316

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Mast, Evan. 2019. "The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market" Upjohn Institute Working Paper 19-307 W. E. Upjohn Institute for Employment Research. https://research.upjohn.org/cgi/viewcontent.cgi?article=1325&context=up_workingpapers

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2.0 INTRODUCTION

This Housing Needs Assessment (HNA) provides an analysis of the proposed Project's impact on housing supply and housing demand and evaluates its potential to contribute to displacement of existing residents of the City of East Palo Alto (East Palo Alto) and the Belle Haven neighborhood of Menlo Park (Belle Haven), two proximate communities identified as having risk factors for displacement. The report has been prepared by Keyser Marston Associates (KMA) for the City of Menlo Park under a subcontract agreement with LSA Associates, prime consultant responsible for preparation of the Environmental Impact Report (EIR).

In 2016, the City updated its General Plan, specifically the land use and circulation elements, and its Zoning Ordinance (commonly referred to as ConnectMenlo). The City completed and certified a program level EIR for ConnectMenlo, which determined that there would be a less than significant impact on population and housing, except cumulative impacts projected to be reduced to less than significant following an update of ABAG regional forecasts. However, pursuant to the terms of the 2017 City of East Palo Alto v. City of Menlo Park Settlement Agreement, which settled the lawsuit regarding the ConnectMenlo EIR, preparation of this HNA is required. This HNA has been prepared consistent with the terms of that settlement agreement.

The following housing-related topics are addressed in this HNA:

1) Net impact on housing availability from the proposed Project, by income level, based on the combined effects of:
    a. Added residential units;
    b. Reduced worker housing need with removal of the existing commercial building;
    c. Added housing needs for workers in new office and ground floor community amenity / café space; and
    d. Added housing needs for workers in off-site retail and other services to residents of the new residential units.

2) Share of housing availability impacts estimated to occur within the City of Menlo Park; and

3) Potential for the proposed Project to contribute to rising housing costs and displacement of existing residents in East Palo Alto and Belle Haven.

These housing-related impacts are not required to be analyzed under the California Environmental Quality Act (CEQA) since economic or social changes are not considered significant effects on the environment. Nevertheless, this information is required by the settlement agreement and may be of interest to decision-makers and/or the public in evaluating the merits of the proposed Project.

2.1 Project Description

Menlo Park Flats Venture, LLC (Project Sponsor) is proposing construction of a new 158-unit multifamily rental apartment building that includes approximately 13,400 square feet of office space and 1,600 square feet of ground floor community amenity. The proposed Project is located on an approximately 1.38 acre site at 165 Jefferson Drive in Menlo Park. The proposed Project replaces an existing commercial building on the Project site encompassing 24,311 square feet of building area. Table 2-1 provides a summary of the proposed Project.

Table 2-1. Project Summary

	Residential Units	Building Area
Proposed		
Apartments	158 Units	154,729 SF
Community Amenity (Café)		1,600 SF
Office		13,400 SF
		169,729 SF
Existing Commercial Building [To Be Demolished]		(24,311 SF)
Net Change With Project	158 Units	145,418 SF

Parking structure is not included in building area totals.

2.2 Income Definitions

The income levels or tiers used in the analysis are expressed in relation to local Area Median Income (AMI). For example, Extremely Low Income is defined as households earning up to 30% of AMI. The AMI for each county or group of counties is issued annually by the U.S. Department of Housing and Urban Development (HUD), and released by the California Department of Housing and Community Development. Most housing programs and policies in California and its jurisdictions utilize these income definitions. The City of Menlo Park is covered by and utilizes the AMI information provided for San Mateo County.

Per HCD and statewide programs, the analysis includes households earning less than 120% AMI. In addition, an Above Moderate Income tier covering 120% to 150% AMI is presented in this analysis because this income tier also faces affordable housing challenges in Menlo Park and the greater Bay Area. In fact, due to the high cost of housing in Menlo Park, housing affordability challenges even extend to households earning more than 150% of AMI[11], especially

[11] An income of approximately 221% of AMI, is estimated to be needed to afford the median priced home in Menlo Park. The median priced home in Menlo Park is $2.35 million based on home sales from December 2019 through December 2020 from real estate data service provider CoreLogic. Estimates assume a down payment of 30% based on the median down payment for home purchases with a mortgage in Menlo Park estimated from CoreLogic data during this period, 35% of income spent on housing, and a mortgage interest rate of 3.1% based on the average 30-year fixed mortgage rate from January through December 2020 from Freddie Mac Primary Mortgage Market Survey.

in the for-sale housing market. As with HNAs prepared for prior projects in Menlo Park, the Above Moderate Income tier was included to provide decision makers more information on the housing needs of a broad spectrum of housing affordability levels.

In summary, the income tiers used in the analysis are:

- Extremely Low Income – households up to 30% of AMI;
- Very Low Income – households over 30% up to 50% of AMI;
- Low Income – households over 50% up to 80% of AMI;
- Moderate Income – households over 80% up to 120% of AMI;
- Above Moderate Income – households over 120% up to 150% of AMI; and
- Over 150% of AMI – households above 150% of AMI.

The 2021 income limits by household size are presented below in Table 2-2.

Table 2-2. 2021 Household Income Limits

		Income Limit by Household Size					
Income Category	**Percent of AMI**	1-person	2-person	3-person	4-person	5-person	6-person
Extremely Low	30% of AMI	$38,400	$43,850	$49,350	$54,800	$59,200	$63,600
Very Low Income	50% of AMI	$63,950	$73,100	$82,250	$91,350	$98,700	$106,000
Low Income	80% of AMI	$102,450	$117,100	$131,750	$146,350	$158,100	$169,800
Moderate Income	120% of AMI	$125,650	$143,600	$161,550	$179,500	$193,850	$208,200
Above Moderate	150% of AMI	$157,050	$179,550	$202,000	$224,400	$242,350	$260,350
Median Income	100% of AMI	$104,700	$119,700	$134,650	$149,600	$161,550	$173,550

AMI = Area Median Income, San Mateo County 2021
Source: California Department of Housing and Community Development

2.3 Report Organization

This report is organized into seven sections and one appendix:

- Section 1.0 provides an Executive Summary;
- Section 2.0 provides an Introduction;
- Section 3.0 identifies the income categories applicable to the new residential units;
- Section 4.0 provides an analysis of worker housing needs from removal of existing on-site jobs and addition of new on-site jobs;
- Section 5.0 estimates housing demand by income for off-site workers in services to new residents such as restaurants, retail and health care;
- Section 6.0 combines the findings of Sections 3, 4 and 5 to estimate the net impact on housing availability and the share of net impacts occurring within the City of Menlo Park;
- Section 7.0 provides a discussion of the potential for the proposed Project to contribute to displacement of existing residents in East Palo Alto and Belle Haven; and

- Appendix A provides supporting tables on worker occupation and incomes.

2.4 Data Sources and Qualifications

The analysis in this report has been prepared using the best and most recent data available. Local data was used wherever possible. Other sources, such as the U.S. Census Bureau and U.S. Bureau of Labor Statistics were used extensively. While KMA believes all sources utilized are sufficiently accurate for the purposes of the analysis, KMA cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these or other sources.

3.0 HOUSING UNITS ADDED BY THE PROJECT BY INCOME CATEGORY

This section estimates how the 158 new residential units added by the proposed Project will be distributed by income or affordability category.

3.1 Below Market Rate Housing Units Required

The proposed Project would include 21 Below Market Rate (BMR) affordable units. The City's Below Market Rate Housing Program codified in Chapter 16.96 of the City's Zoning Code requires residential development projects with twenty or more units to provide 15% BMR affordable units. The 21 required BMR units is determined based on applying the 15% requirement to the 138-unit "base project" before consideration of additional units permitted under density bonus provisions of the City's BMR Program (15% X 138 = 21 BMR units required). Therefore, within the 138-unit base project, there are 117 market rate units and 21 BMR units. The density bonus provisions of the BMR ordinance allow one additional market rate unit for each required BMR unit, resulting in up to 21 bonus market rate units allowed, of which the applicant has proposed 20 bonus market rate units. Therefore, in total, there are 137 market rate units (117 base project + 20 bonus market rate units) and 21 BMR units for a total of 158 units in the proposed Project. Table 3-1 provides a summary.

Table 3-1. Market Rate and BMR Units

	Market Rate Units	BMR Units	Total Units
Zoning Ordinance	117	21 (15% of base project)	138
BMR Density Bonus	20 proposed (of 21 allowed - one for each BMR unit)	0	20
Total	137	21	158

BMR rental units are required by the City's BMR ordinance and guidelines to be affordable to Low Income households. Alternative affordability levels are permitted under the City's BMR guidelines if determined to be roughly equivalent to providing all BMR units at Low Income. The Project applicant has proposed the following two scenarios for the provision of BMR units:

- **Scenario 1** – all BMR units are affordable to Low Income households; and

- **Scenario 2** – a mix of Very Low, Low and Moderate Income BMR units are provided. The City's BMR housing program allows flexibility in the BMR unit affordability mix if it is roughly equivalent to providing all of the units at Low Income. Scenario 2 utilizes this flexibility in proposing a BMR unit mix that consists of four Very Low, 12 Low, and five Moderate Income BMR units.

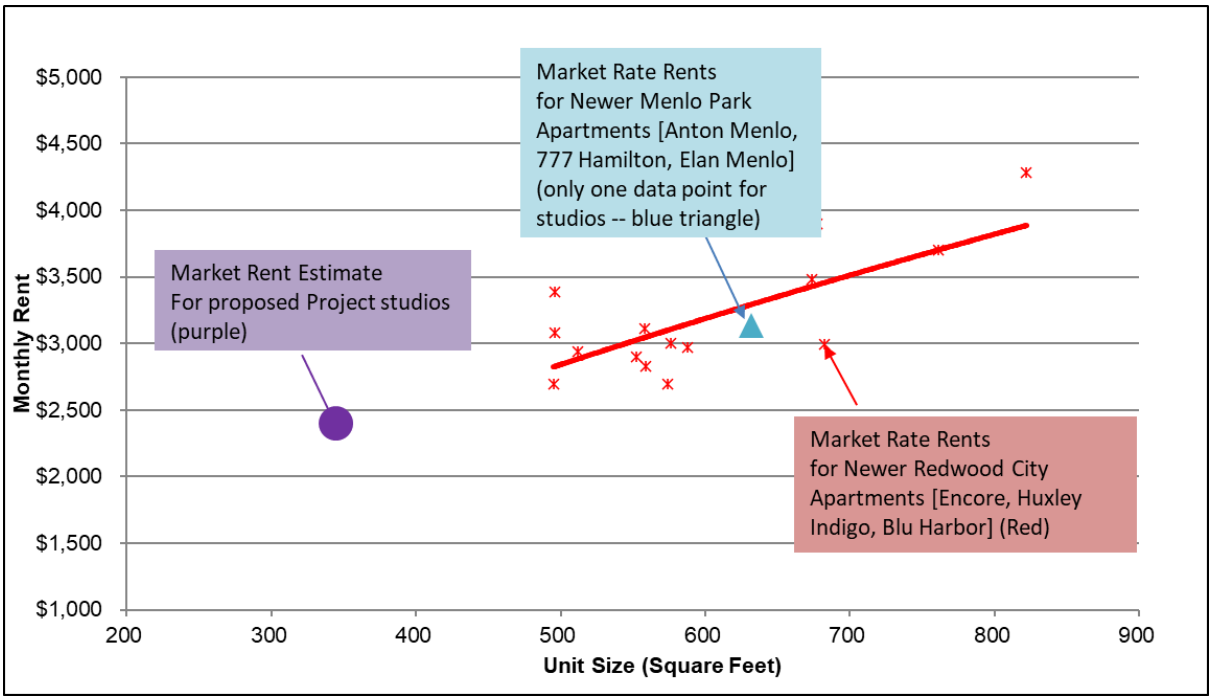
3.2 Affordability Level of Market Rate Units

The proposed Project will include 137 market rate rental units of which 98 are studio units averaging approximately 345 square feet in size and 39 are four-bedroom units averaging approximately 1,625 square feet in size. Market rate studio units are estimated to be affordable to households in the Moderate Income category while market rate four-bedroom units are estimated to be affordable for households over 150% of AMI. Estimated affordability levels are based on estimated market rate rents for the units. Market rate units will not be deed restricted; therefore, the affordability level could change over time as market conditions and the income criteria used to determine affordability level change.

Market rents were estimated by KMA based on three newer rental properties in Menlo Park located on the north side of U.S. 101, the Anton Menlo at 3639 Haven (built 2017), the Elan Menlo at 3645 Haven (built 2017) and 777 Hamilton (built 2016). Data on rents for newer apartment properties in Menlo Park was supplemented with data for newly built apartments in Redwood City including the Encore at 849 Veterans Blvd (built 2019), Huxley at 1355 El Camino Real (built 2018), Indigo at 675 Bradford (built 2016) and Blu Harbor at 1 Blu Harbor Boulevard (built 2017). Market rents reflect data as of June 2020 that was accessed for prior HNAs. From June 2020 through April 2021, rents for available units in the three Menlo Park properties declined an average of 15%. Decreases in rents are consistent with trends experienced for newer apartments elsewhere in the Bay Area and are driven by the work-from-anywhere flexibility many office workers have had during the pandemic. Market rents as of June 2020 are used on the assumption that subsequent decreases in rents are not reflective of longer term conditions and that recent declines in rents will reverse as the pandemic recedes.

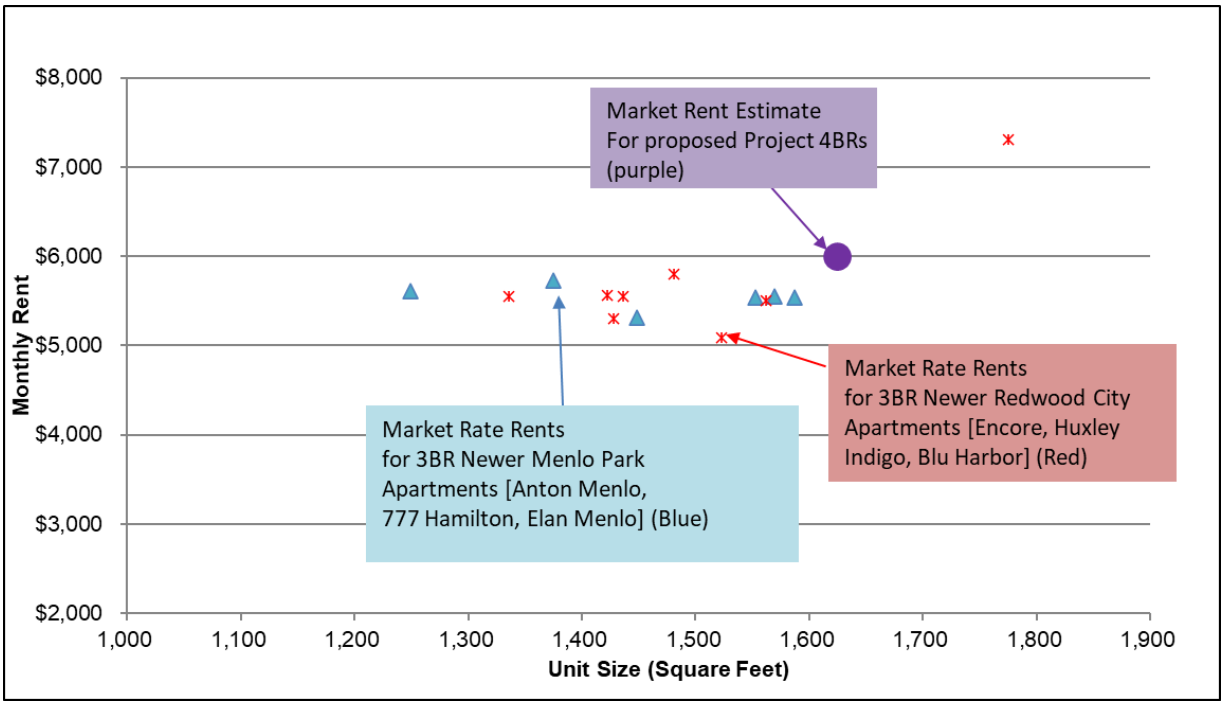
Average rental rates for the comparison properties by bedroom size are shown in Table 3-2 and Charts 1 and 2. Each data point in Charts 1 and 2 represents the average effective market rate rent for units of a specific square footage size. Separate trend lines are fit to actual rents for the Menlo Park comparison properties (blue) and the Redwood City comparison properties (red). Estimated rents for the proposed Project are identified by purple circles. Rents for three bedroom units as used to estimate rents for four bedroom units as there are no four-bedroom units in the comparison properties. Based on the market data and the unit sizes for the proposed Project, studios are estimated to rent for approximately $2,400 per month and four bedrooms for $6,000 per month. Estimated rents for the studios are less than the market comparables due to their smaller size. At an average of 345 square feet, the studios in the proposed Project are approximately 45% smaller on average than the studio units within the comparison properties represented in Table 3-2.

Chart 1 – Newer Studio Apartment Market Rate Rents and Estimated Rents for proposed Project



Source: CoStar and KMA

Chart 2 – Newer Three-Bedroom Market Rate Rents and Estimated Four-Bedroom Rents for proposed Project



Source: CoStar and KMA. Note: trendlines not shown due to limited data.

Table 3-2. Rents for Comparable Apartments and Estimate for Proposed Project						
	Studios			4-Bedrooms		
	Avg Size	Avg Rent	Avg Rent PSF	Avg Size	Avg Rent	Avg Rent PSF
Estimate for Project	345	$2,400	$6.96	1,625	$6,000	$3.69
Comparable Apartments						
Menlo Park North of US101					(3 Br Units)	
Anton Menlo	632	$3,139	$4.97	1,554	$5,536	$3.56
777 Hamilton				1,391	$5,672	$4.08
Elan Menlo Park				1,249	$5,606	$4.49
Redwood City						
Encore	674	$3,478	$5.16	1,399	$5,561	$3.97
Huxley	646	$3,561	$5.51			
Indigo	547	$2,912	$5.32	1,481	$5,799	$3.92
Blu Harbor	588	$2,968	$5.05	1,547	$5,653	$3.65

Source: Effective rents per CoStar, Estimate for proposed Project per KMA.

Market rate rents were then used to estimate the affordability level of the units. As shown in Table 3-3, the market rate studio units are estimated to be affordable to Moderate Income households and four-bedroom units are estimated to be affordable to Over 150% AMI households. While studios are estimated to be affordable at the Moderate Income level, units would not be deed-restricted so it is possible occupants would have incomes that exceed income criteria for Moderate Income and affordability of the units could change over time.

Table 3-3. Estimated Affordability Level Applicable to Market Rate Apartments		
	Studio	4-BR
Estimated Monthly Rent (1)	$2,400	$6,000
Utilities (2)	$118	$265
Total Monthly Rent + Utilities	$2,518	$6,265
Annual Housing Cost	$30,216	$75,180
Percent of Income Spent on Housing (3)	30%	30%
Annual Household Income Required	$100,720	$250,600
2021 Median Income (4)	$104,700	$161,550
Percent of AMI Needed to Afford Market Units	96%	155%
Affordability Level of Market Units	Moderate (not deed restricted)	Over 150% AMI

(1) KMA estimate based on market rents for newer apartment properties in Menlo Park and Redwood City.

(2) Tenant paid utilities estimated based on County Housing Authority utility allowance schedule.

(3) Per California Health and Safety Code Section 50053.

(4) HCD Income Limits for applicable household size for 2021.

3.3 New Residential Units by Income Level

Table 3-4 provides a summary of the income level applicable to the new residential units, combining the findings of Section 3.1 and 3.2.

Scenario 1 includes 21 Low Income BMR units, 98 market rate studio units affordable to Moderate Income and 39 market rate four-bedroom units in the Over 150% AMI category.

Scenario 2 includes four Very Low, 12 Low, and five Moderate Income BMR units, 98 market rate studio units affordable to Moderate Income and 39 market rate four-bedroom units in the Over 150% AMI category.

Table 3-4. Estimated Affordability Level of New Residential Units

	Very Low	Low	Moderate	Moderate	Above Moderate	Over 150% AMI	Total New Residential Units
	BMR units	*BMR units*	*BMR units*	*Market Rate*	*Market Rate*	*Market Rate*	
Scenario 1 - Low Income BMR Units							
Studio	0	15	0	98	0	0	113
4-Bedroom	0	6	0	0	0	39	45
Total	0	21	0	98	0	39	158
Scenario 2 - Very Low, Low and Moderate Income BMR Units							
Studio	3	12	0	98	0	0	113
4-Bedroom	1	0	5	0	0	39	45
Total	4	12	5	98	0	39	158

4.0 CHANGE IN WORKER HOUSING NEEDS FROM REMOVAL OF EXISTING ON-SITE JOBS AND REPLACEMENT WITH NEW ON-SITE JOBS

This section provides an analysis of the change in worker housing need by income level from:

- Removal of existing on-site jobs in the existing commercial building; and
- Addition of new on-site jobs within the new office, ground floor amenity / café space, and on-site property management and maintenance for the new apartments.

The analysis begins by quantifying the number of on-site jobs removed and added by the proposed Project. Then, the analysis proceeds through a series of steps to estimate how the changes in on-site jobs translate into a change in worker housing need by income level.

4.1 Methodology

The analysis estimates the changes in on-site employment from removal of the existing commercial building and construction of the new office, amenity / café space and residential units. The estimated changes in employment are then translated into an estimated impact on worker housing demand based on relationships between jobs and housing demand derived from the U.S. Census. Finally, the income level associated with the housing demand is estimated using a combination of data sources including the U.S. Bureau of Labor Statistics occupation and wage data and U.S. Census data on households.

Following is a description of each step in the analysis.

Analysis Step 1 –On-Site Employment

The proposed Project results in removal of an estimated 9 existing jobs and an addition of an estimated 53 new jobs, for a net addition of 44 jobs as summarized in Table 4-1.

Existing Employment to be Removed

Demolition of the existing commercial building will remove an estimated 9 on-site jobs including an estimated 8 jobs with the existing tenant in the building and one job in building services including janitorial and maintenance. The existing tenant in the building is Theme Party Productions, a company that designs and produces special events. The tenant's website suggests the subject property is used primarily as storage for props offered for rent for events[12].

[12] Theme Party Productions web page accessed on April 22, 2021 at http://www.themeparty.com/ states "Our 25,000 sq.ft. warehouse is filled with the highest quality props and décor in all of Northern California."

The Project applicant has indicated that Theme Party Productions has “fewer than ten” employees; eight are assumed for the analysis. The number of building services staff is estimated using staffing ratios derived from data reported by the International Facility Management Association (IFMA). Building services workers are evaluated separately because these services are typically provided by separate contract service providers.

New Employment Added by Proposed Project

The proposed Project is estimated to add 53 new on-site jobs. This includes an estimated 43 jobs with tenant(s) in the new office space, two jobs in building services such as janitorial and maintenance for the office space, four jobs in the ground floor amenity / café space, and four jobs in on-site property management and maintenance for the new residential units. The number of office jobs is estimated based on a representative office employment density factor of 300 square feet per employee. This office employment density factor generally aligns with the proposed number of parking spaces. Based on the 38 parking spaces proposed for the non-residential space and the estimated 47 employees, at least 19% of employees would need to walk, bike, or use transit. This is similar to the overall average of 22% for Menlo Park’s workplace population that uses one of these three transportation modes to get to work per the 2015-2019 ACS, not including those who worked out of their homes. The number of building services staff is estimated using staffing ratios derived from data reported by the International Facility Management Association (IFMA). The number of residential property management and maintenance staff are estimated based on a ratio of 39 apartment units per employee derived from the National Apartment Association 2018 Survey of Operating Income and Expenses. The ground floor amenity/café space is estimated to include four additional workers for a total of 53 new on-site workers.

Table 4-1. Estimated Net Change in On-Site Employment				
	Development	Basis for On-Site Employment Estimate	Estimated Net Change in On-Site Employment	
Existing				
Existing Warehouse	24,311 SF	Applicant [4]	(8)	employees
Building Services		1 per 25,000 SF[1]	(1)	employee
Subtotal Existing to be Removed			(9)	employees
Proposed				
Rental Units	158 Units	1 per 39 units[2]	4	employees
Community Amenity / Café	1,600 SF	1 per 400 SF [3]	4	employees
Office Space	13,400 SF	1 per 300 SF [3]	43	employees
Commercial Space / Building Services		1 per 10,000 SF[1]	2	employees
Subtotal Proposed			53	employees
Net Change in On-Site Employment			**44**	**employees**

[1] Building services staff, which includes maintenance, janitorial, and security not expected to be directly employed by the tenant, was estimated by KMA based on a ratio of 1 employee per 25,000 square feet for the existing building and 1 per 10,000 square feet for new building. Estimate was derived from International Facility Management Association (IFMA), Operations and Maintenance Benchmarks Research Report #33 and adjusted by KMA as a reflection of employment density.

[2] Based on National Apartment Association 2018 Survey of Operating Income and Expenses in Rental Apartment Communities, average number of units per employee for projects that are 100 to 199 units in size.

[3] KMA estimate. Will vary depending on tenant. Office employment density generally consist with proposed 38 parking spaces for non-residential uses and would require at a minimum of 19% of employees in the office and cafe space to arrive by alternatives to single occupancy vehicles. Building services employment, accounted for separately, is subtracted from office total.

[4] The Applicant has indicated that the existing tenant has "fewer than 10 employees." For purposes of the analysis, 8 are assumed.

Step 2 – Adjustment from Employees to Employee Households

Step 2 converts the number of employees to the number of employee households. This step recognizes that there is, on average, more than one worker per household, and thus the number of housing units in demand must be reduced. The workers per worker household ratio eliminates from the equation all non-working households, such as households comprised of retired persons or students. The calculation is shown in Table 4-2.

KMA derived the worker per worker household figure from ACS data for 2015 to 2019. The ACS data provide estimates of the total number of workers in San Mateo County, and the total number of households with at least one working household member. The ratio of the two figures for San Mateo County is 1.91 workers per worker household. The San Mateo County figure is used in the analysis because workers will be more similar to the County as a whole than the smaller City of Menlo Park profile, which has an average of 1.73 workers per worker household. The workers per worker household ratio is used to translate the existing and new on-site employment to a change in employee households as shown in Table 4-2. The nine existing jobs

is divided by the 1.91 workers per worker household ratio to estimate the decrease of five existing employee households. Using the same approach, the 53 new jobs translate into an estimated 28 employee households.

Table 4-2. Estimated Change in On-Site Employee Households

	Existing (to be removed)			New				
	Existing Commercial	Building Services	Total Existing	Residential Property Management	Amenity / Café	Office	Building Services / Comm'l	Total New
Employment	(8)	(1)	(9)	4	4	43	2	53
Employee Households (at 1.91 workers per household) (1)	(4)	(1)	(5)	2	2	23	1	28

(1) Derived from 2015-2019 U.S. Census American Community Survey data for San Mateo County

Step 3 – Occupational Distribution

Occupational distribution for employees is based on data from a national survey by the Bureau of Labor Statistics (BLS). Occupation refers to job description, such as management, sales clerk, cashier, etc. The survey provides the occupational distribution for various employment "industries." National statistics are used because local data are not generally available, and for many industries, national data are a good reflection of the occupational distribution that can be expected locally.

For the new office space, KMA selected industry categories reflective of tech-oriented office tenants including software publishers (NAICS 511200), computer systems design and related services (NAICS 541500), data processing, hosting and related services (NAICS 518200), and other information services (NAICS 519100).

For building services workers, residential on-site property management and maintenance, the tenant in the existing commercial space, and ground floor amenity/café workers, KMA selected representative occupations from the BLS data as shown in Appendix A Tables 5 to 8.

Table 4-3 provides a summary of worker occupations by major category. Appendix A, Tables 4 to 9 provide a further breakdown of worker occupations by Standard Occupational Classification (SOC) System categories.

Table 4-3. On-Site Employee Households - Occupation Categories										
	Existing Commercial to be Demolished				New Office / Amenity / Café and Residential					
Occupation Category	Comm'l Tenant	Building Services	Total Existing	% of Total	Office	Building Services	Res. Prop Mgmt	Amenity / Café	Total New	% of Total
Management Occupations	(0.4)	0.0	(0.4)	8%	2.9	0.0	0.4	0.0	3.3	12%
Business and Financial	(0.4)	0.0	(0.4)	8%	2.8	0.0	0.0	0.0	2.8	10%
Computer and Mathematical	0.0	0.0	0.0	0%	8.6	0.0	0.0	0.0	8.6	31%
Architecture and Engineering	0.0	0.0	0.0	0%	0.2	0.0	0.0	0.0	0.2	1%
Life, Physical, and Social Science	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Community and Social Services	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Legal	0.0	0.0	0.0	0%	0.1	0.0	0.0	0.0	0.1	0%
Education, Training, and Library	0.0	0.0	0.0	0%	0.8	0.0	0.0	0.0	0.8	3%
Arts, Design, Entertainment,	(1.7)	0.0	(1.7)	34%	1.4	0.0	0.0	0.0	1.4	5%
Healthcare Practitioners	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Healthcare Support	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Protective Service	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Food Preparation and Serving	0.0	0.0	0.0	0%	0.0	0.0	0.0	2.1	2.1	8%
Building and Grounds	0.0	(0.4)	(0.4)	8%	0.0	0.8	0.8	0.0	1.6	6%
Personal Care and Service	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Sales and Related	0.0	0.0	0.0	0%	2.6	0.0	0.0	0.0	2.6	9%
Office and Administrative Support	(0.4)	0.0	(0.4)	8%	2.9	0.0	0.0	0.0	2.9	10%
Farming, Fishing, and Forestry	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Construction and Extraction	0.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
Installation, Maint., and Repair	0.0	(0.1)	(0.1)	3%	0.1	0.3	0.8	0.0	1.2	4%
Production	0.0	0.0	0.0	0%	0.1	0.0	0.0	0.0	0.1	0%
Transportation & Material Moving	(1.3)	0.0	(1.3)	25%	0.0	0.0	0.0	0.0	0.0	0%
Totals	(4)	(1)	(5)	100%	23	1	2	2	28	100%

Notes: See Appendix A Tables 4 to 8 for more detailed breakdown of occupation categories.

Step 4 – Estimate of Employee Wage and Salary Distribution

The employee wage and salary distribution is based on the occupational distribution from Step 3 in combination with 2020 wage and salary information for each occupation for the San Francisco-Oakland-Hayward metropolitan statistical area, which includes San Mateo County from the BLS Occupational Employment Survey (OES). In addition to the average compensation levels, the analysis also utilizes BLS data regarding the percentile distribution of wages within individual occupation categories in estimating the distribution of worker compensation levels. The data on employee wages and salaries utilized in the analysis is presented in Appendix A Tables 4 to 8.

Step 5 – Household Size Distribution

In this step, the household size distribution of workers is estimated using U.S. Census 2015-2019 ACS data for San Mateo County. Data for the County is used since workers are more representative of the larger area in which workers live (the County) than the City of Menlo Park. In addition to the distribution in household sizes, the data also accounts for a range in the

number of workers in households of various sizes. Table 4-4 indicates the percentage distribution utilized in the analysis.

Table 4-4. Percent of Households by Size and No. of Workers

No. of Persons in Household	No. of Workers in Household	Percent of Total Households
1	1	14.7%
2	1	13.1%
	2	17.4%
3	1	7.3%
	2	10.1%
	3+	3.9%
4	1	4.9%
	2	8.9%
	3+	6.4%
5	1	1.9%
	2	3.4%
	3+	2.5%
6	1	1.3%
	2	2.4%
	3+	1.7%
Total		100%

Source: 2015-2019 American Community Survey data for San Mateo County.

Step 6 – Estimate of Households that meet HCD Size and Income Criteria

This step in the analysis calculates the number of employee households that fall into each income category for each size household. This calculation is based on the employee wage and salary distribution (Step 4), the worker household distribution (Step 5) and the 2021 HCD income limits for San Mateo County, as described above.

Household incomes are estimated based upon ratios between individual employee income and household income derived from U.S. Census data shown in Table 4-5. The ratios adjust employee incomes upward even for households with only one worker in consideration of non-wage/salary income sources such as child support, disability, social security, investment income and others.

Table 4-5. Ratio of Household Income to Individual Worker Income

Individual Worker Income	One Worker Households	Two Worker Households	Three or More Workers
$25,000 to $50,000	1.31	2.86	3.50
$50,000 to $75,000	1.15	2.21	2.55
$75,000 to $100,000	1.09	1.97	2.12
$100,000 to $150,000	1.06	1.77	1.84
$150,000 to $200,000	1.04	1.60	1.63
$200,000 to $250,000	1.04	1.54	1.54
$250,000 to $300,000	1.02	1.47	1.47
$300,000 to $500,000	1.04	1.32	1.32
$500,000 and above	1.02	1.25	1.25

Source: KMA analysis of 2015 to 2019 American Community Survey PUMS data for San Francisco Bay Area.

Estimated household incomes are compared to HCD income criteria to determine the percentage that qualify within each income category. The comparison is made for each potential household size/number of workers combination. The result is multiplied by the percentage distribution of household sizes and number of workers per household from Step 5 to calculate the distribution of worker households by income.

Table 4-6 presents the estimated number of households in each income tier by worker occupation category. It represents the output of the analysis, after completing Step 4 (employee compensation levels), Step 5 (household size distribution of worker households), and Step 6 which uses this information to calculate the number of households that fall into each income category.

TABLE 4-6
OCCUPATION AND INCOME (STEPS 4, 5, AND 6)
MENLO FLATS PROJECT
HOUSING NEEDS ASSESSMENT
MENLO PARK, CA

	Existing Commercial							Building Services / Existing						
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Step 4, 5, & 6 - Employee Households within Major Occupation Categories														
Management	-	(0.00)	(0.04)	(0.05)	(0.10)	(0.23)	(0.42)	-	-	-	-	-	-	-
Business and Financial Operations	(0.01)	(0.09)	(0.18)	(0.10)	(0.04)	-	(0.42)	-	-	-	-	-	-	-
Computer and Mathematical	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community and Social Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education Training and Library	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arts, Design, Entertainment, Sports, & Medi	(0.02)	(0.22)	(0.52)	(0.39)	(0.33)	(0.19)	(1.68)	-	-	-	-	-	-	-
Healthcare Practitioners and Technical	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Healthcare Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protective Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Preparation and Serving Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Building Grounds and Maintenance	-	-	-	-	-	-	-	(0.09)	(0.07)	(0.17)	(0.05)	(0.01)	-	(0.39)
Personal Care and Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales and Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office and Admin	(0.06)	(0.09)	(0.17)	(0.09)	(0.01)	-	(0.42)	-	-	-	-	-	-	-
Farm, Fishing, and Forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction and Extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Installation Maintenance and Repair	-	-	-	-	-	-	-	(0.02)	(0.02)	(0.06)	(0.02)	(0.01)	-	(0.13)
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and Material Moving	(0.22)	(0.25)	(0.63)	(0.12)	(0.05)	-	(1.26)	-	-	-	-	-	-	-
Households: Major Occupations	(0.31)	(0.66)	(1.53)	(0.75)	(0.52)	(0.43)	(4.19)	(0.11)	(0.10)	(0.23)	(0.07)	(0.02)	-	(0.52)
Households: all other occupations[(1)]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Households	**(0.31)**	**(0.66)**	**(1.53)**	**(0.75)**	**(0.52)**	**(0.43)**	**(4.19)**	**(0.11)**	**(0.10)**	**(0.23)**	**(0.07)**	**(0.02)**	**-**	**(0.52)**
Total Households - Rounded	-	(1)	(2)	(1)	-	-	(4)	-	-	(1)	-	-	-	(1)

Notes:
[(1)] Represents occupation categories which have a minor amount of employment and for which detailed compensation analysis was not completed. These worker households are assumed to have a similar income distribution to other employees in the same industry. See Appendix A Tables 3 to 8 for information on major and detailed occupation categories identified for detailed compensation analysis.

TABLE 4-6
OCCUPATION AND INCOME (STEPS 4, 5, AND 6)
MENLO FLATS PROJECT
HOUSING NEEDS ASSESSMENT
MENLO PARK, CA

	New Office Space							Building Services / New Comm'l						
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Step 4, 5, & 6 - Employee Households within Major Occupation Categories														
Management	-	0.02	0.16	0.22	0.42	2.07	2.89	-	-	-	-	-	-	-
Business and Financial Operations	0.01	0.24	0.60	0.64	0.71	0.56	2.77	-	-	-	-	-	-	-
Computer and Mathematical	0.01	0.22	1.26	1.31	1.98	3.79	8.57	-	-	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community and Social Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education Training and Library	0.02	0.11	0.26	0.17	0.20	0.04	0.79	-	-	-	-	-	-	-
Arts, Design, Entertainment, Sports, & Medi	0.03	0.15	0.40	0.33	0.32	0.17	1.40	-	-	-	-	-	-	-
Healthcare Practitioners and Technical	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Healthcare Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protective Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Preparation and Serving Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Building Grounds and Maintenance	-	-	-	-	-	-	-	0.19	0.15	0.34	0.09	0.02	-	0.79
Personal Care and Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales and Related	0.13	0.33	0.79	0.50	0.56	0.26	2.57	-	-	-	-	-	-	-
Office and Admin	0.32	0.57	1.06	0.74	0.21	0.02	2.92	-	-	-	-	-	-	-
Farm, Fishing, and Forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction and Extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Installation Maintenance and Repair	-	-	-	-	-	-	-	0.03	0.05	0.12	0.04	0.02	-	0.26
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and Material Moving	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Households: Major Occupations	0.52	1.65	4.53	3.90	4.40	6.91	21.91	0.22	0.19	0.45	0.13	0.05	-	1.05
Households: all other occupations[(1)]	0.01	0.05	0.13	0.11	0.13	0.20	0.43	-	-	-	-	-	-	-
Total Households	**0.54**	**1.70**	**4.66**	**4.02**	**4.52**	**7.11**	**22.54**	**0.22**	**0.19**	**0.45**	**0.13**	**0.05**	**-**	**1.05**
Total Households - Rounded	1	2	5	4	4	7	23	-	-	1	-	-	-	1

Notes:
(1) Represents occupation categories which have a minor amount of employment and for which detailed compensation analysis was not completed. These worker households are assumed to have a similar income distribution to other employees in the same industry. See Appendix A Tables 3 to 8 for information on major and detailed occupation categories identified for detailed compensation analysis.

TABLE 4-6
OCCUPATION AND INCOME (STEPS 4, 5, AND 6)
MENLO FLATS PROJECT
HOUSING NEEDS ASSESSMENT
MENLO PARK, CA

	Residential Property Management							Community Amenity / Café						
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Step 4, 5, & 6 - Employee Households within Major Occupation Categories														
Management	0.02	0.05	0.13	0.09	0.07	0.05	0.42	-	-	-	-	-	-	-
Business and Financial Operations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer and Mathematical	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Community and Social Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education Training and Library	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arts, Design, Entertainment, Sports, & Medi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Healthcare Practitioners and Technical	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Healthcare Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protective Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Preparation and Serving Related	-	-	-	-	-	-	-	0.55	0.35	1.04	0.15	0.01	-	2.10
Building Grounds and Maintenance	0.18	0.12	0.39	0.14	0.01	-	0.84	-	-	-	-	-	-	-
Personal Care and Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales and Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office and Admin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Farm, Fishing, and Forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction and Extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Installation Maintenance and Repair	0.08	0.16	0.38	0.13	0.09	-	0.84	-	-	-	-	-	-	-
Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and Material Moving	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Households: Major Occupations	0.28	0.33	0.90	0.36	0.17	0.05	2.10	0.55	0.35	1.04	0.15	0.01	-	2.10
Households: all other occupations[(1)]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Households	**0.28**	**0.33**	**0.90**	**0.36**	**0.17**	**0.05**	**2.10**	**0.55**	**0.35**	**1.04**	**0.15**	**0.01**	**-**	**2.10**
Total Households - Rounded	-	-	1	1	-	-	2	1	-	1	-	-	-	2

Notes:
(1) Represents occupation categories which have a minor amount of employment and for which detailed compensation analysis was not completed. These worker households are assumed to have a similar income distribution to other employees in the same industry. See Appendix A Tables 3 to 8 for information on major and detailed occupation categories identified for detailed compensation analysis.

4.2 Summary by Income Level

Table 4-7 presents a summary of the changes in on-site worker housing demand within commuting distance of Menlo Park by affordability level as a result of removal of existing on-site jobs and addition of new on-site jobs.

Table 4-7. Estimated Changes in On-Site Employee Households by Income

	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Remove Existing Commercial							
Tenant	0	(1)	(2)	(1)	0	0	(4)
Building Services	0	0	(1)	0	0	0	(1)
Total Existing	**0**	**(1)**	**(3)**	**(1)**	**0**	**0**	**(5)**
New Office and Residential							
Office Space	1	2	5	4	4	7	23
Building Services	0	0	1	0	0	0	1
Residential Property Mgmt	0	0	1	1	0	0	2
Commty Amenity / Café	1	0	1	0	0	0	2
Total New	**2**	**2**	**8**	**5**	**4**	**7**	**28**

The removal of existing on-site employment is estimated to result in a reduction in housing demand for five housing units. This five-unit reduction in housing demand consists of an estimated one Very Low Income, three Low Income, and one Moderate Income units.

The addition of new on-site employment in the proposed Project is estimated to result in a demand for 28 housing units consisting of an estimated two Extremely Low, two Very Low Income, eight Low Income, five Moderate Income, four Above Moderate Income and seven Over 150% AMI units.

5.0 HOUSING DEMAND OF OFF-SITE WORKERS IN SERVICES TO NEW RESIDENTS

The following section provides an analysis of the linkages between development of the new residential units on the Project site, jobs generated in off-site services such as retail and restaurants, and the housing needs of the workers who hold these off-site jobs. Off-site jobs addressed in this section are incorporated into the analysis consistent with the terms of the 2017 settlement agreement which requires, to the extent possible, consideration of multiplier effects.

The analysis of housing demands for off-site workers starts with the estimated rental rate for the new units and moves through a series of linkages from the estimated income of the household that rents the unit, the portion of income available for expenditures on goods and services, jobs associated with the purchase and delivery of those services, the income of the workers doing those jobs and, ultimately, the affordability level of the housing needed by the workers.

The number of jobs by industry that are generated from the household spending of residents living in the proposed Project is estimated using the IMPLAN (IMpact Analysis for PLANning) model, a model widely used to quantify the impacts of changes in a local economy. The number of jobs by industry is then used to estimate worker housing need by income level using the same approach as in Section 4.

5.1 Estimated Household Incomes of New Residents

The estimated household incomes of residents in the new market rate residential units are drawn from the analysis provided in Section 3.2. For BMR units, household income is estimated based on the mid-point of the income range that would qualify for a BMR unit. Household income figures are then multiplied by the number of units to estimate the aggregate household income for all residents of the proposed Project as shown in Table 5-1. Aggregate household income is used to estimate household spending, the input to the IMPLAN model that is used to quantify the number of off-site jobs associated with household spending of new residents.

Table 5-1. Aggregate Household Income of New Residents

	Estimated Household Income (1)		Number of Units		Aggregate Income
	BMR	Market Rate	BMR	Market Rate	
Studios	$83,200	$100,720	15	98	$11,118,560
4-Bedrooms	$128,400	$250,600	6	39	$10,543,800
Total			21	137	$21,662,360
Average Per Household					$137,104

(1) For market rate units, see Table 3-3. For BMR units, estimates are based on the mid-point of the qualifying income range. Scenario 1 is utilized for purposes of this estimate. Section 5 findings are nearly identical under Scenario 2 and round to the same result.

Income Available for Expenditures

The input into the IMPLAN model used in this analysis is the net income available for expenditures. To arrive at income available for expenditures, gross income must be adjusted for Federal and State income taxes, contributions to Social Security and Medicare, savings, and payments on household debt. Per KMA correspondence with the producers of the IMPLAN model (IMPLAN Group LLC), other taxes including sales tax and property tax are handled internally within the model as part of the analysis of expenditures. Payroll deduction for medical benefits and pre-tax medical expenditures are also handled internally within the model. Table 5-2 shows the calculation of the percentage of household income available for expenditures.

Table 5-2. Percent of Income Available for Expenditures (1)

Gross Income	100%
Less:	
Federal Income Taxes (2)	11%
State Income Taxes (3)	5%
FICA Tax Rate (4)	7.65%
Savings & other deductions (5)	6%
Subtotal deductions	32%
Percent of Income Available for Expenditures(6)	***70%***

(1) Calculated as gross income after deduction of taxes and savings. Income available for expenditures is the input to the IMPLAN model which is used to estimate the resulting employment impacts. Housing costs are not deducted as part of this adjustment step because they are addressed separately as expenditures within the IMPLAN model.

(2) Reflects average tax rates (as opposed to marginal) based on U.S. Internal Revenue Services, Tax Statistics, Tables 1.2 and 2.1 for 2018.Tax rates reflect averages for applicable income range. Assumes the standard deduction.

(3) Average tax rate estimated by KMA based on marginal rates per the California Franchise Tax Board and ratios of taxable income to gross income estimated based on U.S. Internal Revenue Service data.

(4) For Social Security and Medicare.

(5) Household savings including retirement accounts like 401k / IRA and other deductions such as interest costs on credit cards, auto loans, etc., necessary to determine the amount of income available for expenditures. The 8% rate used in the analysis is based on a 20 year average computed from U.S. Bureau of Economic Analysis data, specifically the National Income and Product Accounts, Table 2.1 "Personal Income and Its Disposition."

(6) Deductions from gross income to arrive at the income available for expenditures are consistent with the way the IMPLAN model and National Income and Product Accounts (NIPA) defines income available for personal consumption expenditures. Income taxes, contributions to Social Security and Medicare, and savings are deducted; however, property taxes and sales taxes are not. Housing costs are not deducted as part of the adjustment because they are addressed separately as expenditures within the IMPLAN model.

Income available for expenditures is estimated at approximately 70% of gross income. Federal tax rates are estimated at 11% of gross income based upon Internal Revenue Service data. State taxes are estimated to average 5% of gross income based on tax rates per the California Franchise Tax Board. The employee share of FICA payroll taxes for Social Security and Medicare is 7.65% of gross income. A ceiling of $142,800 per employee applies to the 6.3% Social Security portion of this tax rate.

Savings and repayment of household debt represent another necessary adjustment to gross income. Savings includes various IRA and 401 K type programs as well as non-retirement

household savings and investments. Debt repayment includes auto loans, credit cards, and all other non-mortgage debt. Savings and repayment of debt are estimated to represent a combined 6% of gross income based on the 20-year average derived from United States Bureau of Economic Analysis data.

The percentage of income available for expenditure for input into the IMPLAN model is prior to deducting housing costs. The reason is for consistency with the IMPLAN model which defines housing costs as expenditures. The IMPLAN model addresses the fact that expenditures on housing do not generate employment to the degree other expenditures such as retail or restaurants do, but there is some maintenance and property management employment generated.

After deducting income taxes, Social Security, Medicare, savings, and repayment of debt, the estimated income available for expenditures is 70% of gross household.

Another adjustment made to spending is to account for standard operational vacancy in rental units of 5%, a level of vacancy considered average for rental units in a healthy market.

Table 5-3 presents the estimate of household income available for expenditures in the local economy after adjustments to income available for expenditures and vacancy:

Table 5-3. Income Available for Expenditures

Aggregate Annual Household Income, New Residents (Table 5-1)	$21,662,360
Percent Available for Expenditure (Table 5-2)	70%
Adjustment for 5% rental vacancy	95%
Aggregate Household Income Available	$14,405,000

The estimated household income available for expenditure associated with the 158 new residential units is the input into the IMPLAN model.

5.2 The IMPLAN Model

Consumer spending by residents of new housing units will create jobs, particularly in sectors such as restaurants, health care, and retail, which are closely connected to the expenditures of residents. The widely used economic analysis tool, IMPLAN, was used to quantify these new jobs by industry sector.

5.2.1 IMPLAN Model Description

The IMPLAN model is an economic analysis software package now commercially available through the IMPLAN Group, LLC. IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management and has been in use since 1979 and refined over time. It has become a widely used tool for analyzing economic impacts for a broad range of applications from major construction projects to natural resource programs.

IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. Assumptions about the portion of inputs or supplies for a given industry likely to be met by local suppliers, and the portion supplied from outside the region or study area are derived internally within the model using data on the industrial structure of the region.

The output or result of the model is generated by tracking changes in purchases for final use (final demand) as they filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 500 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

Data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis utilizes the data set for San Mateo County. As will be discussed, much of the employment impact is in local-serving sectors, such as retail, eating and drinking establishments, and medical services. It is likely that many off-site employment impacts will occur in Menlo Park and other nearby jurisdictions; however, employment impacts will also extend throughout the county and beyond based on where residents of the proposed Project will shop, dine, seek medical care and other services. Consistent with the approach taken in most residential affordable housing nexus analyses, the analysis includes job impacts throughout the county.

The Covid-19 pandemic has modified consumer spending patterns due to shelter-in-place orders, business closures, and altered consumer preferences and shopping patterns in response to the virus. It is assumed that the pandemic is a temporary condition which is not representative of future conditions when the proposed Project would be completed and occupied. Spending may mostly revert to pre-pandemic patterns once the virus is contained. However, it is possible that some changes in response to the virus, such as an accelerated shift toward online retail, could endure to some degree post-pandemic. Since there is no data on

post-pandemic spending patterns, the analysis uses the most recent IMPLAN data set available, which is representative of the pre-pandemic pattern.

5.2.2 Application of the IMPLAN Model to Estimate Job Growth

The IMPLAN model was applied to link income to household expenditures to job growth. The estimated annual household spending of the residents of the 158 new housing units is the input to the IMPLAN model. The IMPLAN model then distributes spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate the number of off-site jobs.

Job creation, driven by increased demand for products and services, was projected for each of the industries that will serve the new households. A total of 55 off-site jobs are estimated to be generated by spending of the residents as summarized in Table 5-4. Estimates in Table 5-4 exclude on-site jobs in the ground floor amenity / café space and in property management and maintenance of the residential units which are already considered as part of the Section 4 analysis.

Table 5-4. Jobs Generated from Household Spending of Residents

Annual Household Expenditures	$14,405,000
Estimated Number of Off-site Jobs	55.4

As households added to the City by the proposed Project are new and these new households result in net new demand for products and services, the jobs associated with delivery of these products and services are also estimated to be net new jobs. While there may be an ability for existing retail, health care facilities, restaurants, schools and other services to absorb a share of new demand to some extent, existing establishments will still require additional employees in many cases. For example, individual health care providers are only able to see so many patients in a day. Waiters and cooks in restaurants can only serve so many customers. Grocery stores may need to add staff at check-out lanes in response to added demand, and so on. Employment in sectors that serve residents tends to expand with population. As indicated in Section 5.2.3, the ratio between employment in resident-serving sectors of the economy and the number of housing units is relatively consistent at the city and county geographic scales, indicating resident-serving jobs tend to be proportionate to the number of housing units and population.

Table 5-5 provides a detailed breakdown of the employment by industry sorted by projected employment. The Consumer Expenditure Survey published by the Bureau of Labor Statistics tracks expenditure patterns by income level. IMPLAN utilizes this data to reflect the pattern by income bracket. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of total employment. The jobs that are generated are heavily retail jobs, jobs in restaurants and other eating establishments, and in services that are provided locally such as health care.

Table 5-5. Jobs Generated by Industry from Housing Spending [IMPLAN Output]		
Industry Category	**Number of Jobs**	**Percent**
Full-service restaurants	3.9	7%
Limited-service restaurants	1.3	2%
Subtotal Restaurant	5.4	9%
Retail - Building material and garden equipment stores	0.4	1%
Retail - Clothing and clothing accessories stores	1.2	2%
Retail - Electronics and appliance stores	0.5	1%
Retail - Food and beverage stores	2.2	4%
Retail - Furniture and home furnishings stores	0.5	1%
Retail - Gasoline stores	0.3	1%
Retail - General merchandise stores	1.6	3%
Retail - Health and personal care stores	1.0	2%
Retail - Miscellaneous store retailers	1.1	2%
Retail - Clothing and accessories	0.6	1%
Retail - Nonstore retailers	0.8	1%
Retail - Sporting goods, hobby, musical and bookstores	0.5	1%
Personal care services	1.8	3%
Subtotal Retail and Service	12.6	23%
Offices of dentists	1.3	2%
Offices of other health practitioners	1.8	3%
Outpatient care centers	0.8	2%
Offices of physicians	1.5	3%
Other ambulatory health care services	0.3	0%
Home health care services	1.5	3%
Hospitals	1.7	3%
Subtotal Healthcare	8.9	16%
Elementary and secondary schools	0.7	1%
Junior colleges, colleges, universities	0.4	1%
Other educational services	0.6	1%
Subtotal Education	1.6	3%
Individual and family services	2.7	5%
Other personal services	1.9	3%
Automotive repair and maintenance	1.3	2%
Child day care services	1.3	2%
Other financial investment activities	1.3	2%
Automotive repair and maintenance	0.8	1%
Religious organizations	0.7	1%
Fitness and recreational sports centers	0.6	1%
Transit and ground passenger transportation	0.6	1%
All Other	15.9	29%
Total Number of Jobs Generated	**55.4**	**100%**

(1) Estimated employment generated by household expenditures of Project residents for Industries representing more than 1% of total employment. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN, for San Mateo County. Includes both full- and part-time jobs.

5.2.3 Cross-Check Based on Existing Number of Resident-Serving Jobs

As context for the estimated number of off-site jobs and a secondary cross-check for reasonableness, Table 5-6 provides comparisons to the existing ratio of resident-serving jobs in sectors such as health care, retail, food service and education and the number of residential units within Menlo Park and San Mateo County. In Menlo Park, there are 9,072 existing jobs in resident-serving sectors based on data from the U.S. Census and 14,082 residential units based on data from the California Department of Finance. These figures translate to a ratio of approximately 102 resident-serving jobs for every 158 residential units[13]. The ratio for San Mateo County is similar at 90 resident-serving jobs for every 158 residential units. Based on existing relationships between resident-serving jobs and residential units for both the City and the County, estimates for the proposed Project appear reasonable.

Estimates for the proposed Project reflect a lower ratio of resident serving jobs to housing units than overall averages based on the characteristics of the proposed Project which consists of 72% studio units. Households occupying the proposed Project will be smaller[14] than the average household size for the City of 2.64 persons per household and 2.88 persons per household for the County per the California Department of Finance. Smaller household sizes will correspond to lower demand for services compared to overall averages, particularly for services like health care and education that are driven by population. In addition, the proposed Project includes BMR units. Residents of BMR units will have lower household incomes and will drive a lower level of demand for services, particularly in sectors like restaurants that are driven more by discretionary spending. Finally, the City and County averages include employment within the identified sectors associated with serving the business and visitor population as well as residents, resulting in higher ratios than would be the case for jobs associated with residents alone. Therefore, the ratio between the estimated number of resident-serving jobs and the number of residential units for the proposed Project is appropriately less than citywide or countywide averages.

[13] Calculated as 9,072 jobs divided by 14,082 residential units and multiplied by 158 units. This 158-unit figure is selected for ready comparison to the proposed Project.

[14] Based on the unit mix of the proposed Project of 72% studios, 18% four-bedrooms and the HCD standard for relating number of bedrooms to household size of one plus the number of bedrooms, the proposed Project is estimated to correspond to an average household size of approximately 2.14 persons.

Table 5-6. Comparison to Existing City and County Relationships Between Number of Residential Units and Number of Jobs in Key Resident Serving Sectors					
	Existing Jobs [1]		Jobs Per 158 Residential Units		
	City of Menlo Park	San Mateo County	Actual: City of Menlo Park [4]	Actual: San Mateo County [4]	Estimate for Proposed Project
Key Resident-Serving Sectors					
Health Care	3,065	41,812	34.4	23.5	15.0
Retail Trade	1,564	33,825	17.5	19.0	10.7
Food Service	2,005	39,255	22.5	22.1	5.2
Education	1,123	24,010	12.6	13.5	1.6
Other Services[2]	1,040	15,264	11.7	8.6	8.4
Arts, Entertainment, and Recreation	275	6,469	3.1	3.6	1.5
Subtotal Resident-Serving	9,072	160,635	**102**	**90**	**43**
Other Sectors	39,476	257,325	443	145	12
Total All Sectors	48,548	417,960	544.7	235	55
Number of Residential Units[3]	14,082	280,879			

(1) U.S. Census Longitudinal Employer-Household Dynamics, 2018 data for workplace geography.

(2) Includes a broad range of services from auto repair, to dry cleaning, to religious organizations.

(3) Number of housing units as of January 1, 2020 per California Department of Finance Table E-5, Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark.

(4) Calculated by dividing the total number of jobs by the number of residential units and multiplying by 158 units.

Note: The number of jobs by industry from the HNA have been aggregated by major industry category to allow ready comparison to actual existing jobs in the City of Menlo Park and in San Mateo County.

5.3 Analysis of Housing Need by Income

This section presents a summary of the analysis linking the number of off-site jobs associated with the new residential units to the estimated number of housing units required in each of six income categories. The analysis is based on the same methodology as Section 4 and consists of the following analysis steps.

Step 1 – Adjustment from Employees to Employee Households

This step (Table 5-7) converts the number of employees identified in Table 5-5 to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons and students. The San Mateo County average of 1.91 workers per worker household derived from the U. S. Census Bureau 2015-2019 American Community Survey is used for this step in the analysis, consistent with Section 4. The estimated 55 off-site jobs is divided by 1.91 to estimate the number of worker households of 29.

Table 5-7. Estimated Net Change in On-Site Employee Households	
Off-Site Jobs in Services to New Residents	55.4
Number Employee Households - Off-site workers (at 1.91 workers per household) (1)	29.1

(1) Derived from 2015-2019 U.S. Census American Community Survey data for San Mateo County

Step 2 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arrive at income level. The output from the IMPLAN model provides the number of employees by industry sector, shown in Table 5-5. The IMPLAN output is then paired with data from the Department of Labor, Bureau of Labor Statistics Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector. As shown in Table 5-8, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories are sales and related (13.8%), office and administrative support (12.6%), and food preparation and serving (13.4%). Table 5-8 indicates the percentage and number of employee households by occupation for off-site workers.

Table 5-8. Worker Households by Occupation – Jobs in Off-Site Services to New Residential Units

Occupation Category	Number of Worker Households	% of Jobs
Management Occupations	1.2	4.1%
Business and Financial	1.3	4.3%
Computer and Mathematical	0.4	1.3%
Architecture and Engineering	0.1	0.2%
Sciences	0.1	0.4%
Community & Social Services	0.6	2.1%
Legal	0.2	0.7%
Education, and Library	0.9	3.2%
Arts, Design, Entertainment	0.4	1.4%
Healthcare Practitioners	2.4	8.3%
Healthcare Support	2.8	9.7%
Protective Service	0.2	0.6%
Food Prep and Serving	3.9	13.4%
Building and Grounds.	0.7	2.3%
Personal Care and Service	1.9	6.4%
Sales and Related	4.0	13.8%
Office and Admin Support	3.7	12.6%
Farming, Fishing, Forestry	0.0	0.1%
Construction and Extraction	0.2	0.8%
Installation, Maint. and Repair	1.0	3.5%
Production	0.5	1.6%
Transportation	2.7	9.3%
Totals	**29**	**100.0%**

See Appendix Tables 1 and 2 for additional detail.

Step 3 – Estimates of Employee Households by Income

In this step, occupations are translated to employee incomes based on recent wage and salary information for workers in San Mateo County from the BLS Occupational Employment Survey. The wage and salary information summarized in Appendix A Table 2 provided the income inputs to the analysis.

For each occupational category shown in Table 5-8, the OES data provides a distribution of specific occupations within the category. For example, within the Food Preparation and Serving Category, there are Supervisors, Cooks, Bartenders, Waiters and Waitresses, Dishwashers, etc. In total, there are approximately 100 detailed occupation categories included in the analysis, as shown in the Appendix A Table 2. Each of these occupation categories has a different distribution of wages, which was obtained from BLS and is specific to workers in the County as of 2020.

Household incomes are estimated from employee incomes using ratios between individual employee income and household income derived from 2015-2019 ACS data for the San Francisco Bay Area. Ratios used in this section are the same as those used in Section 4 and presented in Table 4-5.

Estimated household incomes are compared to the income criteria shown in Table 2-2 to determine the percentage that qualify within each income category for each potential household size/number of workers combination.

Step 4 – Distribution of Household Size and Number of Workers

In this step, we account for the distribution in household sizes and number of workers using local data obtained from the U.S. Census. 2015-2019 ACS data is used to develop a set of percentage factors representing the distribution of household sizes and number of workers within working households. The percentage factors are the same as used in Section 4 and presented in Table 4-4. Application of these percentage factors accounts for the following:

- Households have a range in size and a range in the number of workers.
- Large households generally have more workers than smaller households.

The result of this step is a distribution of working households by number of workers and household size.

Step 5 – Estimate of Number of Households that Meet Size and Income Criteria

Step 5 is the final step to calculate the number of worker households meeting the size and income criteria for the five affordability tiers. The calculation combines the results from Step 3 on percentage of worker households that would meet the income criteria at each potential household size / number of workers combination, with Step 4, the percentage of worker

household having a given household size / number of workers combination. The result is the percent of households that fall into each affordability tier. The percentages are then multiplied by the number of households from Step 1 to arrive at number of households in each affordability tier.

Tables 5-9 presents the resulting estimates of the number of households within each income category by worker occupation category.

Table 5-9. Employee Households by Occupation and Income (Steps 3, 4, and 5) for Workers in Off-Site Services to New Residents

Major Occupation Category [1]	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Management	0.0	0.0	0.1	0.1	0.2	0.6	1.2
Business and Financial Operations	0.0	0.1	0.3	0.2	0.3	0.3	1.3
Computer and Mathematical	-	-	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-	-	-
Community and Social Services	-	-	-	-	-	-	-
Legal	-	-	-	-	-	-	-
Education Training and Library	0.1	0.2	0.3	0.3	0.1	0.0	0.9
Arts, Design, Entertainment, Sports, & Media	-	-	-	-	-	-	-
Healthcare Practitioners and Technical	0.0	0.1	0.3	0.4	0.6	1.0	2.4
Healthcare Support	0.7	0.5	1.2	0.3	0.0	-	2.8
Protective Service	-	-	-	-	-	-	-
Food Preparation and Serving Related	1.0	0.7	1.9	0.3	0.0	-	3.9
Building Grounds and Maintenance	0.1	0.1	0.3	0.1	0.0	0.0	0.7
Personal Care and Service	0.5	0.3	0.9	0.2	0.0	-	1.9
Sales and Related	0.9	0.6	1.9	0.3	0.1	0.1	4.0
Office and Admin	0.4	0.7	1.4	0.9	0.2	0.0	3.7
Farm, Fishing, and Forestry	-	-	-	-	-	-	-
Construction and Extraction	-	-	-	-	-	-	-
Installation Maintenance and Repair	0.1	0.2	0.3	0.3	0.2	0.0	1.0
Production	-	-	-	-	-	-	-
Transportation and Material Moving	0.5	0.5	1.2	0.3	0.1	-	2.7
Households: Major Occupations	4.4	4.1	10.2	3.8	1.8	2.1	26.4
Households: all other occupations [2]	0.4	0.4	1.0	0.4	0.2	0.2	2.7
Total Households	**4.8**	**4.5**	**11.2**	**4.2**	**2.0**	**2.3**	**29**
Rounded	**5.0**	**5.0**	**11.0**	**4.0**	**2.0**	**2.0**	**29**

[1] See Appendix A Table 1 - 2 for additional information on Major Occupation Categories.

[2] Represents occupation categories which have a minor amount of employment and for which detailed compensation analysis was not completed. These worker households are assumed to have a similar income distribution to other employees. See Appendix A Tables 1 - 2 for information on major and detailed occupation categories identified for detailed compensation analysis.

5.4 Summary of Housing Need by Income, Off-site Workers

Table 5-10 summarizes the demand for housing by workers in off-site services to the 158 new residential units by income category.

Table 5-10. Estimated Off-Site Employee Households by Income							
	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
Worker Households by Income	5	5	11	4	2	2	29

As shown in Table 5-10, the 158 residential units are estimated to create a demand for an additional 29 housing units for off-site workers in services such as retail, restaurants, and education. Housing demand for new off-site workers is distributed across the income tiers with the greatest number of households in the Low Income category. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, consumer spending results in employment that is concentrated in lower paid occupations including food preparation, administrative, and retail sales.

6.0 NET IMPACT ON HOUSING AVAILABILITY

This section combines the findings of the prior three sections to estimate the net impact on housing availability from the proposed Project by income. Net impacts on housing availability represent the combined housing supply and demand effects of the proposed Project including from:

- Added housing supply (Section 3);
- Reduced housing demand from removal of existing on-site jobs (Section 4);
- Added housing demand from new on-site jobs (Section 4); and
- Added housing demand from jobs in off-site services to new residential units (Section 5).

Additions to housing supply are considered increases in housing availability. Reductions in housing demand are also considered to *increase* housing availability because this makes existing units available; conversely, increases in housing demand are considered as reducing housing availability.

Section 6.1 addresses total housing availability impacts regardless of location. Section 6.2 provides an estimate specific to impacts occurring within Menlo Park.

6.1 Net Impact on Housing Availability Regionally

The proposed Project is estimated to increase the number of available housing units by 106 units as shown in Table 6-1. This estimate reflects the combined effect of:

- Adding 158 new residential units to the housing supply.

- A 5-unit increase in housing availability from removal of existing on-site jobs, which removes existing worker housing demand.

- A 28-unit decrease in housing availability due to added housing demand from new on-site workers.

- A 29-unit decrease in housing availability due to added housing demand by off-site workers who provide services to residents of the proposed Project.

Table 6-1. Estimated Net Impact of Project on Housing Availability	
1. Increase in available housing from construction of new units (Section 3)	158 Units
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand (Section 4)	5 Units
3. Decrease in available housing from increase in housing demand by new on-site workers (Section 4)	(28 Units)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents (Section 5)	(29 Units)
Net Increase in Available Housing	106 Units

Scenario 1 – Low Income BMR Units

Table 6-2 provides a breakout of the housing availability findings by income category for Scenario 1, with Low Income BMR units. As shown, the 106-unit net increase in housing availability consists of five Low, 90 Moderate and 30 Over 150% AMI units. Increased housing availability in the Low, Moderate and Over 150% AMI categories is offset by decreases within the Extremely Low, Very Low and Above Moderate categories of seven, six, and six units, respectively, as a result of added housing demand from on- and off-site workers that exceeds added housing availability from construction of new units and removal of on-site jobs within these income categories.

Table 6-2. Net Impacts on Housing Availability by Income Category, Scenario 1 – Low Income BMR Units							
	Extremely Low	**Very Low**	**Low**	**Moderate**	**Above Moderate**	**Over 150% AMI**	**Total**
1. Increase in available housing from construction of new units	0	0	21	98	0	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	0	1	3	1	0	0	5
3. Decrease in available housing from increase in housing demand from new on-site workers	(2)	(2)	(8)	(5)	(4)	(7)	(28)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	(5)	(5)	(11)	(4)	(2)	(2)	(29)
Net Increase in Housing Availability (1)	**(7)**	**(6)**	**5**	**90**	**(6)**	**30**	**106**

(1) Negative figures represent a net increase in housing demand that is not offset by added housing supply.

Scenario 2 – Very Low, Low and Moderate Income BMR Units

Table 6-3 provides a summary of housing availability findings by income for Scenario 2, with a mix of Very Low, Low and Moderate Income BMR units. In Scenario 2, the 106-unit net increase in available housing breaks down as 95 Moderate and 30 Over 150% AMI Income units. Increased housing availability in the Moderate and Over 150% AMI categories is offset by decreases within the Extremely Low, Very Low, Low and Above Moderate Income housing categories of seven, two, four, and six units, respectively, due to added housing demand from on-site and off-site workers within these income categories.

Table 6-3. Net Impacts on Housing Availability by Income Category, Scenario 2 – Very Low, Low, and Moderate Income BMR Units

	Extremely Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
1. Increase in available housing from construction of new units	0	4	12	103	0	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	0	1	3	1	0	0	5
3. Decrease in available housing from increase in housing demand from new on-site workers	(2)	(2)	(8)	(5)	(4)	(7)	(28)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	(5)	(5)	(11)	(4)	(2)	(2)	(29)
Net Increase in Housing Availability (1)	**(7)**	**(2)**	**(4)**	**95**	**(6)**	**30**	**106**

(1) Negative figures represent a net increase in housing demand that is not offset by added housing supply.

6.2 Menlo Park Share of Impact on Housing Supply and Housing Demand

KMA estimated the share of impacts on housing supply and housing demand that would occur within the City of Menlo Park. Estimates represent an allocation of the total housing availability impacts presented in Table 6-2 and 6-3 based on where housing units included in the proposed Project will be constructed (in Menlo Park) and where workers will live (a share in Menlo Park and a share outside of Menlo Park). Two scenarios are presented regarding the share of workers who will seek and find housing within the City of Menlo Park:

A. Current Commute Share (5.9%) – the "Current Commute Share" scenario is based on the existing 5.9% share of Menlo Park workers who live in the City. Section 6.3 provides additional discussion of the existing commute share.

B. Increased Commute Share (20%) – the "Increased Commute Share" scenario assumes 20% of new workers are housed within the City consistent with an assumption used in the City's 2000 commercial linkage fee nexus study[15] (2000 Nexus Study). The 20% commute share assumption from the 2000 Nexus Study reflects a goal of housing a larger share of the City's workforce. This scenario is included for informational purposes in response to interest expressed by the City Council in improving the jobs housing balance and obtaining data to inform the goal of increasing the number of workers who live and work in Menlo Park.

The 5.9% and 20% commute shares described above are applied to estimate the number of on- and off-site employees that will live in Menlo Park.

The analysis under the two commute scenarios is described below.

A. Current Commute Share Scenario

The analysis of housing availability impacts within Menlo Park under the Current Commute Share scenario reflects the following allocation of total regional impacts identified in Section 6.1:

(1) All residential units added by the proposed Project are in the City of Menlo Park; therefore, all 158 units are identified as additional housing supply in Menlo Park.

(2) None of five total units of added housing availability from removal of on-site jobs is estimated to be within Menlo Park based on the existing 5.9% share of Menlo Park workers who live in the City. Applying the 5.9% factor to the findings by income level from Table 6-2 and 6-3 yields a fraction of a unit that rounds to zero.

(3) Two of the 28 total units of additional housing need for new on-site workers is estimated to be within Menlo Park based on the existing 5.9% share of Menlo Park workers who live in the City. Applying the 5.9% factor to the findings by income level from Table 6-2 and 6-3 yields one unit of additional housing need in both the Low and Over 150% AMI income categories.

(4) Two of the 29 total units of additional housing need for off-site workers is estimated to be within Menlo Park based on the existing 5.9% share of Menlo Park workers who live in the City. One unit of additional housing need is estimated within both the Low and Moderate Income categories.

[15] Commercial Linkage Fee Nexus Study prepared for the City of Menlo Park by Vernazza Wolfe Associates, Inc. dated September 2000.

In summary, with the Current Commute Share scenario, the estimated net increase in housing availability in Menlo Park is 154 units based on the 158 new housing units constructed in Menlo Park, minus two units of new housing demand from new on-site workers and two units of new housing demand from new off-site workers.

Table 6-4 presents the findings by income level for Scenario 1, with Low Income BMR units. As shown, the estimated 154-unit net increase in housing availability in Menlo Park consists of 19 Low, 97 Moderate and 38 Over 150% AMI units.

Table 6-4. Estimated Menlo Park Share of Net Housing Availability Impacts, Scenario 1 with Current Commute Share

	Basis for Allocation to Menlo Park	Extr. Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
1. Increase in available housing from construction of new units	*all units are in Menlo Park*	-	-	21	98	-	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	*Based on current 5.9% Menlo Park commute share*	-	-	-	-	-	-	-
3. Decrease in available housing from increase in housing demand from new on-site workers	*Based on current 5.9% Menlo Park commute share*	-	-	(1)	-	-	(1)	(2)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	*Based on current 5.9% Menlo Park commute share*	-	-	(1)	(1)	-	-	(2)
Menlo Park Share of Net Increase in Housing Availability		-	-	19	97	-	38	154

Table 6-5 presents the findings by income level for Scenario 2, with Very Low, Low and Moderate Income BMR units. As shown, the estimated 154-unit net increase in housing availability in Menlo Park consists of four Very Low, ten Low, 102 Moderate and 38 Over 150% AMI units.

Table 6-5. Estimated Menlo Park Share of Net Housing Availability Impacts, Scenario 2 with Current Commute Share

	Basis for Allocation to Menlo Park	Extr. Low	Very Low	Low	Moderate	Above Moderate	Over 150% AMI	Total
1. Increase in available housing from construction of new units	*all units are in Menlo Park*	-	4	12	103	-	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	*Based on current 5.9% Menlo Park commute share*	-	-	-	-	-	-	-
3. Decrease in available housing from increase in housing demand from new on-site workers	*Based on current 5.9% Menlo Park commute share*	-	-	(1)	-	-	(1)	(2)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	*Based on current 5.9% Menlo Park commute share*	-	-	(1)	(1)	-	-	(2)
Menlo Park Share of Net Increase in Housing Availability		-	4	10	102	-	38	154

B. Increased Commute Share Scenario

The Increased Commute Share scenario is based on the City's 2000 Nexus Study which incorporated a commute share assumption of 20%. This 20% commute share assumption reflects a goal to house a larger share of the City's workforce locally that was approximately double the 10% commute share for Menlo Park as of the time the Nexus Study was prepared[16]. As stated in the 2000 Nexus Study:

[16] Per the 1990 Census, Menlo Park's commute share was 10% based on a total number working in Menlo Park of 26,048 of which 2,662 lived in Menlo Park. Figures do not include those who work out of their homes rather than commute to a separate workplace. The 1990 Census was the most recent data available at the time the 2000 Nexus Study was prepared as the 2000 Census data was not yet released. The 2000 Nexus Study references a separate factor of 23%, also as of 1990, which is not comparable to the 10% commute share in 1990. This 23% factor represents the share of Menlo Park *employed residents* (residents who are employed) who work in Menlo Park versus commute out of Menlo Park to a job located in another city.

Using a relatively higher number provides a goal for the City to achieve. Although inflated housing prices in the 1990's have resulted in a decrease in the percentage of Menlo Park workers who can afford to live in Menlo Park, the City's goal is to encourage local workers to live in Menlo Park in order to achieve a better jobs/housing balance.

This Increased Commute Share scenario provides additional information regarding how analysis findings would vary were the City to seek to house 20% of the added workforce locally consistent with the goal identified in the 2000 Nexus Study.

With the Increased Commute Share scenario, application of the 20% goal-based commute share results in allocation of one out of five units of added housing availably from removal of existing employee housing demand, six of the 28 units of added housing demand from new on-site jobs and six of the 29 units of additional housing need for off-site workers to Menlo Park, rather than two units each with the Current Commute Share scenario. In total, with the Increased Commute Share scenario, the estimated net increase in housing availability in Menlo Park is 147 units, consisting of 158 new housing units constructed in Menlo Park plus one unit of added housing availability from removal of on-site jobs minus 12 units of new housing demand in Menlo Park from on- and off-site workers.

Table 6-6 presents the findings by income level for Scenario 1, with Low Income BMR units and the Increased Commute Share. As shown, the estimated 147-unit net increase in housing availability in Menlo Park with the Increased Commute Share consists of 18 Low, 96 Moderate and 37 Over 150% AMI units, offset by a net decrease in housing availability within the Extremely Low, Very Low and Above Moderate Income categories of one, two and one units, respectively.

Table 6-6. Estimated Menlo Park Share of Net Housing Availability Impacts, Scenario 1 with Increased Commute Share								
	Basis for Allocation to Menlo Park	**Extr. Low**	**Very Low**	**Low**	**Moderate**	**Above Moderate**	**Over 150% AMI**	**Total**
1. Increase in available housing from construction of new units	*all units are in Menlo Park*	-	-	21	98	-	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	-	-	1	-	-	-	1
3. Decrease in available housing from increase in housing demand from new on-site workers	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	-	(1)	(2)	(1)	(1)	(1)	(6)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	(1)	(1)	(2)	(1)	-	(1)	(6)
Menlo Park Share of Net Increase in Housing Availability		(1)	(2)	18	96	(1)	37	147

Table 6-7 presents the findings by income level for Scenario 2, with Very Low, Low and Moderate Income BMR units and the Increased Commute Share. As shown, the estimated 147-unit net increase in housing availability in Menlo Park consists of two Very Low, nine Low, 101 Moderate and 37 Over 150% AMI units offset by a one-unit net decrease in housing availability within both the Extremely Low Income and Above Moderate Income categories.

Table 6-7. Estimated Menlo Park Share of Net Housing Availability Impacts, Scenario 2 with Increased Commute Share								
	Basis for Allocation to Menlo Park	**Extr. Low**	**Very Low**	**Low**	**Moderate**	**Above Moderate**	**Over 150% AMI**	**Total**
1. Increase in available housing from construction of new units	*all units are in Menlo Park*	-	4	12	103	-	39	158
2. Increase in available housing from removal of existing on-site jobs, which reduces worker housing demand	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	-	-	1	-	-	-	1
3. Decrease in available housing from increase in housing demand from new on-site workers	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	-	(1)	(2)	(1)	(1)	(1)	(6)
4. Decrease in available housing from increase in housing demand by off-site workers in services to new residents	*2000 Nexus Goal-Based Menlo Park commute share of 20%*	(1)	(1)	(2)	(1)	-	(1)	(6)
Menlo Park Share of Net Increase in Housing Availability		(1)	2	9	101	(1)	37	147

6.3 Additional Discussion of Commute Share

The share of new on- and off-site workers who will live in Menlo Park is estimated based on a commute share of 5.9% in the Current Commute Share scenario. This percentage is derived from the U.S. Census 2015-2019 American Community Survey and reflects the existing share of those working in Menlo Park who also live in Menlo Park, excluding those who work at home. The remaining 94.1% of the workforce commutes in from outside of the City.

Use of the existing commute share specific to the City of Menlo Park may overstate the share of off-site workers likely to live in Menlo Park as some jobs in off-site services to new residents such as retail, medical care, and restaurants may be in nearby cities rather than in Menlo Park. For those who work in nearby cities, the propensity to live in Menlo Park is expected to be less than the 5.9% commute share for Menlo Park workers[17].

The existing percentage of workers commuting from other jurisdictions to Menlo Park is attributable to a number of factors including the supply of housing relative to the number of jobs and the high cost of housing in Menlo Park. Although many factors influence housing decisions, because the number of workers that both live and work in Menlo Park is so low and the cost of

[17] For example, around 3.9% of those who work in Palo Alto live in Menlo Park based on data from the American Community Survey, lower than the 5.9% share for Menlo Park workers.

housing is high, it is possible that the 5.9% does not reflect the proportion of workers who would live in Menlo Park if they could find housing and could afford it. The share of the workforce that lives in Menlo Park has also been declining over time from 10% in 1990 to 7% as of the 2000 Census to 5.9% per the 2015-2019 ACS. Workers most everywhere tend to commute more in recent years than in the past and, in addition, Menlo Park has become less affordable over time. The possibility that availability and affordability of housing have contributed to a downward trend in Menlo Park's commute share is the primary reason for including the separate goal-based Increased Commute Share scenario.

Construction of new housing can be expected to contribute toward increasing the number of workers that live locally by providing additional housing opportunities in Menlo Park. The 158-unit size of the proposed Project represents an approximately 1.1% increase in the size of the City's existing housing stock of 14,082 units[18]. While the number of units added is small relative to the larger workforce of over 40,000, the proposed Project can be expected to contribute incrementally to housing a greater number of workers locally.

[18] Number of housing units as of January 1, 2020 per California Department of Finance Table E-5, Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark.

7.0 DISPLACEMENT ANALYSIS

This section provides a discussion of the potential for the proposed Project to contribute to displacement of existing residents and neighborhood change in two proximate communities known to be vulnerable to displacement, the City of East Palo Alto (East Palo Alto) and the Belle Haven neighborhood of Menlo Park (Belle Haven). Given the complex array of factors that influence housing markets and neighborhood change, precise estimates or projections of outcomes are not feasible; instead, a qualitative discussion of the potential for the proposed Project to impact displacement is provided.

Location of Proposed Project Relative to Belle Haven and East Palo Alto

The aerial image below shows the location of the proposed Project relative to Belle Haven and East Palo Alto. The proposed Project is located within Menlo Park's Bayfront Area. Belle Haven is a residential neighborhood located to the east of the Project site generally bounded by U.S. 101, Willow Road and a railroad right-of-way, outlined in red on the aerial image below. East Palo Alto is just to the east of Belle Haven across Willow Road.

Proposed Project, Belle Haven and East Palo Alto Location

Source: Google Maps

7.1 Displacement and Risk of Displacement in East Palo Alto and Belle Haven

Displacement occurs when housing or neighborhood conditions force existing residents to move, or households feel like their move is involuntary. Displacement can be caused by a range of physical, economic and social factors including but not limited to foreclosure, condominium

conversion, building deterioration or condemnation, increased taxes, natural disasters, eminent domain, and increases in housing costs[19, 20, 21]. The HNA is focused on economic drivers of displacement, specifically the potential for the proposed Project to affect the local housing market and housing costs.

Lower income communities in the Bay Area have become increasingly vulnerable to displacement of existing residents. Employment growth, constrained housing production, and rising income inequality are among the factors that have contributed to increased displacement pressures, especially within lower income communities in locations accessible to employment centers where many households are housing-cost burdened.

East Palo Alto and Belle Haven both have existing risk factors for displacement. Both have a relatively lower-income existing population that includes a high percentage of households who spend 35% or more of their income on housing. East Palo Alto's rent control and just cause eviction ordinance provides significant protection to existing renters within multi-family buildings built prior to 1988 but does not preclude the potential for longer-term neighborhood change. The Urban Displacement Project,[22] an initiative of UC Berkeley "aimed at understanding the nature of gentrification and displacement in the Bay Area" has identified the Belle Haven census tract and census tracts within East Palo Alto as areas experiencing "ongoing gentrification and/or displacement" or "at risk of displacement." A separate analysis by the Urban Displacement Project[23] indicates that, despite risk factors for displacement, East Palo Alto had not experienced significant gentrification during the 2000 to 2013 period, potentially due to policies aimed at preventing displacement including rent control and just cause eviction protections.

A recent study by UC Berkeley's Center for Community Innovation and its Y-PLAN initiative, titled *Investment and Disinvestment as Neighbors: A Study of Baseline Housing Conditions in the Bay Area Peninsula*, provided an assessment of the baseline housing conditions in the Belle Haven neighborhood, City of East Palo Alto, and North Fair Oaks neighborhood (unincorporated San Mateo County). The study found indications of recent changes including increased population turnover, declining school age population, and an increase in homelessness. The study also identified a high incidence of rent burdened households and disproportionate pressure on the local housing market compared to the rest of San Mateo County. The study

[19] Zuk, M. et. al. 2017. Gentrification, Displacement, and the Role of Public Investment. Journal of Planning Literature. Journal of Planning Literature 1-14.

[20] Center for Community Innovation (2020). Investment and Disinvestment as Neighbors, A Study of Baseline Housing Conditions in the Bay Area Peninsula.

[21] Bradshaw, K. (2019). Uneven Ground: How unequal land use harms communities in southern San Mateo County. Palo Alto Online. https://paloaltoonline.atavist.com/uneven-ground.

[22] Zuk, M., & Chapple, K. (2019). Urban Displacement Project. http://www.urbandisplacement.org/

[23] Crispell, M, Harris L.R., and Cespedes S. March 2016. San Mateo County's East Palo Alto. Urban Displacement Project.

found more signs of disinvestment in East Palo Alto and more indications of real estate speculation in Belle Haven[24].

7.2 Potential for Proposed Project to Contribute to Displacement

The following outlines factors considered in the evaluation of whether the proposed Project could have an influence on displacement in East Palo Alto and Belle Haven:

(1) The proposed Project adds 158 new units to the housing supply, including 21 BMR units and 98 market rate units estimated to be affordable to Moderate Income, which will make additional housing opportunities available in a very competitive housing market.

(2) The proposed Project results in an estimated net increase in housing availability of 106 units. The basis for this figure is described in Section 6.1 and considers the 158 new units constructed as well as changes in worker housing demand.

(3) The proposed Project is located in an area geographically separate from both Belle Haven and East Palo Alto and will not physically alter either community.

(4) The 158 new units in the proposed Project equate to an approximately 1.1% increase in the existing 14,082-unit Menlo Park housing stock[25] and a 0.06% increase in the 280,879-unit housing stock of San Mateo County.

(5) Several recent studies have explored the effects of new market rate housing development on housing costs and displacement pressures within the immediate vicinity of new housing development[26]. The studies found that new residential development has

[24] Center for Community Innovation. (2020). Investment and Disinvestment as Neighbors, A Study of Baseline Housing Conditions in the Bay Area Peninsula.

[25] Number of housing units as of January 1, 2020 per California Department of Finance Table E-5, Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark.

[26] Asquith, Brian J., Evan Mast, and Davin Reed. 2019. "Supply Shock Versus Demand Shock: The Local Effects of New Housing in Low-Income Areas." Upjohn Institute Working Paper 19-316. W. E. Upjohn Institute for Employment Research. https://doi.org/10.17848/wp19-316

Damiano, Anthony, Frenier, Chris. 2020. “Build Baby Build?: Housing Submarkets and the Effects of New Construction on Existing Rents” University of Minnesota CURA Center for Urban and Regional Affairs. https://www.tonydamiano.com/project/new-con/bbb-wp.pdf

Li, Xiaodi. 2019. “Do New Housing Units in Your Backyard Raise Your Rents?” NYU Wagner and NYU Furman Center. https://72187189-93c1-48bc-b596-fc36f4606599.filesusr.com/ugd/7fc2bf_2fc84967cfb945a69a4df7baf8a4c387.pdf

moderating effects on rents and displacement pressures at the local level. New residential developments were found to decrease rents in the area surrounding the new housing either in absolute terms or relative to market trend.

In consideration of the above factors, the proposed Project is not anticipated to contribute to displacement in East Palo Alto or Belle Haven. The proposed Project increases availability of market rate and affordable housing, which will tend to moderate or counteract displacement pressures by relieving, to some extent, market pressures on the existing local housing stock.

Mast, Evan. 2019. "The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market" Upjohn Institute Working Paper 19-307 W. E. Upjohn Institute for Employment Research. https://research.upjohn.org/cgi/viewcontent.cgi?article=1325&context=up_workingpapers

Pennington, Kate. 2021. "Does Building New Housing Cause Displacement?: The Supply and Demand Effects of Construction in San Francisco." Department of Agricultural and Resource Economics, University of California, Berkeley. https://www.dropbox.com/s/oplls6utgf7z6ih/Pennington_JMP.pdf?dl=0

Phillips, Shane, Manville, Michael, Lens Michael. 2021. "Research Roundup: The Effect of Market-Rate Development on Neighborhood Rents" UCLA Lewis Center for Regional Policy Studies. https://www.lewis.ucla.edu/research/market-rate-development-impacts/

APPENDIX A – WORKER OCCUPATIONS AND COMPENSATION LEVELS

APPENDIX A TABLE 1
WORKER OCCUPATION DISTRIBUTION, 2019
SERVICES TO HOUSEHOLDS EARNING $100 - $150K
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Major Occupations (2% or more)	Worker Occupation Distribution[1] Services to Households Earning $100,000 to $150,000
Management Occupations	*4.0%*
Business and Financial Operations Occupations	*4.2%*
Educational Instruction and Library Occupations	*3.1%*
Healthcare Practitioners and Technical Occupations	*8.1%*
Healthcare Support Occupations	*9.5%*
Food Preparation and Serving Related Occupations	*13.0%*
Building and Grounds Cleaning and Maintenance Occupations	*2.2%*
Personal Care and Service Occupations	*6.2%*
Sales and Related Occupations	*13.4%*
Office and Administrative Support Occupations	*12.3%*
Installation, Maintenance, and Repair Occupations	*3.4%*
Transportation and Material Moving Occupations	*9.0%*
All Other Worker Occupations - Services to Households Earning $100,000 to $150,000	*11.6%*
INDUSTRY TOTAL	100.0%

[1] Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

Source: Bureau of Labor Statistics, IMPLAN
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APPENDIX A TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2020
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 1 of 4			
Management Occupations			
General and Operations Managers	$170,200	38.7%	1.5%
Sales Managers	$165,500	4.9%	0.2%
Administrative Services and Facilities Managers	$138,200	3.2%	0.1%
Computer and Information Systems Managers	$209,500	3.2%	0.1%
Financial Managers	$195,300	9.2%	0.4%
Food Service Managers	$73,200	5.4%	0.2%
Medical and Health Services Managers	$159,500	8.3%	0.3%
Social and Community Service Managers	$67,000	3.9%	0.2%
Personal Service Managers, All Other; Entertainment and Recreation Mar	$180,900	3.9%	0.2%
All other Management Occupations (Avg. All Categories)	$161,000	19.3%	0.8%
Weighted Mean Annual Wage	***$161,000***	**100.0%**	**4.0%**
Business and Financial Operations Occupations			
Human Resources Specialists	$94,900	5.8%	0.2%
Management Analysts	$118,500	5.3%	0.2%
Training and Development Specialists	$87,000	3.7%	0.2%
Market Research Analysts and Marketing Specialists	$99,900	8.0%	0.3%
Project Management Specialists and Business Operations Specialists, All	$99,300	10.3%	0.4%
Accountants and Auditors	$96,500	16.7%	0.7%
Personal Financial Advisors	$168,200	11.0%	0.5%
Loan Officers	$80,900	5.6%	0.2%
Financial and Investment Analysts, Financial Risk Specialists, and Financi	$128,200	10.6%	0.4%
All Other Business and Financial Operations Occupations (Avg. All Categ	$111,600	23.0%	1.0%
Weighted Mean Annual Wage	***$111,600***	**100.0%**	**4.2%**
Educational Instruction and Library Occupations			
Preschool Teachers, Except Special Education	$48,800	26.7%	0.8%
Elementary School Teachers, Except Special Education	$90,800	7.1%	0.2%
Secondary School Teachers, Except Special and Career/Technical Educa	$99,800	4.9%	0.2%
Self-Enrichment Teachers	$55,400	9.3%	0.3%
Substitute Teachers, Short-Term	$47,500	3.7%	0.1%
Tutors and Teachers and Instructors, All Other	$47,000	5.8%	0.2%
Teaching Assistants, Except Postsecondary	$41,800	18.7%	0.6%
All Other Educational Instruction and Library Occupations (Avg. All Categ	$54,900	23.7%	0.7%
Weighted Mean Annual Wage	***$54,900***	**100.0%**	**3.1%**

Sources: Bureau of Labor Statistics, IMPLAN
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APPENDIX A TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2020
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 2 of 4			
Healthcare Practitioners and Technical Occupations			
Pharmacists	$145,100	4.8%	0.4%
Physical Therapists	$110,800	4.9%	0.4%
Registered Nurses	$151,200	24.8%	2.0%
Physicians, All Other; and Ophthalmologists, Except Pediatric	$180,700	3.5%	0.3%
Dental Hygienists	$119,400	6.0%	0.5%
Pharmacy Technicians	$56,000	6.9%	0.6%
Licensed Practical and Licensed Vocational Nurses	$74,600	8.9%	0.7%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Ca	$123,500	40.1%	3.2%
Weighted Mean Annual Wage	***$123,500***	**100.0%**	**8.1%**
Healthcare Support Occupations			
Home Health and Personal Care Aides	$31,900	56.1%	5.3%
Nursing Assistants	$52,700	14.8%	1.4%
Massage Therapists	$50,200	3.7%	0.4%
Dental Assistants	$58,100	7.9%	0.7%
Medical Assistants	$54,800	8.2%	0.8%
All Other Healthcare Support Occupations (Avg. All Categories)	$40,400	9.3%	0.9%
Weighted Mean Annual Wage	***$40,400***	**100.0%**	**9.5%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$50,600	7.6%	1.0%
Cooks, Fast Food	$29,600	4.6%	0.6%
Cooks, Restaurant	$42,300	11.0%	1.4%
Food Preparation Workers	$34,700	6.5%	0.8%
Bartenders	$42,300	3.5%	0.4%
Fast Food and Counter Workers	$34,200	31.0%	4.0%
Waiters and Waitresses	$44,500	19.6%	2.6%
Dishwashers	$35,600	3.8%	0.5%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	$36,000	3.4%	0.4%
All Other Food Preparation and Serving Related Occupations (Avg. All Ca	$39,000	9.1%	1.2%
Weighted Mean Annual Wage	***$39,000***	**100.0%**	**13.0%**

Sources: Bureau of Labor Statistics, IMPLAN
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2020
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 3 of 4			
Building and Grounds Cleaning and Maintenance Occupations			
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$38,900	51.1%	1.1%
Maids and Housekeeping Cleaners	$43,300	15.4%	0.3%
Pest Control Workers	$49,900	4.1%	0.1%
Landscaping and Groundskeeping Workers	$45,400	20.7%	0.5%
All Other Building and Grounds Cleaning and Maintenance Occupations (A	$41,600	8.7%	0.2%
Weighted Mean Annual Wage	***$41,600***	**100.0%**	**2.2%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service and Entertainment and Recrea	$57,500	5.9%	0.4%
Animal Caretakers	$37,400	16.4%	1.0%
Amusement and Recreation Attendants	$32,600	3.0%	0.2%
Hairdressers, Hairstylists, and Cosmetologists	$35,200	23.0%	1.4%
Manicurists and Pedicurists	$31,200	7.5%	0.5%
Childcare Workers	$39,900	14.7%	0.9%
Exercise Trainers and Group Fitness Instructors	$59,700	9.1%	0.6%
Recreation Workers	$41,300	4.6%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	$40,500	15.8%	1.0%
Weighted Mean Annual Wage	***$40,500***	**100.0%**	**6.2%**
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	$50,300	9.8%	1.3%
Cashiers	$35,700	28.7%	3.9%
Retail Salespersons	$38,600	38.9%	5.2%
Securities, Commodities, and Financial Services Sales Agents	$110,500	4.4%	0.6%
Sales Representatives of Services, Except Advertising, Insurance, Financ	$86,400	5.0%	0.7%
Sales Representatives, Wholesale and Manufacturing, Except Technical a	$84,400	3.4%	0.5%
All Other Sales and Related Occupations (Avg. All Categories)	$46,800	9.9%	1.3%
Weighted Mean Annual Wage	***$46,800***	**100.0%**	**13.4%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$75,800	7.5%	0.9%
Billing and Posting Clerks	$54,100	3.1%	0.4%
Bookkeeping, Accounting, and Auditing Clerks	$59,100	7.4%	0.9%
Customer Service Representatives	$53,000	14.6%	1.8%
Receptionists and Information Clerks	$45,400	12.0%	1.5%
Medical Secretaries and Administrative Assistants	$53,900	5.9%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Exe	$55,900	9.6%	1.2%
Office Clerks, General	$49,700	15.5%	1.7%
All Other Office and Administrative Support Occupations (Avg. All Categor	$54,400	24.5%	3.0%
Weighted Mean Annual Wage	***$54,400***	**100.0%**	**12.1%**

Sources: Bureau of Labor Statistics, IMPLAN
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APPENDIX A TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2020
SERVICES TO HOUSEHOLDS EARNING $100,000 TO $150,000
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total No. of Service Workers
Page 4 of 4			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$91,200	7.8%	0.3%
Automotive Body and Related Repairers	$59,900	11.1%	0.4%
Automotive Service Technicians and Mechanics	$67,800	30.2%	1.0%
Bus and Truck Mechanics and Diesel Engine Specialists	$69,800	6.0%	0.2%
Maintenance and Repair Workers, General	$57,700	14.5%	0.5%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Cate	$67,200	30.4%	1.0%
Weighted Mean Annual Wage	***$67,200***	**100.0%**	**3.4%**
Transportation and Material Moving Occupations			
First-Line Supervisors of Transportation and Material Moving Workers, Ex	$64,400	4.2%	0.4%
Driver/Sales Workers	$38,400	4.7%	0.4%
Heavy and Tractor-Trailer Truck Drivers	$58,200	9.7%	0.9%
Light Truck Drivers	$53,400	6.6%	0.6%
Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	$42,700	9.3%	0.8%
Parking Attendants	$37,900	8.7%	0.8%
Cleaners of Vehicles and Equipment	$35,800	7.3%	0.7%
Laborers and Freight, Stock, and Material Movers, Hand	$43,700	12.4%	1.1%
Packers and Packagers, Hand	$36,700	3.1%	0.3%
Stockers and Order Fillers	$40,000	19.6%	1.8%
All Other Transportation and Material Moving Occupations (Avg. All Categ	$44,400	14.2%	1.3%
Weighted Mean Annual Wage	***$44,400***	**100.0%**	**9.0%**
			88.4%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

[2] Occupation percentages are based on the 2019 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on Occupational Employment Survey data applicable to San Mateo County as of First Quarter 2020.

[3] Including occupations representing 3% or more of the major occupation group

Sources: Bureau of Labor Statistics, IMPLAN
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 3
WORKER OCCUPATION DISTRIBUTION, 2019
OFFICE SPACE
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

	Worker Occupation Distribution[1] Office Space
Management Occupations	*12.8%*
Business and Financial Operations Occupations	*12.3%*
Computer and Mathematical Occupations	*38.0%*
Educational Instruction and Library Occupations	*3.5%*
Arts, Design, Entertainment, Sports, and Media Occupations	*6.2%*
Sales and Related Occupations	*11.4%*
Office and Administrative Support Occupations	*13.0%*
All Other Worker Occupations - Office Space	*2.8%*
INDUSTRY TOTAL	100.0%

[1] Distribution of occupational employment is based on the Bureau of Labor Statistics Occupational Employment Survey.

Source: Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2020
OFFICE SPACE WORKERS
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Office Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$170,200	21.6%	2.8%
Marketing Managers	$187,500	11.7%	1.5%
Sales Managers	$165,500	11.5%	1.5%
Computer and Information Systems Managers	$209,500	27.8%	3.6%
Financial Managers	$195,300	6.4%	0.8%
Personal Service Managers, All Other; Entertainment and Recreation Man	$180,900	7.2%	0.9%
All other Management Occupations (Avg. All Categories)	$187,400	13.9%	1.8%
Weighted Mean Annual Wage	***$187,400***	**100.0%**	**12.8%**
Business and Financial Operations Occupations			
Human Resources Specialists	$94,900	9.0%	1.1%
Management Analysts	$118,500	10.9%	1.3%
Training and Development Specialists	$87,000	5.7%	0.7%
Market Research Analysts and Marketing Specialists	$99,900	29.9%	3.7%
Project Management Specialists and Business Operations Specialists, All	$99,300	18.0%	2.2%
Accountants and Auditors	$96,500	11.2%	1.4%
Financial and Investment Analysts, Financial Risk Specialists, and Financi	$128,200	5.5%	0.7%
All Other Business and Financial Operations Occupations (Avg. All Catego	$102,000	9.8%	1.2%
Weighted Mean Annual Wage	***$102,000***	**100.0%**	**12.3%**
Computer and Mathematical Occupations			
Computer Systems Analysts	$124,400	9.3%	3.5%
Computer User Support Specialists	$79,300	11.4%	4.3%
Network and Computer Systems Administrators	$104,000	4.3%	1.6%
Computer Programmers	$117,100	4.6%	1.7%
Software Developers and Software Quality Assurance Analysts and Tester	$153,800	46.9%	17.8%
Web Developers and Digital Interface Designers	$120,700	6.3%	2.4%
Computer Occupations, All Other	$126,800	6.5%	2.5%
All Other Computer and Mathematical Occupations (Avg. All Categories)	$132,700	10.8%	4.1%
Weighted Mean Annual Wage	***$132,700***	**100.0%**	**38.0%**
Educational Instruction and Library Occupations			
Archivists	$85,800	4.2%	0.1%
Librarians and Media Collections Specialists	$93,000	43.0%	1.5%
Library Technicians	$63,600	40.0%	1.4%
All Other Educational Instruction and Library Occupations (Avg. All Catego	$79,200	12.8%	0.5%
Weighted Mean Annual Wage	***$79,200***	**100.0%**	**3.5%**
Arts, Design, Entertainment, Sports, and Media Occupations			
Art Directors	$139,300	3.1%	0.2%
Special Effects Artists and Animators	$101,800	6.7%	0.4%
Graphic Designers	$82,700	9.3%	0.6%
Producers and Directors	$107,100	9.6%	0.6%
News Analysts, Reporters, and Journalists	$73,900	13.3%	0.8%
Public Relations Specialists	$84,800	8.3%	0.5%
Editors	$90,800	26.6%	1.7%
Technical Writers	$107,900	4.8%	0.3%
Writers and Authors	$98,500	7.3%	0.5%
All Other Arts, Design, Entertainment, Sports, and Media Occupations (Av	$92,700	10.9%	0.7%
Weighted Mean Annual Wage	***$92,700***	**100.0%**	**6.2%**

Source: U.S. Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2020
OFFICE SPACE WORKERS
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Office Workers
Page 2 of 2			
Sales and Related Occupations			
First-Line Supervisors of Non-Retail Sales Workers	$85,200	4.3%	0.5%
Advertising Sales Agents	$98,400	17.3%	2.0%
Sales Representatives of Services, Except Advertising, Insurance, Financi	$86,400	50.7%	5.8%
Sales Representatives, Wholesale and Manufacturing, Technical and Scie	$109,200	10.6%	1.2%
Sales Representatives, Wholesale and Manufacturing, Except Technical a	$84,400	6.0%	0.7%
Telemarketers	$35,200	4.2%	0.5%
All Other Sales and Related Occupations (Avg. All Categories)	$88,700	7.0%	0.8%
Weighted Mean Annual Wage	***$88,700***	**100.0%**	**11.4%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$75,800	8.5%	1.1%
Bookkeeping, Accounting, and Auditing Clerks	$59,100	6.0%	0.8%
Customer Service Representatives	$53,000	35.3%	4.6%
Library Assistants, Clerical	$46,900	9.5%	1.2%
Executive Secretaries and Executive Administrative Assistants	$88,300	5.4%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Exe	$55,900	6.2%	0.8%
Office Clerks, General	$49,700	11.5%	1.5%
All Other Office and Administrative Support Occupations (Avg. All Categor	$57,200	17.5%	2.3%
Weighted Mean Annual Wage	***$57,200***	**100.0%**	**13.0%**
			97.2%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

[2] Occupation percentages are based on the 2019 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on Occupational Employment Survey data applicable to San Mateo County as of First Quarter 2020.

[3] Including occupations representing 3% or more of the major occupation group

Source: U.S. Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 5
AVERAGE ANNUAL WORKER COMPENSATION, 2020
EXISTING COMMERCIAL
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Existing Commercial Workers [2]
Sales Managers	$165,500	10.0%
Set and Exhibit Designers	$78,800	20.0%
Lighting Technicians and Media and Communication Equipment Workers, All Other*	$91,300	20.0%
Meeting, Convention, and Event Planners	$67,100	10.0%
Office Clerks, General	$49,700	10.0%
Light Truck Drivers	$53,400	10.0%
Laborers and Freight, Stock, and Material Movers, Hand	$43,700	20.0%
		100.0%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

[2] Estimated breakdown based upon on the following description from the LinkedIn page for the existing tenant "Theme Party Productions has been designing and producing memorable special events for over 20 years. Theme Party Productions offers a warehouse with over 24,000 sq. ft. of prop rental resources, creative and technically skilled event design staff to meet the needs of our clients."

Source: Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 6
AVERAGE ANNUAL WORKER COMPENSATION, 2020
BUILDING SERVICES
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Building Services Workers
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$38,900	75.0%
Maintenance and Repair Workers, General	$57,700	25.0%
		100.0%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

Source: Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 7
AVERAGE ANNUAL WORKER COMPENSATION, 2020
APARTMENT PROPERTY MANAGEMENT
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	2020 Avg. Compensation [1]	% of Total Apartment Property Management Workers
Property, Real Estate, and Community Association Managers	$88,900	20.0%
Maintenance and Repair Workers, General	$57,700	40.0%
Grounds Maintenance Workers, All Other	$42,800	40.0%
		100.0%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

Source: Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX A TABLE 8
AVERAGE ANNUAL WORKER COMPENSATION, 2020
COMMUNITY AMENITY / CAFÉ SPACE
HOUSING NEEDS ASSESSMENT - MENLO FLATS PROJECT
MENLO PARK, CA

Occupation [3]	Estimated No. On-site workers	2020 Avg. Compensation [1]	% of Total Community Amenity / Café Space Workers
First-Line Supervisors of Food Preparation and Serving Workers	1	$50,600	25.0%
Food Preparation Workers	2	$34,700	50.0%
Food Servers, Nonrestaurant	1	$35,300	25.0%
	4		100.0%

[1] The methodology utilized by the Bureau of Labor Statistics (BLS) assumes hourly paid employees are employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week by 52 weeks.

Source: U.S. Bureau of Labor Statistics
Keyser Marston Associates, Inc.
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APPENDIX D

TRANSPORTATION IMPACT ANALYSIS

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TRANSPORTATION IMPACT ANALYSIS

MENLO FLATS

MENLO PARK, SAN MATEO COUNTY, CALIFORNIA

This Transportation Impact Analysis has been prepared under the supervision of
Shiva Delparastaran, P.E.

LSA

September 2021

TRANSPORTATION IMPACT ANALYSIS

MENLO FLATS

MENLO PARK, SAN MATEO COUNTY, CALIFORNIA

Submitted to:

City of Menlo Park
701 Laurel Street
Menlo Park, California 94025

Prepared by:

LSA
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

Project No. CMK2001

LSA

September 2021

EXECUTIVE SUMMARY

LSA prepared this Transportation Impact Analysis (TIA) to identify the potential transportation effects resulting from the development of the proposed Menlo Flats Project (project) at 165 Jefferson Drive, Menlo Park, California. LSA has prepared this analysis based on the objectives and methodologies set forth in the City of Menlo Park (City) TIA Guidelines (City of Menlo Park 2020a), the City's Transportation Demand Management (TDM) Plan (Hexagon 2020), the City's General Plan (City of Menlo Park 2016), the Town of Atherton General Plan (Town of Atherton 2019), applicable requirements of the California Department of Transportation (Caltrans), and applicable provisions of the California Environmental Quality Act (CEQA).

The project site is currently occupied by an office tenant. The project would demolish the existing 24,311-square-foot (sf) office building and construct an approximately 253,700 sf, eight-story mixed-use building with 158 dwelling units and 15,000 sf of community amenity space (13,400 sf of office use and 1,600 sf of commercial space, assumed to be used as a café), as well as associated open space, circulation and parking, and infrastructure improvements. Vehicle access to the project site will be provided via a new full-access driveway on Jefferson Drive. The project will be completed in 2024.

Based on the results of this TIA, the project's estimated average daily vehicle miles traveled (VMT) is above the City's VMT threshold for both residential and office components of the project. However, implementation of the proposed TDM Plan would result in the project's average daily VMT being below the City's VMT thresholds. Therefore, the VMT generated by the project would result in a less than significant impact.

This TIA evaluates the a.m. and p.m. peak-hour levels of service (LOS) during a typical weekday at the study area intersections. The project's adverse effects were determined based on the analysis of the following scenarios, consistent with the City's requirements:

- Existing condition
- Near-Term (Existing plus approved projects) condition
- Near-Term Plus Project condition
- Cumulative (including all future potential development by year 2040) condition
- Cumulative Plus Project condition

Based on the results of this TIA, development of the project would result in one study area intersection operating in noncompliance with the TIA Guidelines under the Near-Term Plus Project condition and in seven study intersections operating in noncompliance with the TIA Guidelines under the Cumulative Plus Project condition. The intersections would operate in compliance with the TIA Guidelines under the Near-Term Plus Project and Cumulative Plus Project conditions with proposed improvements, which will be discussed in the study.

The project residential and nonresidential uses would access the parking garage via a single two-way gated entry point approximately 85 feet (ft) from the back of the sidewalk on Jefferson Drive. Project outbound traffic would need to be stop-controlled at the driveway before turning onto

Jefferson Drive. The project driveway would meet the minimum sight distance requirements specified in the California Manual on Uniform Traffic Control Devices (California MUTCD; Caltrans 2014).

Based on the results of the gate stacking analysis, the minimum stacking distance is satisfied at the proposed gate on the project site, and the proposed gate operation and vehicle storage length would accommodate the projected demand without queuing onto Jefferson Drive.

The project will not meet the minimum required parking spaces for the residential use but will meet the minimum required parking spaces for the nonresidential use. However, as part of the Below Market Rate (BMR) Ordinance and BMR Guidelines, the project sponsor may request a waiver from the minimum parking requirement. Therefore, if the City Council grants the waiver for the minimum number of parking spaces, the project would meet the City's parking requirements.

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FIGURES

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LIST OF ABBREVIATIONS AND ACRONYMS

ac	acre(s)
ADT	average daily trips
BMR	Below Market Rate
California MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
City	City of Menlo Park
ft	foot/feet
HCM	*Highway Capacity Manual*
ITE	Institute of Transportation Engineers
LOS	level of service
mi	mile(s)
mph	miles per hour
NCHRP	National Cooperative Highway Research Program
OPR	Office of Planning and Research
project	Menlo Flats Project
SamTrans	San Mateo County Transportation Authority
SB	Senate Bill
sf	square feet
SR-84	State Route 84
TAZ	Traffic Analysis Zone
TDM	Transportation Demand Management
TIA	Transportation Impact Analysis
TIF	Traffic Impact Fee
TRB	Transportation Research Board
US-101	United States Route 101
VMT	vehicle miles traveled

TRANSPORTATION IMPACT ANALYSIS, MENLO FLATS PROJECT

INTRODUCTION

The purpose of this Transportation Impact Analysis (TIA) is to identify the potential transportation effects associated with the proposed Menlo Flats Project (project) located at 165 Jefferson Drive in Menlo Park, San Mateo County, California. The project site is currently occupied by an office tenant. The project would demolish the existing 24,311-square-foot (sf) office building and construct an approximately 253,700 sf, eight-story mixed-use building with 158 dwelling units and 15,000 sf of community amenity space (13,400 sf of office use and 1,600 sf of commercial space, assumed to be used as a café), as well as associated open space, circulation and parking, and infrastructure improvements. The project will be completed in 2024.

The approximately 1.38-acre (ac) project site is bordered by office and light industrial uses to the north, east, and west, and by Jefferson Drive to the south. Vehicle access to the project site will be provided via a new full-access driveway on Jefferson Drive. A project vicinity map is presented on Figure 1. Figure 2 illustrates the conceptual site plan.

LSA prepared the TIA based on the City of Menlo Park (City) TIA Guidelines (City of Menlo Park 2020a), the City's Transportation Demand Management (TDM) Plan (Hexagon 2020), the City's General Plan (City of Menlo Park 2016), the Town of Atherton General Plan (Town of Atherton 2019), applicable requirements of the California Department of Transportation (Caltrans), and applicable provisions of the California Environmental Quality Act (CEQA).

This TIA examines the following four scenarios:

1. Existing condition
2. Near-Term (Existing plus approved projects) condition
3. Near-Term Plus Project condition
4. Cumulative (including all future potential development by year 2040) condition
5. Cumulative Plus Project condition

The following analysis periods have been evaluated:

1. Weekday a.m. peak hour (between 7:00 a.m. and 9:00 a.m.)
2. Weekday p.m. peak hour (between 4:00 p.m. and 6:00 p.m.)

PROJECT DESCRIPTION

The project would demolish the existing office building and construct an approximately 253,700 sf eight-story mixed-use building with 158 dwelling units and 15,000 sf of community amenity space (consisting of 13,400 sf of office use and 1,600 sf of commercial space, assumed to be used as a café), as well as associated open space, circulation and parking, and infrastructure improvements. The project will be completed in 2024.

Vehicle access to the project site will be provided via a new full-access driveway on Jefferson Drive. Project outbound traffic will be stop-controlled at the driveway, while Jefferson Drive will remain uncontrolled along the project frontage.

ANALYSIS METHODOLOGY

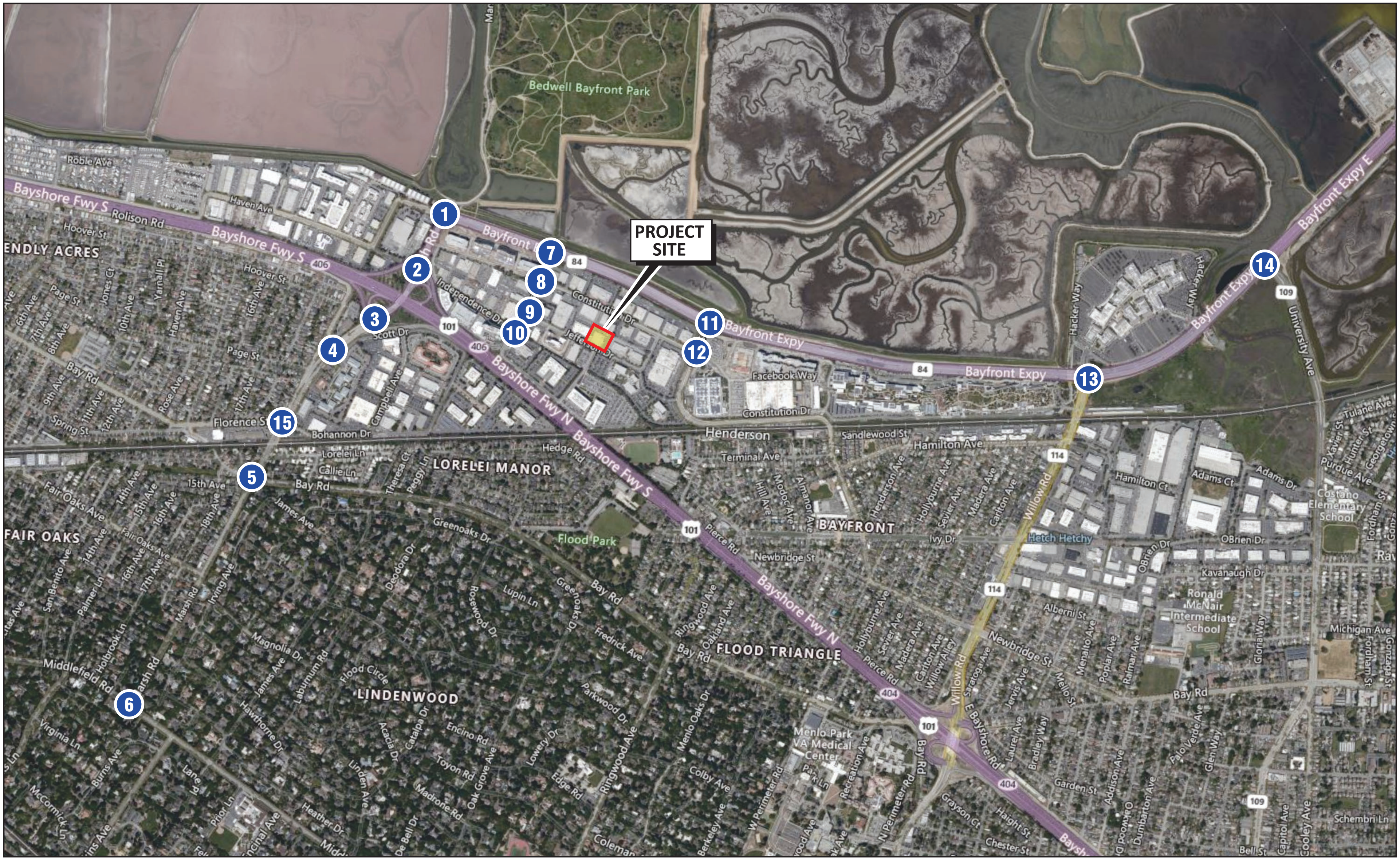
This TIA is prepared consistent with the objectives and requirements of City's TIA Guidelines (City of Menlo Park 2020a), the City's TDM Plan (Hexagon 2020), the City's General Plan (City of Menlo Park 2016), the Town of Atherton General Plan (Town of Atherton 2019), Caltrans, and applicable provisions of CEQA.

Study Area

The study area analyzed in this report includes the following 15 intersections:

1. Marsh Road/Bayfront Expressway/Haven Avenue (local approaches to State)
2. Marsh Road/United States Route 101 (US-101) northbound off-ramp (State)
3. Marsh Road/US-101 southbound off-ramp (State)
4. Marsh Road/Scott Drive (Menlo Park)
5. Marsh Road/Bay Road (Menlo Park)
6. Marsh Road/Middlefield Road (Atherton)
7. Chrysler Drive/Bayfront Expressway (local approaches to State)
8. Chrysler Drive/Constitution Drive (Menlo Park)
9. Chrysler Drive/Jefferson Drive (Menlo Park)
10. Chrysler Drive/Independence Drive (Menlo Park)
11. Chilco Street/Bayfront Expressway (local approaches to State)
12. Chilco Street/Constitution Drive (Menlo Park)
13. Willow Road/Bayfront Expressway (State)
14. University/Bayfront Expressway (State)
15. Marsh Road/Florence Street-Bohannon Drive (Menlo Park)

Figure 3 shows the study intersections.



LSA

FIGURE 3

LEGEND

- Study Area Intersection

N

0 1000 2000

FEET

SOURCE: Bing Maps

Menlo Flats

Study Area Intersections

I:\CMK2001\G\Study Intersections.cdr (7/1/2021)

Intersection Level of Service Methodologies

In accordance with the City's TIA Guidelines (City of Menlo Park 2020a), intersections are evaluated using the *Highway Capacity Manual* (HCM), 6th Edition (TRB 2017) methodology. Vistro software was used to determine the level of service (LOS) based on traffic volume and intersection geometry.

The HCM methodology calculates the average delay experienced by all vehicles at an intersection. The resulting calculation of average delay experienced by vehicles at the intersection is then used to determine the LOS at that location. LOS A represents free-flow activity, and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. LOS criteria for intersections are presented below:

A. In this service level, no approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.

B. This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.

C. This service level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

D. This service level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.

E. Capacity occurs at the upper end of this service level. This level represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.

F. This service level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and the delay (in seconds) of signalized and unsignalized intersections is as follows:

Level of Service	Signalized Intersection Delay per Vehicle (seconds)	Unsignalized Intersections Delay per Vehicle (seconds)
A	≤10	≤10.0
B	>10 and ≤20	>10.0 and ≤15.0
C	>20 and ≤35	>15.0 and ≤25.0
D	>35 and ≤55	>25.0 and ≤35.0
E	>55 and ≤80	>35.0 and ≤50.0
F	>80	>50.0

Threshold of Significance

The City's General Plan considers LOS D as the upper limit of satisfactory operations for the City-controlled signalized intersections, except at the intersection of Ravenswood Avenue/Middlefield Road and the intersections along Willow Road from Middlefield Road to US-101.

Based on the City's TIA Guidelines (City of Menlo Park 2020a), a project is considered potentially noncompliant with local policies if the addition of the project trips results in an intersection on a collector street operating at LOS A through C to operate at an unacceptable LOS (i.e., LOS D, E, or F), or have an increase of 23 seconds or greater in average vehicle delay. A project is also considered potentially noncompliant with local policies if the addition of the project trips results in an intersection on arterial streets or local approaches to State-controlled signalized intersections operating at LOS A through D to operate at an unacceptable LOS (i.e., LOS E or F) or have an increase of 23 seconds or greater in average vehicle delay. Furthermore, a project is considered potentially noncompliant with local policies if the addition of the project trips results in an increase of more than 0.8 second of average delay to vehicles on all critical movements for intersections operating at a near-term LOS D through F for collector streets and at a near-term LOS E or F for arterial streets. A project is also considered potentially noncompliant with local policies if the addition of the project trips results in an increase of more than 0.8 second of average delay to vehicles on the most critical movements for intersections operating at a near-term LOS E or F for local approaches to State-controlled signalized intersections.

The Town of Atherton General Plan Circulation Element (Town of Atherton 2019) considers LOS D as the upper limit of satisfactory operations for minor arterials and collectors, and LOS C for local streets.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities and to maintain the existing LOS in cases where a facility is operating at less than the target LOS. For the purposes of this TIA and consistency with the past studies in the City, the City's LOS standard is also applied to the State-controlled intersections, and the Caltrans LOS standard applies to ramp intersections. A project LOS impact at a Caltrans intersection would occur if the addition of the project trips causes the peak-hour LOS to deteriorate from an acceptable LOS (LOS A, B, C, or D) to an unacceptable LOS (LOS E or F) or causes an intersection that is already operating at an unacceptable LOS to deteriorate to a worse LOS.

EXISTING BASELINE CONDITION

Existing Circulation System

Key roadways in the vicinity of the proposed project are as follows:

- **Bayfront Expressway (State Route 84 [SR-84])** is a six-lane north-south expressway located east of the project site. According to the City's General Plan, Bayfront Expressway is a Freeway. From Marsh Road to Chilco Street, the speed limit is 45 miles per hour (mph), and south of Chilco Street, the speed limit is 50 mph.

- **Constitution Drive** is a two-lane north-south roadway located east of the project site. According to the City's General Plan, Constitution Drive is a Mixed Use Collector. The posted speed limit is 35 mph. On-street parking is generally not permitted.
- **Jefferson Drive** is a two-lane north-south roadway that provides direct access to the project site. According to the City's General Plan, Jefferson Drive is a Mixed Use Collector. The posted speed limit is 25 mph. On-street parking is generally not permitted.
- **Independence Drive** is a two-lane north-south roadway located southwest of the project site. According to the City's General Plan, Independence Drive is a Mixed Use Collector. The posted speed limit is 25 mph. On-street parking is generally not permitted.
- **Bayshore Freeway (US-101)** is an eight-lane north-south freeway located west of the project site. US-101 connects Menlo Park with cities in the San Francisco Peninsula from San Jose to San Francisco. In the vicinity of the project site, the speed limit is 65 mph.
- **Marsh Road** is an east-west roadway located north of the project site. According to the City's General Plan, Marsh Road is a Thoroughfare with three lanes in each direction between US-101 and Bayfront Expressway and is a Mixed Use Collector from US-101 to Bay Road. The posted speed limit is 35 mph. On-street parking is permitted in selected locations south of US-101.
- **Chrysler Drive** is a two-lane east-west roadway located north of the project site. According to the City's General Plan, Chrysler Drive is a Mixed Use Collector. The posted speed limit is 25 mph. On-street parking is not permitted.
- **Chilco Street** is a two- to four-lane east-west roadway located south of the project site. It extends from Bayfront Expressway to residential neighborhoods to the south. According to the City's General Plan, Chilco Street is a Mixed Use Collector. The posted speed limit is 30 mph. On-street parking is not permitted.

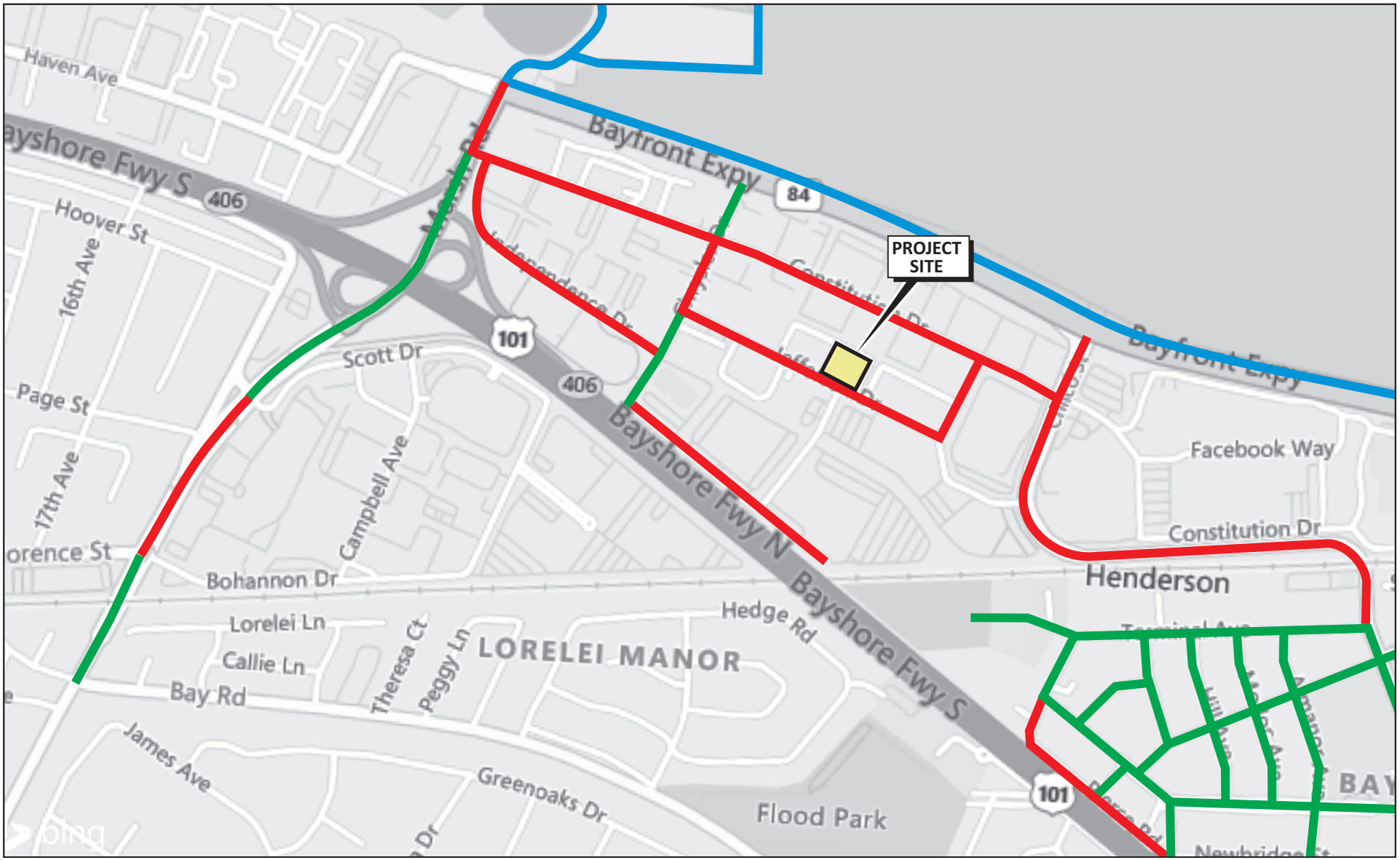
The existing study area intersection geometrics are shown in Appendix A.

Pedestrian Circulation

Sidewalks currently exist in the project vicinity on the west side of Jefferson Drive and Constitution Drive between Chrysler Drive and Chilco Street, on the east side of Constitution Drive between Marsh Road and Chrysler Drive, on the west side of Independence Drive between Constitution Drive and Chrysler Drive, on Chrysler Drive between Jefferson Drive and Commonwealth Drive and between Constitution Drive and Bayfront Expressway, and on the south side of Chrysler Drive between Jefferson Drive and Constitution Drive. Figure 4 represents the existing sidewalk facilities in the project vicinity. The project would maintain the pedestrian crosswalks and curb ramps at the study intersections consistent with the policies from the American with Disabilities Act. There would be no other change to the surrounding pedestrian system with the development of the project.

Bicycle Circulation

The San Francisco Bay Trail (Class I) runs parallel to Bayfront Expressway in the vicinity of the project site. A Class I bike path is also provided on Marsh Road between Constitution Drive and Bayfront Expressway.



LSA

LEGEND

- Sidewalks on Both Sides
- Sidewalks on One Side
- Bay Trail

0 415 830
FEET

SOURCE: Bing Maps

FIGURE 4

Menlo Flats
Existing Pedestrian Facilities

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Class II bike lanes are currently provided on Jefferson Drive, on Constitution Drive between Independence Drive and Chilco Street, on Chrysler Drive between Bayfront Expressway and Independence Drive, and on Chilco Street between Bayfront Expressway and Constitution Drive.

Class III bike routes are currently provided on Independence Drive between Constitution Drive and Chrysler Drive.

Class IV facilities (protected bike lanes) are provided on the east and west sides of Chilco Street in the vicinity of the project.

Figure 5 illustrates the existing bicycle facilities in the project vicinity. Bicycle travel can occur along these routes to employment, shopping, or recreational destinations.

Transit Facilities

Transit facilities will be accessible to and from the project site. The Crosstown Shuttle (M1) stop is provided at the intersection of Del Norte Avenue/Terminal Avenue, approximately 1 mile (mi) from the project site, and provides free transportation to the Menlo Park Caltrain Station, the Palo Alto Caltrain Station, and the surrounding medical/commercial uses. The M1 Shuttle provides five runs in each direction throughout the day. Two shuttle stops (Marsh Road and M3) are provided approximately 500 feet (ft) north and south of the project site on Jefferson Drive. The Marsh Road Shuttle (M3) provides free transportation service between the Menlo Park Caltrain Station (approximately 3.5 mi from the project site) and Marsh Road business park area. It runs between approximately 7:30 a.m. to 10:00 a.m. and 3:30 p.m. to 6:00 p.m.

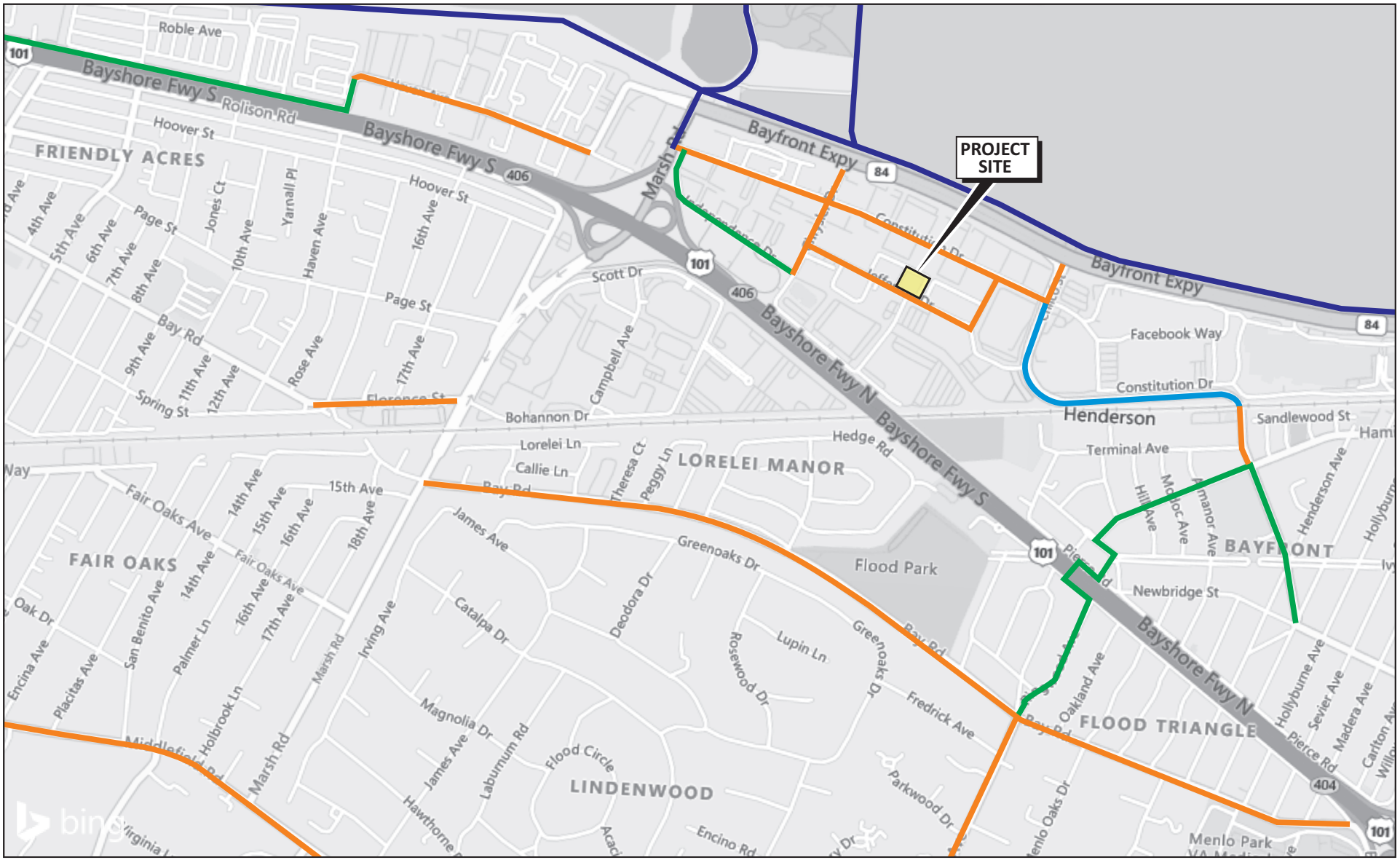
Additionally, a San Mateo County Transportation Authority (SamTrans, Route 270) bus stop is provided on Haven Avenue, approximately 1 mi from the project site. Route 270 operates in a loop between the Redwood City Caltrain Station and the Marsh Road business park area. Figure 6 shows the existing transit and shuttle services in the project vicinity.

Additional transit lines by SamTrans in the vicinity of the project site include Route 281, Route 296, Route 397, and Route ECR. Route 81 and Route 83 provide limited service to local schools on weekdays. Furthermore, AC Transit operates Line U and Dumbarton Express (Lines DB and DB1) in the vicinity of the project site. Appendix B provides the Marsh Road Shuttle, the SamTrans bus routes, and the AC Transit bus routes map and schedule.

Existing Traffic Volumes and Level of Service Analysis

Existing traffic volumes were collected in 2019 and were increased by 1 percent to represent a 2020 condition. Existing traffic counts were included in the Vistro file provided by the City. Appendix C provides the turning movement volumes under the Existing condition.

Table A summarizes the results of the existing peak-hour LOS analysis for the study area intersections. The existing HCM worksheets are provided in Appendix D.



LSA

LEGEND

- Class I Facility
- Class II Facility
- Class III Facility
- Class IV Facility

0 625 1250
FEET

SOURCE: Bing Maps

FIGURE 5

Menlo Flats
Existing Bicycle Facilities

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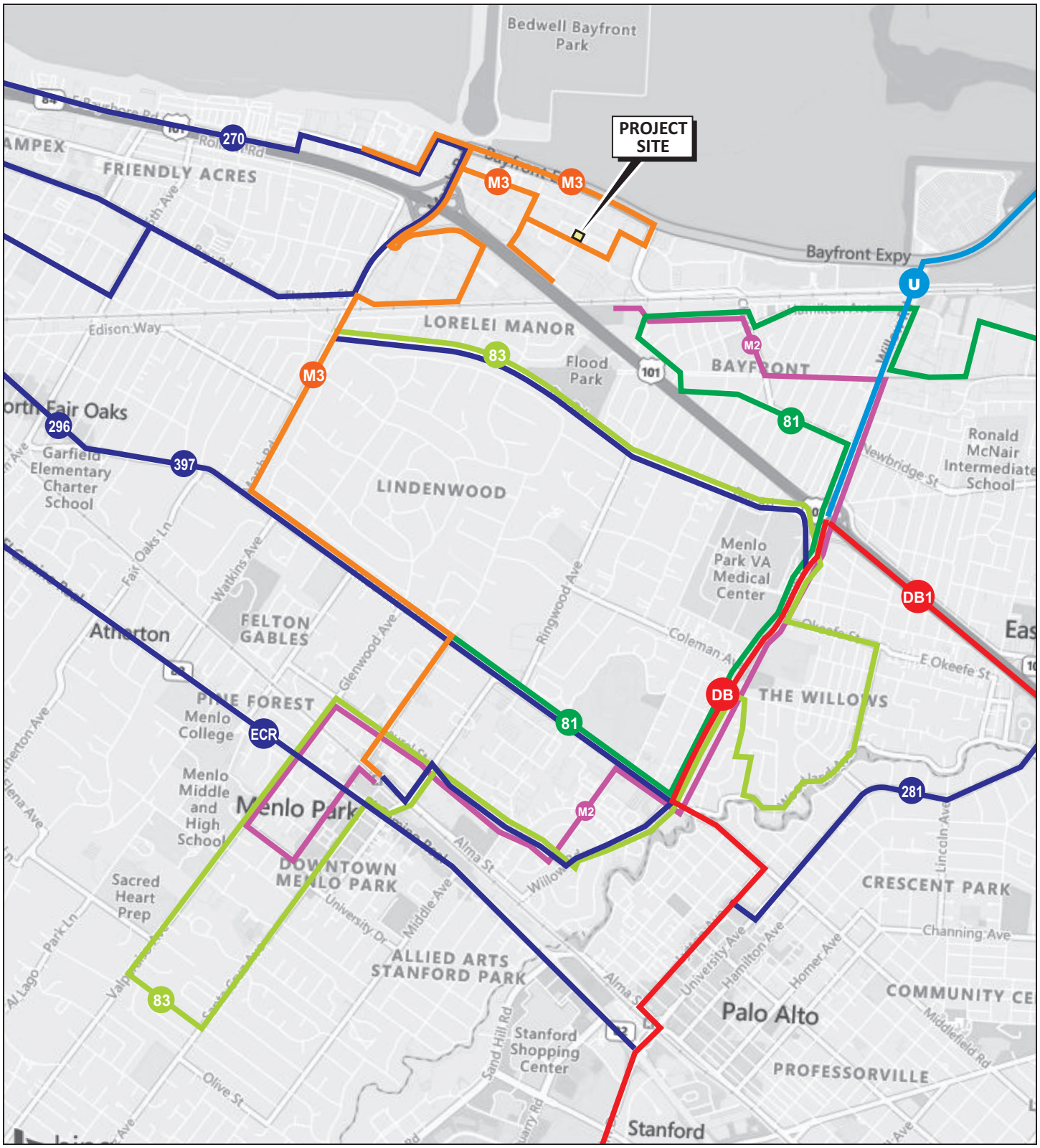

LSA

LEGEND

- SanTrans Route (Full Service)

N

0 1250 2500

FEET

SOURCE: Bing Maps

FIGURE 6

Menlo Flats

Existing Transit Facilities

I:\CMK2001\G\Transit Facilities.cdr (9/9/2021)

LSA

Table A: Existing Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Existing Delay	Existing LOS	Meet General Plan Standard?[1]
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)	Signal	AM	56.9	E	No
			PM	36.5	D	Yes
2	Marsh Road/US-101 Northbound Ramps (State/CMP)	Signal	AM	15.8	B	N/A
			PM	13.3	B	N/A
3	Marsh Road/US-101 Southbound Ramps (State/CMP)	Signal	AM	18.1	B	N/A
			PM	17.0	B	N/A
4	Marsh Road/Scott Drive (Menlo Park)	Signal	AM	18.5	B	Yes
			PM	15.3	B	Yes
5	Marsh Road/Bay Road (Menlo Park)	Signal	AM	19.7	B	Yes
			PM	18.6	B	Yes
6	Marsh Road/Middlefield Road (Atherton)	Signal	AM	35.0	D	N/A
			PM	37.9	D	N/A
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	AM	8.4	A	Yes
			PM	13.1	B	Yes
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	AM	50.6	D	Yes
			PM	28.0	C	Yes
9	Chrysler Drive/Jefferson Drive (Menlo Park)	TWSC[2]	AM	18.6	C	Yes
			PM	19.0	C	Yes
10	Chrysler Drive/Independence Drive (Menlo Park)	TWSC[2]	AM	39.3	E	No
			PM	16.7	C	Yes
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	AM	12.7	B	Yes
			PM	16.0	B	Yes
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	AM	28.3	C	No
			PM	36.2	D	No
13	Willow Road/Bayfront Expressway (State)	Signal	AM	106.0	F	N/A
			PM	168.1	F	N/A
14	University/Bayfront Expressway (State)	Signal	AM	11.4	B	N/A
			PM	94.1	F	N/A
15	Marsh Road/Florence Street-Bohannon Drive (Menlo Park)	Signal	AM	35.3	D	Yes
			PM	34.6	C	Yes

[1] The General Plan Standard information is relevant where the City's LOS policy standards apply.

[2] For TWSC, for unsignalized intersections, delay and LOS for the worst movement are reported.

City = City of Menlo Park

CMP = Congestion Management Program

LOS = level of service

N/A = not applicable

TWSC = two-way stop-controlled

US-101 = United States Route 101

As shown in Table A, the intersections listed below exceed the City's LOS standard during one or both peak hours:

- Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)—LOS E (a.m. peak hour)
- Chrysler Drive/Independence Drive (Menlo Park)—LOS E (a.m. peak hour)
- Willow Road/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)
- University/Bayfront Expressway (State)—LOS F (p.m. peak hour)

All other study area intersections operate at satisfactory LOS under the Existing condition.

A peak-hour traffic signal warrant analysis has been prepared to determine whether a traffic signal is justified at the unsignalized intersection of Chrysler Drive/Independence Drive under the Existing condition. The analysis is based on Warrant 3, Peak Hour Warrant, of the California Manual on Uniform Traffic Control Devices (California MUTCD; Caltrans 2014). The California MUTCD signal warrant analysis worksheets are provided in Appendix E. As shown in Appendix E, installation of a traffic signal is not warranted under the Existing condition.

TRANSPORTATION DEMAND MANAGEMENT PLAN

The project will implement a TDM Plan in order to relieve traffic congestion and parking demand throughout the City. The TDM measures may include the following:

- A Transportation Coordinator will be assigned to provide information regarding alternative modes of transportation to the residents.
- An online kiosk with transportation information will be established. Residents could access the online kiosk from their smartphone.
- A Resident Orientation Packet consisting of transportation information will be provided to residents.
- Twenty-four short-term and 208 long-term bicycle spaces will be provided on site.
- Enhanced pedestrian facilities will be provided on Jefferson Drive, including new sidewalks landscaped with street trees along the project's frontages.
- On-site amenities will be provided, including 26 parking spaces equipped with electric vehicle charging stations and a high-bandwidth internet connection to facilitate telecommunicating and working from home.
- Carpool and vanpool programs will be provided, including on-site ride matching assistance promoting 511 RideMatch and Scoop.

- Carpool and vanpool incentives will be provided, including Scoop discounts for San Mateo County carpools, the Star Store Program, First Five Rides Free on 511, the Vanpool Formation Incentive, the Vanpool Seat Subsidy, and the Vanpool Participant Rebate.

- The on-site residential parking will be unbundled from each unit. Unbundling of parking would encourage residents to forego a second vehicle or have no vehicle at all.

Appendix F provides the detailed TDM Plan (Hexagon 2020).

VEHICLE MILES TRAVELED

Senate Bill (SB) 743 directed the Governor's Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions by replacing the focus on automobile vehicle delay and LOS or other similar measures of vehicular capacity or traffic congestion in the TIA with vehicle miles traveled (VMT). This change shifts the focus of the TIA from measuring impacts to drivers, such as the amount of delay and LOS at an intersection, to measuring the impact of driving on the local, regional, and statewide circulation system and the environment. This shift in focus is expected to better align the TIA with the statewide goals related to reducing greenhouse gas emissions, encouraging infill development, and promoting public health through active transportation. As a result of SB 743, the California Office of Administrative Law cleared the revised *State CEQA Guidelines* for use on December 28, 2018. Beginning July 1, 2020, VMT is the legally required threshold for transportation impacts pursuant to CEQA. Prior to July 1, 2020, the City's TIA Guidelines used LOS as the primary metric for potentially significant environmental impacts. On June 23, 2020, the City Council approved the VMT thresholds for incorporation into the updated TIA Guidelines (City of Menlo Park 2020a).

The project is within the Bayfront Area of the City, where the majority of the area consists of industrial and business parkland uses and includes the City's entire existing General Industrial (M-2) zoning district along with some high-density residential land uses. The Bayfront Area contains heavily utilized corridors (e.g., US-101, Bayfront Expressway, and Willow Road), which could be challenging for pedestrians and bikers to utilize. The City's 2016 General Plan (City of Menlo Park 2016) update to the Land Use and Circulation Elements and rezoning of land in the Bayfront Area (i.e., ConnectMenlo) was designated to change the land use in the area and build a more pedestrian/bike-friendly environment, with increased density and diversity of uses. The change in the land use and transportation patterns would result in a reduction in the VMT within the Bayfront Area compared to the Existing condition.

As outlined in the City's TIA Guidelines (City of Menlo Park 2020a), the project VMT is estimated using the City's 2020 travel demand model. The travel demand model is a transportation planning analytical tool that utilizes land use information, travel behavior, and transportation-related data to forecast traffic statistics such as trip generation, trip distribution, and trip length. There are approximately 80 Traffic Analysis Zones (TAZs) in Menlo Park. The project is located within TAZ 3072.

The City's residential VMT threshold is defined as 13.7 per capita, which is 15 percent below the regional average (i.e., 16.1 per resident). Table B presents the regional average VMT and the City's defined VMT threshold per capita for the residential land use.

Table B: Regional, City, and Project VMT—Residential Land Use

Land-Use	Regional Average VMT	City's VMT Threshold (15% below the Regional Average)	Project VMT (TAZ 3072)
Residential (per capita)	16.1	13.7	16.0

Source: Menlo Park Travel Demand Model (2020)
City = City of Menlo Park
TAZ = Traffic Analysis Zone
VMT = vehicle miles traveled

For a previous approved residential project (Menlo Uptown Project) in the City that is located in the same TAZ as the project, the estimated average daily VMT for the residential use of that project was 16.0 per resident, which is 17 percent above the threshold of significance of 13.7 per capita. Therefore, as shown in Table B, the estimated average daily VMT per resident for the residential land use of the project is 16.0, which is 17 percent above the City's defined threshold of significance of 13.7 per capita.

As discussed before, the project will implement a TDM Plan that aims to reduce traffic congestion and parking demand. The proposed TDM measures and estimated percent reduction in VMT are presented in Table C, consistent with the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measu*res (CAPCOA 2010).

Table C: Project TDM Measures and Estimated VMT Reduction—Residential Land Use

TDM Measure	Range of VMT Reduction	Applied VMT Reduction for the Project[1]
Bike Parking (SDT-7)	0.625%	0.625%
Pedestrian Network Improvement (SDT-1)	0%–2%	2%
Limit Parking Supply (PDT-1)	5%–12%	12%
Unbundled Parking (PDT-2)	2.6%–13%	2.6%
Commute Trip Reduction Marketing (TRT-7)	0.8%–4%	4%
Increase Density (LUT-1)	9%–30%	>9%
Total		**>30.23%**

Source: *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010).
Note: The TDM measures and VMT reduction are consistent with the previous approved project (Menlo Uptown Project).
[1] The VMT reduction rate was determined based on the estimated level of adoption and aggressiveness of TDM strategies, accounting for other TDM measures so that the TDM reduction would not be overestimated.
CAPCOA = California Air Pollution Control Officers Association
TDM = Transportation Demand Management
VMT = vehicle miles traveled

As shown in Table C, implementation of the proposed TDM measures will result in a VMT reduction of approximately 30.23 percent of the VMT generated by the residential land use of the project. Application of the TDM measures would result in an average daily VMT of 11.2 per resident for the residential use, which is below the City's defined VMT threshold of significance of 13.7 per capita. As such, the VMT generated by the project's residential land use would result in a less than significant impact.

Table D presents the citywide average VMT and the City's defined VMT threshold per employee for the office land use. As shown in Table D, the City's office VMT threshold is defined as 12.7 per employee, which is 15 percent below the citywide average (i.e., 14.9 per employee). Based on the direction from the City and previous approved projects in the project vicinity, the estimated average daily VMT for the office land use of the project is 16.4 per employee, which is 29 percent above the City's defined threshold of significance of 12.7 per employee.

Table D: Citywide, City, and Project VMT—Office Land Use

Land-Use	Citywide Average VMT	City's VMT Threshold (15% below the Citywide Average)	Project VMT (TAZ 3072)
Office (per employee)	14.9	12.7	16.4

Source: Menlo Park Travel Demand Model (2020)
TAZ = Traffic Analysis Zone
VMT = vehicle miles traveled

Table E presents the proposed TDM measures and estimated percent reduction in VMT for the office use, which is consistent with the CAPCOA Guidelines and previous approved projects in the project vicinity. As shown in Table E, implementation of the proposed TDM measures will result in a VMT reduction of approximately 6.63 percent of the VMT generated by the office land use of the project. Application of the TDM measures would result in an average daily VMT of 15.3 per employee for the office use.

Table E: Project TDM Measures and Estimated VMT Reduction—Office Land Use

Project TDM Measure	Range of VMT Reduction	Applied VMT Reduction for the Project[1]
Pedestrian Network Improvement (SDT-1)	0%–2%	2%
Bike Parking (SDT-7)	0.625%	0.625%
Commute Trip Reduction Marketing (TRT-7)	0.8–4%	4%
TOTAL		**6.63%**

Source: *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010).
[1] The VMT reduction rate was determined based on the estimated level of adoption and aggressiveness of TDM strategies, accounting for other TDM measures so that the TDM reduction would not be overestimated.
CAPCOA = California Air Pollution Control Officers Association
TDM = Transportation Demand Management
VMT = vehicle miles traveled

Given that the TDM plan would need to achieve a 22 percent reduction in VMT per employee and that the TDM plan as currently proposed would achieve a 6.63 percent reduction, the VMT generated by the office use of the project would result in a significant impact. Therefore, additional TDM measures would be required to reduce this impact to a less than significant impact. The additional TDM measures would need to achieve a minimum of 15.4 percent reduction in VMT, for a total 22 percent reduction in VMT.

Table F presents the additional TDM measures for the office use, consistent with the CAPCOA Guidelines and previous approved projects in the project vicinity. As shown in Table F, implementation of additional TDM measures would result in an estimated reduction of an additional 19.6 percent of VMT generated by the office use. Application of the project TDM measures and additional TDM measures would result in an average daily VMT of 11.3 per employee for the office use, which is below the City's defined VMT threshold of significance of 12.7 per employee. As such, the VMT generated by the project's office use would result in a less than significant impact.

Table F: Project and Additional TDM Measures and Total Estimated VMT Reduction—Office Land Use

TDM Measure	Range of VMT Reduction	Applied VMT Reduction for the Project[1]
Project TDM Measures		
Pedestrian Network Improvement (SDT-1)	0%–2%	2%
Bike Parking (SDT-7)	0.625%	0.625%
Commute Trip Reduction Marketing (TRT-7)	0.8%–4%	4%
Total Proposed TDM Plan	—	**6.63%**
Additional TDM Measures		
Price Workplace Parking (TRT-14, TRT-15)	0.1% to 19.7%	6.8%
Subsidized or Discounted Transit (TRT-4)	0% to 20%	7.3%
Telecommuting and Alternative Work Schedule (TRT-6)	0.07% to 5.5%	5.5%
Total Additional TDM Measures	—	**19.6%**
Total TDM Plan		**26.23%**

Source: *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010).

[1] The VMT reduction rate was determined based on the estimated level of adoption and aggressiveness of TDM strategies, accounting for other TDM measures so that the TDM reduction would not be overestimated.

CAPCOA = California Air Pollution Control Officers Association
TDM = Transportation Demand Management
VMT = vehicle miles traveled

The project also includes 1,600 sf of commercial space, which is assumed to operate as a café. According to the City's TIA Guidelines (City of Menlo Park 2020a), local serving retail projects with 10,000 sf or less would be exempt from VMT analysis. Therefore, the project's café is exempt from further VMT analysis and presumed to have a less than significant impact.

NEAR-TERM BASELINE CONDITION

The Near-Term (2024) condition represents the transportation network and traffic conditions at the time of the project's expected occupancy. Table G summarizes the list of approved projects included in the Near-Term condition. The traffic volumes from the approved projects were included in the Vistro file provided by the City. Appendix C provides the turning movement volumes under the Near-Term condition.

Table G: Approved Projects Summary

Project Name[1]		Location	Description
1	Greenheart	1300 El Camino Real	183 du residential 203,000 sf office 18,600 sf retail/personal service
2	Menlo Gateway Constitution	100–155 Constitution Drive	487,244 sf office 7,420 sf restaurant
3	Facebook Expansion Project	301–309 Constitution Drive	450,400 sf office 200 room hotel
4	Stanford	500 El Camino Real	215 du residential 143,900 sf office 10,000 sf retail
5	New Magnet High School	150 Jefferson Drive	400-student high school
6	1275 El Camino Real	1275 El Camino Real	3-unit residential 9,334 sf office 589 sf retail
7	1430 O'Brien Drive	1430 O'Brien Drive	46,608 sf research & development 10,223 sf fitness 7,652 sf café
8	1345 Willow Road	1345 Willow Road	140 du residential

[1] The approved projects were provided by the City staff in February 2021.
City = City of Menlo Park
du = dwelling unit
sf = square feet

Near-Term Traffic LOS Analysis

Table H summarizes the results of the near-term peak-hour LOS analysis for the study area intersections. The near-term HCM worksheets are contained in Appendix D. As shown in Table H, the intersections listed below exceed the City's LOS standard during one or both peak hours:

- Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)—LOS E (a.m. peak hour)
- Marsh Road/Middlefield Road (Atherton)—LOS E (a.m. peak hour)
- Chrysler Drive/Constitution Drive (Menlo Park)—LOS F (a.m. peak hour)
- Chrysler Drive/Independence Drive (Menlo Park)—LOS F (a.m. peak hour)
- Willow Road/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)
- University/Bayfront Expressway (State)—LOS F (p.m. peak hour)

All other study area intersections operate at satisfactory LOS under the Near-Term condition.

Table H: Near-Term Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Near-Term Delay	Near-Term LOS	Meet General Plan Standard?[2]
				N/A	59.7	E	
				EB	114.1	F	
			AM	WB	36.5	D	No
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)	Signal	PM	N/A	37.4	D	Yes
			AM	N/A	25.3	C	N/A
2	Marsh Road/US-101 Northbound Ramps (State/CMP)	Signal	PM	N/A	13.3	B	N/A
			AM	N/A	22.9	C	N/A
3	Marsh Road/US-101 Southbound Ramps (State/CMP)	Signal	PM	N/A	17.7	B	N/A
			AM	N/A	20.0	B	Yes
4	Marsh Road/Scott Drive (Menlo Park)	Signal	PM	N/A	15.1	B	Yes
			AM	N/A	22.7	C	Yes
5	Marsh Road/Bay Road (Menlo Park)	Signal	PM	N/A	18.4	B	Yes
			AM	N/A	73.8	E	N/A
6	Marsh Road/Middlefield Road (Atherton)	Signal	PM	N/A	44.2	D	N/A
			AM	N/A	9.5	A	Yes
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	PM	N/A	20.1	C	Yes
				N/A	111.1	F	
				NB	24.2	C	
				SB	176.1	F	
				EB	104.4	F	
			AM	WB	56.7	E	No
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	N/A	39.8	D	Yes
			AM	N/A	23.2	C	Yes
9	Chrysler Drive/Jefferson Drive (Menlo Park)	TWSC[3]	PM	N/A	20.1	C	Yes
			AM	N/A	59.0	F	No
10	Chrysler Drive/Independence Drive (Menlo Park)	TWSC[3]	PM	N/A	17.0	C	Yes
			AM	N/A	21.9	C	Yes
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	PM	N/A	25.3	C	Yes
			AM	N/A	33.8	C	Yes
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	PM	N/A	50.0	D	Yes
			AM	N/A	193.1	F	N/A
13	Willow Road/Bayfront Expressway (State)	Signal	PM	N/A	180.9	F	N/A
			AM	N/A	12.7	B	N/A
14	University/Bayfront Expressway (State)	Signal	PM	N/A	113.1	F	N/A
			AM	N/A	38.3	D	Yes
15	Marsh Road/Florence Street-Bohannon Drive (Menlo Park)	Signal	PM	N/A	37.0	D	Yes

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

[3] For TWSC, for unsignalized intersections, delay and LOS for the worst movement are reported.

City = City of Menlo Park

CMP = Congestion Management Program

EB = eastbound

LOS = level of service

N/A = not applicable

NB = northbound

SB = southbound

TWSC = two-way stop-controlled

US-101 = United States Route 101

WB = westbound

A peak-hour traffic signal warrant analysis has been prepared to determine whether a traffic signal is justified at the unsignalized intersection of Chrysler Drive/Independence Drive under the Near-Term condition. The analysis is based on Warrant 3, Peak Hour Warrant, of the California MUTCD (Caltrans 2014). The California MUTCD signal warrant analysis worksheets are provided in Appendix E. As shown in Appendix E, installation of a traffic signal is not warranted under the Near-Term condition.

CUMULATIVE BASELINE CONDITION

The Cumulative (2040) condition represents the transportation network and traffic conditions under a long-range horizon. The Cumulative condition includes all the approved projects plus future pending projects. Table I summarizes the list of cumulative projects provided by the City staff. The traffic volumes from the cumulative projects were included in the Vistro file provided by the City. Appendix C provides the turning movement volumes under the Cumulative condition.

Table I: Cumulative Projects Summary

	Project Name[1]	Location	Description
1	1285 El Camino Real	1285 El Camino Real	15 du residential 1,997 sf office/retail
2	Roger Reynolds	133 Encinal Avenue	24 du residential
3	1010-1026 Alma Street	1010-1026 Alma Street	25,156 sf office 324 sf retail
4	Minkoff Group	650-660 Live Oak Avenue	16,854 sf office 17 du residential
5	1021 Evelyn Street	1021 Evelyn Street	3 du residential 6,610 sf office
6	Stanford	2111-2121 Sand Hill Road	39,010 sf office
7	40 Middlefield Road	40 Middlefield Road	3,584 sf office
8	Guild Theatre	949 El Camino Real	10,854 sf live entertainment venue
9	1540 El Camino Real	1540 El Camino Real	27 du residential 40,759 sf office
10	115 El Camino Real	115 El Camino Real	4 du residential 1,543 sf retail
11	506-556 Santa Cruz Avenue	506-556 Santa Cruz Avenue	7 du residential 4,901 sf retail/café 17,877 sf office
12	1125 Merrill Street	1125 Merrill Street	2 du residential 4,366 sf office
13	409 Glenwood Avenue	409 Glenwood Avenue	7 du residential
14	1350 Adams Court (1315 O'Brien Drive)	1350 Adams Court (1315 O'Brien Drive)	260,400 sf research & development
15	Facebook Willow Village	1350 Willow Road	1,729 du residential 1,600,000 sf office 200,000 sf retail 193-room hotel
16	111 Independence Drive	111 Independence Drive	105 du residential 746 sf retail
17	1125 O'Brien Drive	1125 O'Brien Drive	128,524 sf research & development 2,760 sf retail
18	162–164 Jefferson Drive	162–164 Jefferson Drive	249,500 sf office

Table I: Cumulative Projects Summary

	Project Name[1]	Location	Description
19	555 Willow Road	555 Willow Road	3 du residential
20	Boutique Hotel	1704 El Camino Real	46-room hotel 27,293 sf hotel
21	706–716 Santa Cruz Avenue	706–716 Santa Cruz Avenue	4 du residential23,454 sf office12,035 sf retail
22	201 El Camino Real	201 El Camino Real	14 du residential 5,876 sf retail 1,200 sf restaurant
23	Menlo Uptown	141 Jefferson Drive	483 du residential 2,940 sf retail
24	1162 El Camino Real	1162 El Camino Real	9 du residential
25	Hotel Moxy	3723 Haven Avenue	163-room hotel 58,027 sf hotel
26	Menlo Portal	110 Constitution Drive - 115 Independence Drive	335 du residential 34,819 sf office 1,608 sf retail
27	301 Constitution Drive	301 Constitution Drive	40-room hotel
28	1075 O'Brien Drive	1075 O'Brien Drive	94,617 sf research & development/office 9,869 sf restaurant
29	1550 El Camino Real	1550 El Camino Real	8 du residential
30	Sobrato Mixed-Use[1]	123 Independence Drive	276 du residential 88,750 sf office 107 du residential

[1] The approved projects were provided by the City staff in February 2021.
City = City of Menlo Park
du = dwelling unit
sf = square feet

Planned Transportation Facility Improvements

Based on the City's Comprehensive Bicycle Development Plan (City of Menlo Park 2005), the following bicycle network improvements are anticipated to be implemented by 2040:

- A Class I connector path is recommended on Independence Drive, which would connect the planned Class II bike lanes on Marsh Road and the existing Class II bike lanes on Constitution Drive.
- Class II bike lanes are recommended on Marsh Road between Bayfront Expressway and Bay Road.

[1] The 123 Independence Drive project was revised in August 2021 to include a total of 432 dwelling units and no office space. At the time the NOP was published, the 123 Independence Project included 49 fewer residential units and 88,750 more square feet of office space. For the purposes of the cumulative analysis, the increase in residential units and reduction in office space is assumed to have a negligible effect on the cumulative scenario.

- A new bicycle and pedestrian bridge over the Atherton Channel is planned to extend the bike lanes and sidewalks on Haven Avenue to Marsh Road, as part of the Haven Avenue Streetscape project. The Haven Avenue Streetscape project facilitates connections between Menlo Park, San Mateo County, and Redwood City residents.
- Based on the City's Transportation Master Plan (City of Menlo Park 2020b), the following pedestrian and bicycle improvements are anticipated to be implemented by 2040:
- Pedestrian and bicycle facilities will be improved, including installing sidewalks and adding bike lanes along Jefferson Drive from Chrysler Drive to Constitution Drive.
- Class II bike lanes will be constructed along Constitution Drive from Independence Drive to Chrysler Drive, and sidewalks will be constructed along Constitution Drive from Independence Drive to Chilco Street.
- Bike lanes will be constructed along Chrysler Drive between Constitution Drive and Commonwealth Drive.
- Bike lanes will be constructed along Marsh Road between Independence Drive and Scott Drive. A bicycle and pedestrian bridge will be constructed along Marsh Road over US-101.Bike lanes and a multiuse path will be implemented along Haven Avenue from Marsh Road to Haven Court. The project would construct a Class I multiuse path from Marsh Road to Atherton Channel, establish Class II bike lanes from Haven Court to Atherton Channel, and install bicycle and pedestrian crossing upgrades.
- Pedestrian and bicycle crossings along Bayfront Expressway will be improved. The project includes installing a high-visibility pedestrian crossing along Bayfront Expressway at Chrysler Drive, Chilco Street, and Willow Road. A bicycle and pedestrian bridge will be constructed over Bayfront Expressway between Chilco Street and Willow Road.

Cumulative Traffic LOS Analysis

Table J summarizes the results of the cumulative peak-hour LOS analysis for the study area intersections. The cumulative HCM worksheets are contained in Appendix D. As shown in Table J, the intersections listed below exceed the City's LOS standard during one or both peak hours:

- Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)—LOS F(a.m. peak hour)
- Marsh Road/Middlefield Road (Atherton)—LOS F (a.m. peak hour)
- Chrysler Drive/Bayfront Expressway (Local Approaches to State)—LOS E (p.m. peak hour)
- Chrysler Drive/Constitution Drive (Menlo Park)—LOS F (a.m. and p.m. peak hours)
- Chrysler Drive/Jefferson Drive (Menlo Park)—LOS E (a.m. peak hour) and LOS F (p.m. peak hour)
- Chrysler Drive/Independence Drive (Menlo Park)—LOS F (a.m. peak hour)
- Chilco Street/Bayfront Expressway (Local Approaches to State)—LOS E (a.m. and p.m. peak hours)
- Chilco Street/Constitution Drive (Menlo Park)—LOS F (a.m. and p.m. peak hours)
- Willow Road/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)
- University/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)

All other study area intersections operate at satisfactory LOS under the Cumulative condition.

A peak-hour traffic signal warrant analysis has been prepared to determine whether a traffic signal is justified at the unsignalized intersections of Chrysler Drive/Jefferson Drive and Chrysler Drive/ Independence Drive under the Cumulative condition. The analysis is based on Warrant 3, Peak Hour Warrant, of the nine warrants presented in the California MUTCD (Caltrans 2014). The California MUTCD signal warrant analysis worksheets are provided in Appendix E.

As shown in Appendix E, installation of a traffic signal is warranted at Chrysler Drive/Jefferson Drive during the p.m. peak hour but is not warranted at Chrysler Drive/Independence Drive under the Cumulative condition.

Table J: Cumulative Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Cumulative Delay	Cumulative LOS	Meet General Plan Standard?[2]
				N/A	103.1	F	
				NB	108.0	F	
				SB	54.4	D	
				EB	169.0	F	
			AM	WB	87.6	F	No
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)	Signal	PM	N/A	37.1	D	Yes
			AM	N/A	34.9	C	N/A
2	Marsh Road/US-101 Northbound Ramps (State/CMP)	Signal	PM	N/A	18.0	B	N/A
			AM	N/A	37.9	D	N/A
3	Marsh Road/US-101 Southbound Ramps (State/CMP)	Signal	PM	N/A	42.1	D	N/A
			AM	N/A	32.9	C	Yes
4	Marsh Road/Scott Drive (Menlo Park)	Signal	PM	N/A	22.9	C	Yes
			AM	N/A	28.6	C	Yes
5	Marsh Road/Bay Road (Menlo Park)	Signal	PM	N/A	19.9	B	Yes
			AM	N/A	81.2	F	N/A
6	Marsh Road/Middlefield Road (Atherton)	Signal	PM	N/A	53.4	D	N/A
			AM	N/A	12.5	B	Yes
				N/A	62.7	E	
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	212.0	F	No
				N/A	361.5	F	
				NB	40.8	D	
				SB	123.7	F	
				EB	175.9	F	
			AM	WB	1430.7	F	No
				N/A	242.7	F	
				NB	28.0	C	
				SB	837.5	F	
				EB	107.4	F	
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	WB	403.1	F	No
			AM	N/A	48.3	E	No
9	Chrysler Drive/Jefferson Drive (Menlo Park)	TWSC[3]	PM	N/A	141.8	F	No
			AM	N/A	307.4	F	No
10	Chrysler Drive/Independence Drive (Menlo Park)	TWSC[3]	PM	N/A	21.2	C	Yes
				N/A	61.6	E	
			AM	NB	164.8	F	No
				N/A	67.1	E	
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	257.2	F	No
				N/A	85.3	F	
				NB	92.2	F	
				SB	94.0	F	
				EB	35.8	D	
			AM	WB	50.0	D	No
				N/A	252.2	F	
				NB	98.6	F	
				SB	211.6	F	
				EB	521.3	F	
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	PM	WB	113.7	F	No
			AM	N/A	325.6	F	N/A
13	Willow Road/Bayfront Expressway (State)	Signal	PM	N/A	373.8	F	N/A
			AM	N/A	101.0	F	N/A
14	University/Bayfront Expressway (State)	Signal	PM	N/A	215.3	F	N/A
			AM	N/A	40.0	D	Yes
15	Marsh Road/Florence Street-Bohannon Drive (Menlo Park)	Signal	PM	N/A	46.1	D	Yes

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

[3] For TWSC, for unsignalized intersections, delay and LOS for the worst movement are reported.

City = City of Menlo Park

CMP = Congestion Management Program

EB = eastbound

LOS = level of service

N/A = not applicable

NB = northbound

SB = southbound

TWSC = two-way stop-controlled

US-101 = United States Route 101

WB = westbound

PROPOSED PROJECT

Trip Generation

The project site is currently occupied by 24,311 sf of office use. The project would demolish the existing office building and construct 158 residential dwelling units and 15,000 sf of community amenity space (i.e., 13,400 sf of office use and 1,600 sf of commercial space, assumed to be used as a café) as well as associated open space, circulation and parking, and infrastructure improvements. Project trips were estimated by applying the trip generation rates for Land Use Code 221 (Mid-Rise Residential Housing), Land Use Code 710 (General Office Building), and Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (ITE 2017a). Table K summarizes the project trip generation. As Table K indicates, the proposed project would generate an average daily trips (ADT) of 2,218, including 258 trips in the a.m. peak hour (131 inbound and 127 outbound) and 145 trips in the p.m. peak hour (75 inbound and 70 outbound).

Due to the characteristics of mixed-use developments, internal trip capture and pass-by trip reductions were applied to the project. Internal trip capture was estimated using the National Cooperative Highway Research Program (NCHRP) 684 Trip Capture Estimation Tool, which is referenced in the latest version of the ITE *Trip Generation Handbook* (3rd Edition) (ITE 2017b). The internal capture percentages for each land use type of a mixed-use development (e.g., office and coffee/donut shop uses) are calculated after the vehicle trip generation is input into the NCHRP 684 Trip Capture Estimation Tool. The NCHRP 684 Trip Capture Estimation Tool outputs are provided in Appendix G. The pass-by trip reduction percentage for the assumed coffee/donut shop is also referenced in the ITE *Trip Generation Handbook* (3rd Edition) (ITE 2017b). A 43 percent p.m. peak-hour pass-by reduction was applied for Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window). In addition, based on direction from the City, a 20 percent reduction was applied to the project trips, as the project would develop a TDM Plan that is forecast to reduce the project trips by approximately 20 percent. As such, the net project trip generation is 1,066 ADT, including 120 trips in the a.m. peak hour (61 inbound and 59 outbound) and 77 trips in the p.m. peak hour (41 inbound and 36 outbound).

It should be noted that at the time that the TIA was prepared, the specific land use, tenant, and square footage of the proposed ground-floor commercial use were uncertain; therefore, in order to provide a conservative (maximum) estimate of the potential trips associated with the nonresidential use, ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) was used. A typical use that corresponds to this category would be a café. As shown in Table K, a 1,600 sf café would generate 74 trips during the a.m. peak hour and 22 trips during the p.m. peak hour after internal trip capture and pass-by reductions are applied. For reference, a similarly sized office use would generate a total of 2 trips during the a.m. peak hour and 2 trips during the p.m. peak hour before any trip reductions or credits are applied.

LSA

Table K: Menlo Flats Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Multifamily Mid-Rise		DU	5.44	0.09	0.27	0.36	0.27	0.17	0.44
General Office		TSF	Regression Equations						
Coffee/Donut Shop[2]		TSF	754.55	51.58	49.56	101.14	18.16	18.15	36.31
Project Trip Generation									
Gross Trips									
Multifamily Mid-Rise	158	DU	860	14	43	57	43	27	70
General Office	13.400	TSF	151	34	5	39	3	14	17
Coffee/Donut Shop	1.600	TSF	1,207	83	79	162	29	29	58
Total			***2,218***	***131***	***127***	***258***	***75***	***70***	***145***
Internal Trip Capture and Pass-By Trips									
Internal Trip Capture (Multifamily Mid-Rise)[3]			(129)	(1)	(10)	(11)	(5)	(5)	(10)
Internal Trip Capture (General Office)[3]			(57)	(6)	(3)	(9)	(2)	(1)	(3)
Internal Trip Capture (Coffee/Donut Shop)[3]			(181)	(12)	(6)	(18)	(5)	(6)	(11)
Pass-By Trips (Coffee/Donut Shop)[4]			(519)	(36)	(34)	(70)	(12)	(13)	(25)
Total			***(886)***	***(55)***	***(53)***	***(108)***	***(24)***	***(25)***	***(49)***
Subtotal (Gross - Internal Capture and Pass-By) Trips			**1,332**	**76**	**74**	**150**	**51**	**45**	**96**
TDM Plan[5]			***(266)***	***(15)***	***(15)***	***(30)***	***(10)***	***(9)***	***(19)***
Total			**1,066**	**61**	**59**	**120**	**41**	**36**	**77**
Existing Trip Generation									
General Office	**24.311**	**TSF**	**269**	**42**	**7**	**49**	**5**	**25**	**30**
Net Trip Generation (Project - Existing)			**797**	**19**	**52**	**71**	**36**	**11**	**47**

[1] Trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* , 10th Edition (2017).

Land Use Code (221) - Multifamily Housing (Mid-Rise) - Between 3 and 10 Levels

Land Use Code (710) - General Office Building

Regression Equations: ADT: Ln(T) = 0.97Ln(X) + 2.50; AM: T = 0.94(X) + 26.49; PM: Ln(T) = 0.95(X) + 0.36

Land Use Code (936) - Coffee/Donut Shop without Drive-Through Window

[2] ITE does not have an ADT rate. ADT trip rate is provided by the City.

[3] Internal Capture based on the NCHRP 684 Internal Trip Capture Estimation Tool, developed by the Texas A&M Transportation Institute (Version 2013.1).

Multifamily Housing Internal Trip Capture with Office and Coffee/Donut Shop: 15% ADT, 7% AM In, 23% AM Out, 12% PM In, 19% PM Out.

General Office Internal Trip Capture with Residential and Coffee/Donut Shop: 38% ADT, 18% AM In, 60% AM Out, 67% PM In, 7% PM Out.

Coffee/Donut Shop Internal Trip Capture with Residential and Office: 15% ADT, 14% AM In, 8% AM Out, 17% PM In, 21% PM Out.

[4] Pass-by trip percentage from the ITE *Trip Generation Handbook* , 3rd Edition (2017).

Land Use Code (932) - High-Turnover (Sit-Down) Restaurant: 43%.

[5] The project will develop a Transportation Demand Management (TDM) Plan that reduces the project trips by 20%.

ADT = average daily trips

DU = dwelling unit

TSF = thousand square feet

As such, the transportation analysis can be considered conservative and allows for flexibility in selecting the future tenant of the nonresidential space.

Additionally, Table K illustrates the existing site trip generation for the 24,311 sf of office use. Using ITE trip rates for Land Use Code 710 (General Office Building), the existing site generates 269 ADT, including 49 trips in the a.m. peak hour (42 inbound and 7 outbound) and 30 trips in the p.m. peak hour (5 inbound and 25 outbound).

The net trip generation of the project is an additional 797 ADT, including 71 trips in the a.m. peak hour (19 inbound and 52 outbound) and 47 trips in the p.m. peak hour (36 inbound and 11 outbound).

Trip Distribution and Assignment

Trip distribution for the project is based on the trip distribution patterns for the Menlo Uptown Project (located west of the 141 Jefferson Drive Project site). Project peak-hour traffic volumes entering/exiting the project site were assigned to the adjacent street system based on the location of the project driveway. Project trip distribution and project-added traffic volumes at the study intersections are provided in Appendix C.

NEAR-TERM PLUS PROJECT CONDITION

To determine the Near-Term Plus Project condition, net traffic generated by the project was added to near-term traffic volumes at the study area intersections. Appendix C shows the resulting Near-Term Plus Project peak-hour traffic volumes.

Near-Term Plus Project Traffic Level of Service Analysis

Table L summarizes the results of the Near-Term Plus Project peak-hour LOS analysis for the study area intersections. Appendix D provides the Near-Term Plus Project HCM worksheets. As shown in Table L, the intersections listed below exceed the City's LOS standard during one or both peak hours:

- Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)—LOS E (a.m. peak hour)
- Marsh Road/Middlefield Road (Atherton)—LOS E (a.m. peak hour)
- Chrysler Drive/Constitution Drive (Menlo Park)—LOS F (a.m. peak hour)
- Chrysler Drive/Independence Drive (Menlo Park)—LOS F (a.m. peak hour)
- Willow Road/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)
- University/Bayfront Expressway (Menlo Park)—LOS F (p.m. peak hour)

All other study area intersections operate at satisfactory LOS under the Near-Term Plus Project condition.

A peak-hour traffic signal warrant analysis has been prepared to determine whether a traffic signal is justified at the unsignalized intersection of Chrysler Drive/Independence Drive. The analysis is based on Warrant 3, Peak Hour Warrant, of the California MUTCD (Caltrans 2014). The California MUTCD signal warrant analysis worksheets are provided in Appendix E.

Table L: Near-Term Plus Project Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Near-Term Delay	Near-Term LOS	Near-Term Plus Project Delay	Near-Term Plus Project LOS	Meet General Plan Standard?[2]	Noncompliant with TIA Guidelines?
				N/A	59.7	E	59.8	E		
				EB	114.1	F	113.9	F		
			AM	WB	36.5	D	37.0	D	No	No
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)	Signal	PM	N/A	37.4	D	37.7	D	Yes	No
			AM	N/A	25.3	C	25.7	C	N/A	No
2	Marsh Road/US-101 Northbound Ramps (State/CMP)	Signal	PM	N/A	13.3	B	13.5	B	N/A	No
			AM	N/A	22.9	C	23.3	C	N/A	No
3	Marsh Road/US-101 Southbound Ramps (State/CMP)	Signal	PM	N/A	17.7	B	17.8	B	N/A	No
			AM	N/A	20.0	B	20.0	B	Yes	No
4	Marsh Road/Scott Drive (Menlo Park)	Signal	PM	N/A	15.1	B	15.1	B	Yes	No
			AM	N/A	22.7	C	22.7	C	Yes	No
5	Marsh Road/Bay Road (Menlo Park)	Signal	PM	N/A	18.4	B	18.4	B	Yes	No
			AM	N/A	73.8	E	74.2	E	N/A	No
6	Marsh Road/Middlefield Road (Atherton)	Signal	PM	N/A	44.2	D	44.6	D	N/A	No
			AM	N/A	9.5	A	9.7	A	Yes	No
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	PM	N/A	20.1	C	20.4	C	Yes	No
				N/A	111.1	F	120.2	F		
				NB	24.2	C	24.5	C		
				SB	176.1	F	199.1	F		
				EB	104.4	F	112.6	F		
			AM	WB	56.7	E	56.7	E	No	Yes
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	N/A	39.8	D	40.7	D	Yes	No
			AM	N/A	23.2	C	24.7	C	Yes	No
9	Chrysler Drive/Jefferson Drive (Menlo Park)	TWSC[3]	PM	N/A	20.1	C	21.9	C	Yes	No
			AM	N/A	59.0	F	60.1	F	No	Yes
10	Chrysler Drive/Independence Drive (Menlo Park)	TWSC[3]	PM	N/A	17.0	C	17.1	C	Yes	No
			AM	N/A	21.9	C	23.3	C	Yes	No
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	PM	N/A	25.3	C	26.3	C	Yes	No
			AM	N/A	33.8	C	36.0	D	Yes	No
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	PM	N/A	50.0	D	52.7	D	Yes	No
			AM	N/A	193.1	F	193.4	F	N/A	No
13	Willow Road/Bayfront Expressway (State)	Signal	PM	N/A	180.9	F	180.9	F	N/A	No
			AM	N/A	12.7	B	12.8	B	N/A	No
14	University/Bayfront Expressway (State)	Signal	PM	N/A	113.1	F	113.3	F	N/A	No
			AM	N/A	38.3	D	38.3	D	Yes	No
15	Marsh Road/Florence Street-Bohannon Drive (Menlo Park)	Signal	PM	N/A	37.0	D	37.0	D	Yes	No

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

[3] For TWSC, for unsignalized intersections, delay and LOS for the worst movement are reported.

City = City of Menlo Park

CMP = Congestion Management Program

EB = eastbound

LOS = level of service

N/A = not applicable

NB = northbound

SB = southbound

TIA = Transportation Impact Analysis

TWSC = two-way stop-controlled

US-101 = United States Route 101

WB = westbound

As shown in Appendix E, installation of a traffic signal is not warranted under the Near-Term Plus Project condition.

Addition of the project trips would result in the Chrysler Drive/Constitution Drive and Chrysler Drive/Independence Drive intersections operating in noncompliance with the TIA Guidelines in the a.m. peak hour under the Near-Term Plus Project condition. The project would cause these City-controlled intersections to experience an increase in average critical movement delay of greater than 0.8 second during the a.m. peak hour.

Recommended Improvements

Consistent with the previous approved projects in Menlo Park (e.g., the Menlo Uptown Project and 111 Independence Drive Project), the following improvements are recommended.

Chrysler Drive/Constitution Drive

Addition of the project trips would result in the Chrysler Drive/Constitution Drive intersection operating in noncompliance with the TIA Guidelines in the a.m. peak hour under the Near-Term Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during the a.m. peak hour.

The recommended improvement at Chrysler Drive/Constitution Drive is to convert the westbound shared left-through-right-turn lane on Chrysler Drive to one left-turn lane and one shared through-right-turn lane. It is also recommended to convert the southbound shared through-right-turn lane on Constitution Drive to one through lane and one right-turn lane. The recommended improvements would require roadway widening to accommodate the lane modifications on westbound Chrysler Drive and on southbound Constitution Drive. The recommended improvement may require traffic signal modification if traffic signal poles need to be replaced due to the widening. The project is required to pay Traffic Impact Fees (TIFs) according to the current TIF schedule. While the improvements to the westbound approach are included in the City's TIF program, the improvements on the southbound approach are beyond those in the TIF program, and payment of the TIFs would not entirely address the change to intersection delay as a result of project traffic. The recommended improvement would result in the intersection operating in compliance with the City's TIA Guidelines in the Near-Term Plus Project condition.

Chrysler Drive/Independence Drive

Addition of the project trips would result in the Chrysler Drive/Independence Drive intersection operating in noncompliance with the TIA Guidelines in the a.m. peak hour under the Near-Term Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during the a.m. peak hour.

The recommended improvement at Chrysler Drive/Independence Drive is to install a stop control for both approaches of Chrysler Drive, therefore converting the intersection from a two-way stop control to an all-way stop control. Alternatively, the City's Transportation Master Plan (City of Menlo Park 2020b) identifies installation of a traffic signal as a future improvement at Chrysler Drive/ Independence Drive. This improvement is in the City's TIF program, and the project is required to

pay TIFs according to the City's current TIF schedule. Converting the intersection from a two-way stop control to an all-way stop control would result in the intersection operating in compliance with the City's TIA Guidelines in the Near-Term Plus Project condition.

Table M summarizes the results of the Near-Term Plus Project with Improvements peak-hour LOS analysis.

CUMULATIVE PLUS PROJECT CONDITION

To determine the Cumulative Plus Project condition, net traffic generated by the project was added to cumulative traffic volumes at the study area intersections. Appendix C shows the resulting Cumulative Plus Project peak-hour traffic volumes.

Cumulative Plus Project Traffic LOS Analysis

Table N summarizes the results of the Cumulative Plus Project peak-hour LOS analysis for the study area intersections. Appendix D provides the Cumulative Plus Project HCM worksheets. As shown in Table N, the intersections listed below exceed the City's LOS standard during one or both peak hours:

- Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State)—LOS F (a.m. peak hour)
- Marsh Road/Middlefield Road (Atherton)—LOS F (a.m. peak hour)
- Chrysler Drive/Bayfront Expressway (Local Approaches to State)—LOS E (p.m. peak hour)
- Chrysler Drive/Constitution Drive (Menlo Park)—LOS F (a.m. and p.m. peak hours)
- Chrysler Drive/Jefferson Drive (Menlo Park)—LOS F (a.m. and p.m. peak hours)
- Chrysler Drive/Independence Drive (Menlo Park)—LOS F (a.m. peak hour)
- Chilco Street/Bayfront Expressway (local approaches to State)—LOS E (a.m. and p.m. peak hours)
- Chilco Street/Constitution Drive (Menlo Park)—LOS F (a.m. and p.m. peak hours)
- Willow Road/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)
- University/Bayfront Expressway (State)—LOS F (a.m. and p.m. peak hours)

All other study area intersections operate at satisfactory LOS under the Cumulative Plus Project condition.

A peak-hour traffic signal warrant analysis has been prepared to determine whether a traffic signal is justified at the unsignalized intersections of Chrysler/Jefferson Drive and Chrysler Drive/ Independence Drive. The analysis is based on Warrant 3, Peak Hour Warrant, of the California MUTCD (Caltrans 2014). The California MUTCD signal warrant analysis worksheets are provided in Appendix E. As shown in Appendix E, installation of a traffic signal is warranted at Chrysler Drive/ Jefferson Drive during the p.m. peak hour and is not warranted at Chrysler Drive/Independence Drive, under the Cumulative Plus Project condition.

Table M: Near-Term Plus Project with Improvements Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Near-Term		Near-Term Plus Project		Near-Term Plus Project with Improvements		Meet General Plan Standard?[2]
					Delay	LOS	Delay	LOS	Delay	LOS	
				N/A	111.1	F	120.2	F	32.1	C	
				NB	24.2	C	24.5	C	18.2	B	
				SB	176.1	F	199.1	F	35.9	D	
				EB	104.4	F	112.6	F	31.3	C	
			AM	WB	56.7	E	56.7	E	41.8	D	Yes
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	N/A	39.8	D	40.7	D	33.1	C	Yes
			AM	N/A	59.0	F	60.1	F	14.6	B	Yes
10	Chrysler Drive/Independence Drive (Menlo Park)	AWSC	PM	N/A	17.0	C	17.1	C	11.4	B	Yes

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

AWSC = all-way stop-controlled

City = City of Menlo Park

EB = eastbound

LOS = level of service

N/A = not applicable

NB = northbound

SB = southbound

WB = westbound

Table N: Cumulative Plus Project Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Cumulative Delay	Cumulative LOS	Cumulative Plus Project Delay	Cumulative Plus Project LOS	Meet General Plan Standard?[2]	Noncompliant with TIA Guidelines?
				N/A	103.1	F	105.2	F		
				NB	108.0	F	108.0	F		
				SB	54.4	D	54.4	D		
				EB	169.0	F	168.7	F		
			AM	WB	87.6	F	91.7	F	No	Yes
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to	Signal	PM	N/A	37.1	D	37.4	D	Yes	No
			AM	N/A	34.9	C	35.5	D	N/A	No
2	Marsh Road/US-101 Northbound Ramps (State/CMP)	Signal	PM	N/A	18.0	B	18.7	B	N/A	No
			AM	N/A	37.9	D	38.6	D	N/A	No
3	Marsh Road/US-101 Southbound Ramps (State/CMP)	Signal	PM	N/A	42.1	D	43.3	D	N/A	No
			AM	N/A	32.9	C	32.9	C	Yes	No
4	Marsh Road/Scott Drive (Menlo Park)	Signal	PM	N/A	22.9	C	22.9	C	Yes	No
			AM	N/A	28.6	C	28.7	C	Yes	No
5	Marsh Road/Bay Road (Menlo Park)	Signal	PM	N/A	19.9	B	20.0	B	Yes	No
			AM	N/A	81.2	F	81.9	F	N/A	No
6	Marsh Road/Middlefield Road (Atherton)	Signal	PM	N/A	53.4	D	54.0	D	N/A	No
			AM	N/A	12.5	B	13.2	B	Yes	No
				N/A	62.7	E	63.9	E		
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	212.0	F	216.3	F	No	Yes
				N/A	361.5	F	371.1	F		
				NB	40.8	D	41.3	D		
				SB	123.7	F	131.7	F		
				EB	175.9	F	192.8	F		
			AM	WB	1430.7	F	1473.2	F	No	Yes
				N/A	242.7	F	249.8	F		
				NB	28.0	C	28.2	C		
				SB	837.5	F	866.1	F		
				EB	107.4	F	116.3	F		
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	WB	403.1	F	403.1	F	No	Yes
			AM	N/A	48.3	E	52.5	F	No	Yes
9	Chrysler Drive/Jefferson Drive (Menlo Park)	TWSC[3]	PM	N/A	141.8	F	162.2	F	No	Yes
			AM	N/A	307.4	F	311.3	F	No	Yes
10	Chrysler Drive/Independence Drive (Menlo Park)	TWSC[3]	PM	N/A	21.2	C	21.3	C	Yes	No
				N/A	61.6	E	65.0	E		
			AM	NB	164.8	F	188.7	F	No	Yes
				N/A	67.1	E	68.6	E		
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	257.2	F	259.8	F	No	Yes
				N/A	85.3	F	91.2	F		
				NB	92.2	F	98.6	F		
				SB	94.0	F	101.4	F		
				EB	35.8	D	38.2	D		
			AM	WB	50.0	D	51.0	D	No	Yes
				N/A	252.2	F	255.6	F		
				NB	98.6	F	98.7	F		
				SB	211.6	F	222.6	F		
				EB	521.3	F	524.7	F		
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	PM	WB	113.7	F	113.7	F	No	Yes
			AM	N/A	325.6	F	325.8	F	N/A	No
13	Willow Road/Bayfront Expressway (State)	Signal	PM	N/A	373.8	F	374.5	F	N/A	No
			AM	N/A	101.0	F	101.2	F	N/A	No
14	University/Bayfront Expressway (State)	Signal	PM	N/A	215.3	F	215.2	F	N/A	No
			AM	N/A	40.0	D	40.1	D	Yes	No
15	Marsh Road/Florence Street-Bohannon Drive (Menlo Park)	Signal	PM	N/A	46.1	D	46.1	D	Yes	No

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

[3] For TWSC, for unsignalized intersections, delay and LOS for the worst movement are reported.

City = City of Menlo Park
CMP = Congestion Management Program
EB = eastbound
LOS = level of service
N/A = not applicable
NB = northbound
SB = southbound
TIA = Transportation Impact Analysis
TWSC = two-way stop-controlled
US-101 = United States Route 101
WB = westbound

Addition of the project trips would result in seven study intersections to operate in noncompliance with the TIA Guidelines under Cumulative Plus Project condition in one or both peak hours. The project would cause these intersections to experience an increase in average critical movement delay of 0.8 second or greater during at least one peak hour.

Recommended Improvements

Consistent with the previous approved projects in the City (e.g., the Menlo Uptown Project and 111 Independence Drive Project), the following improvements are recommended.

Marsh Road-Bayfront Expressway/Haven Avenue

Addition of the project trips would result in the Marsh Road-Bayfront Expressway/Haven Avenue intersection operating in noncompliance with the TIA Guidelines in the a.m. peak hour under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during the a.m. peak hour.

The recommended improvement at Marsh Road-Bayfront Expressway/Haven Avenue is to restripe the southbound approach along Haven Avenue to one shared left-through lane, one shared through-right-turn lane, and one right-turn lane. This improvement is in the City's TIF program, and the project is required to pay TIFs according to the City's current TIF schedule. The recommended improvement would result in the intersection operating better than the Cumulative baseline condition and in compliance with the City's TIA Guidelines in the Cumulative Plus Project condition.

Chrysler Drive/Bayfront Expressway

Addition of the project trips would result in the Chrysler Drive/Bayfront Expressway intersection operating in noncompliance with the TIA Guidelines in the p.m. peak hour under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during the p.m. peak hour.

The recommended improvement at Chrysler Drive/Bayfront Expressway is to convert the eastbound right-turn lane on Chrysler Drive to a shared left-right-turn lane. The recommended improvement is subject to Caltrans review and approval, as this intersection is located within Caltrans jurisdiction. The recommended improvement would result in the intersection operating in compliance with the City's TIA Guidelines in the Cumulative Plus Project condition.

Chrysler Drive/Constitution Drive

Addition of the project trips would result in the Chrysler Drive/Constitution Drive intersection operating in noncompliance with the TIA Guidelines in both peak hours under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of 0.8 second or greater during both peak hours.

The recommended improvement at Chrysler Drive/Constitution Drive is to convert the westbound shared left-through-right-turn lane on Chrysler Drive to one left-turn lane and one shared through-right-turn lane. It is also recommended to convert the southbound shared through-right-turn lane on Constitution Drive to one through lane and one right-turn lane. Additionally, it is recommended

to convert the northbound shared left-through-right-turn lane on Constitution Drive to one shared left-through lane and one right-turn lane. The recommended improvements would require widening to accommodate the lane modifications on westbound Chrysler Drive and on northbound and southbound Constitution Drive. The recommended improvements may require traffic signal modification if traffic signal poles need to be replaced due to the widening.

The project is required to pay TIFs according to the current TIF schedule. While the improvements to the westbound approach are included in the City's TIF program, the improvements on the northbound and southbound approaches are beyond those in the TIF program, and payment of the TIFs would not entirely address the change to intersection delay as a result of project traffic. The recommended improvements would result in the intersection operating in compliance with the City's TIA guidelines in the Cumulative Plus Project condition.

Chrysler Drive/Jefferson Drive

Addition of the project trips would result in the Chrysler Drive/Jefferson Drive intersection operating in noncompliance with the TIA Guidelines in both peak hours under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of 0.8 second or greater during both peak hours.

The recommended improvement at Chrysler Drive/Jefferson Drive is to install a traffic signal and convert the northbound shared left-right-turn lane on Jefferson Drive to one left-turn lane and one right-turn lane. The installation of a traffic signal is consistent with the City's Transportation Master Plan (City of Menlo Park 2020b), which identifies traffic signal installation as a future improvement at Chrysler Drive/Jefferson Drive. No widening or additional right-of-way would be required.

This improvement is in the City's TIF program, and the project is required to pay TIFs according to the City's current TIF schedule. As such, payment of the TIFs would address the changes in intersection delay as a result of project traffic. The recommended improvement would result in the intersection operating in compliance with the City's TIA guidelines in the Cumulative Plus Project condition.

Chrysler Drive/Independence Drive

Addition of the project trips would result in the Chrysler Drive/Independence Drive intersection operating in noncompliance with the TIA Guidelines in the a.m. peak hour under Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during the a.m. peak hour.

The recommended improvement at Chrysler Drive/Independence Drive is to install a traffic signal consistent with the City's Transportation Master Plan (City of Menlo Park 2020b), which identifies traffic signal installation as a future improvement at Chrysler Drive/Independence Drive.

This improvement is in the City's TIF program, and the project is required to pay TIFs according to the City's current TIF schedule. As such, payment of the TIFs would address the changes in intersection delay as a result of project traffic. The recommended improvement would result in the

intersection operating in compliance with the City's TIA Guidelines in the Cumulative Plus Project condition.

Chilco Street/Bayfront Expressway

Addition of the project trips would result in the Chilco Street/Bayfront Expressway intersection operating in noncompliance with the TIA Guidelines in both peak hours under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during both peak hours.

The recommended improvement at Chilco Street/Bayfront Expressway is to restripe the eastbound center left-turn lane on Chilco Street to a shared left-right-turn lane and to redesign the existing bike lane. The lane configuration in this direction would be one left-turn lane, one shared left/right lane, and one right-turn lane. The recommended improvements are subject to Caltrans review and approval, as this intersection is located within Caltrans jurisdiction. The recommended improvements would result in the intersection operating in compliance with the City's TIA Guidelines in the Cumulative Plus Project condition.

Chilco Street/Constitution Drive

Addition of the project trips would result in the Chilco Street/Constitution Drive intersection operating in noncompliance with the TIA Guidelines in both peak hours under the Cumulative Plus Project condition. The project would cause this intersection to experience an increase in average critical movement delay of greater than 0.8 second during both peak hours.

The recommended improvement at Chilco Street/Constitution Drive is to convert the westbound shared through-right-turn lane on Chilco Street to a through lane and a right-turn lane. The lane configuration in this direction would be two left-turn lanes, one through lane, and one right-turn lane. It is also recommended to convert the southbound left-through lane on Constitution Drive to one left-turn lane and one through lane, resulting in one left-turn lane, one through lane, and one right-turn lane in this direction. The recommended improvements would require widening along westbound Chilco Street and southbound Constitution Drive. This may require traffic signal modification if traffic signal poles need to be replaced due to the widening.

The project is required to pay TIFs according to the current TIF schedule. The improvements are beyond those in the TIF program, and payment of the TIFs would not entirely address the change to intersection delay as a result of the project traffic. The recommended improvements would result in the intersection operating in compliance with the City's TIA Guidelines in the Cumulative Plus Project condition.

Table O summarizes the results of the Cumulative Plus Project with Improvements peak-hour LOS analysis.

Table O: Cumulative Plus Project with Improvements Intersection Level of Service Summary

	Intersection	Control	Peak Hour	Critical Approach[1]	Cumulative		Cumulative Plus Project		Cumulative Plus Project with Improvements		Meet General Plan Standard?[2]
					Delay	LOS	Delay	LOS	Delay	LOS	
				N/A	103.1	F	105.2	F	82.0	F	
				NB	108.0	F	108.0	F	67.7	E	
				SB	54.4	D	54.4	D	54.4	D	
				EB	169.0	F	168.7	F	84.2	F	
			AM	WB	87.6	F	91.7	F	91.4	F	No
1	Marsh Road-Bayfront Expressway/Haven Avenue (Local Approaches to State	Signal	PM	N/A	37.1	D	37.4	D	38.6	D	Yes
			AM	N/A	12.5	B	13.2	B	12.2	B	Yes
				N/A	62.7	E	63.9	E	26.8	C	
7	Chrysler Drive/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	212.0	F	216.3	F	55.2	E	Yes
				N/A	361.5	F	371.1	F	52.5	D	
				NB	40.8	D	41.3	D	41.3	D	
				SB	123.7	F	131.7	F	66.0	E	
				EB	175.9	F	192.8	F	50.0	D	
			AM	WB	1430.7	F	1473.2	F	47.8	D	Yes
				N/A	242.7	F	249.8	F	122.5	F	
				NB	28.0	C	28.2	C	28.3	C	
				SB	837.5	F	866.1	F	418.4	F	
				EB	107.4	F	116.3	F	85.3	F	
8	Chrysler Drive/Constitution Drive (Menlo Park)	Signal	PM	WB	403.1	F	403.1	F	80.8	F	No
			AM	N/A	48.3	E	52.5	F	35.3	D	YEs
9	Chrysler Drive/Jefferson Drive (Menlo Park)	Signal	PM	N/A	141.8	F	162.2	F	114.8	F	No
			AM	N/A	307.4	F	311.3	F	31.2	C	Yes
10	Chrysler Drive/Independence Drive (Menlo Park)	Signal	PM	N/A	21.2	C	21.3	C	9.6	A	Yes
				N/A	61.6	E	65.0	E	48.1	D	
			AM	NB	164.8	F	188.7	F	58.6	F	Yes
				N/A	67.1	E	68.6	E	30.8	C	
11	Chilco Street/Bayfront Expressway (Local Approaches to State)	Signal	PM	NB	257.2	F	259.8	F	65.7	E	Yes
				N/A	85.3	F	91.2	F	52.8	D	
				NB	92.2	F	98.6	F	91.6	F	
				SB	94.0	F	101.4	F	42.7	D	
				EB	35.8	D	38.2	D	35.3	C	
			AM	WB	50.0	D	51.0	D	50.0	D	Yes
				N/A	252.2	F	255.6	F	124.3	F	
				NB	98.6	F	98.7	F	98.7	F	
				SB	211.6	F	222.6	F	75.1	E	
				EB	521.3	F	524.7	F	187.4	F	
12	Chilco Street/Constitution Drive (Menlo Park)	Signal	PM	WB	113.7	F	113.7	F	113.7	F	No

[1] The Critical Approach information is relevant where the project would increase delay per the LOS policy standards.

[2] The General Plan Standard information is relevant where the City's LOS policy standards apply.

City = City of Menlo Park

EB = eastbound

LOS = level of service

N/A = not applicable

NB = northbound

SB = southbound

WB = westbound

SITE ANALYSIS

Access and On-Site Circulation

Vehicle access to the project site will be provided via a new full-access driveway on Jefferson Drive. Residential and nonresidential uses would access the parking garage via a single two-way gated entry point approximately 85 ft from the back of the sidewalk on Jefferson Drive. Project outbound traffic would need to be stop-controlled at the driveway before turning onto Jefferson Drive. Jefferson Drive would continue to be uncontrolled along the project frontage.

Sight Distance Analysis

A sight distance analysis was conducted along Jefferson Drive at the location of the proposed project driveway to ensure driver visibility and safety. The speed limit along Jefferson Drive is 25 mph. According to Table 6C-2 of the California MUTCD (Caltrans 2014), the stopping sight distance for roadways with a speed limit of 25 mph is 155 ft. Figure 7 illustrates the sight distance along Jefferson Drive. As shown in this figure, there are no sight distance obstructions at the proposed project driveway. The sight distance at the proposed project driveway exceeds 155 ft looking east and west. Therefore, the project driveway would meet the minimum sight distance requirements specified in the California MUTCD (Caltrans 2014).

Gate Stacking Analysis

The project proposes to provide a gate at the parking garage entrance. The proposed gate will be located approximately 85 ft from the back of the sidewalk on Jefferson Drive. Project vehicles would need to pass through the security gate in order to enter/exit the parking garage. The gated access would provide one inbound lane and one outbound lane. A gate stacking analysis was conducted to evaluate the peak inbound traffic volumes into the project site and the adequacy of vehicle storage so that project vehicles would not queue onto Jefferson Drive.

The methodology described in the Robert Crommelin report, *Entrance-Exit Design and Control for Major Parking Facilities* (Robert Crommelin and Associates, Inc. 1972; Attachment B), is used to determine the potential queue that may develop at the proposed gate location. Queue formation is a function of the peak-hour inbound traffic volume and the service rate of the gate device to accommodate the demand. The peak-hour inbound volume is compared to the gate service rate, and the queue length is then determined.

Vehicular reservoir needs at the gated facility were identified for a given volume of peak-hour inbound traffic and service rate of the proposed gated entrance device. As shown in Table K, the proposed project would generate 2,218 ADT, including 258 trips in the a.m. peak hour (131 inbound and 127 outbound) and 145 trips in the p.m. peak hour (75 inbound and 70 outbound). The maximum inbound volume during the peak hour will determine the formation of the queues in front of the gate. The maximum inbound volume is 131 trips during the a.m. peak hour.

After accounting for internal trip capture and TDM Plan reductions, the net maximum inbound volume would be 97 trips during the a.m. peak hour. As such, 97 inbound vehicles in the a.m. peak hour are used to evaluate the potential queue in front of the gate.

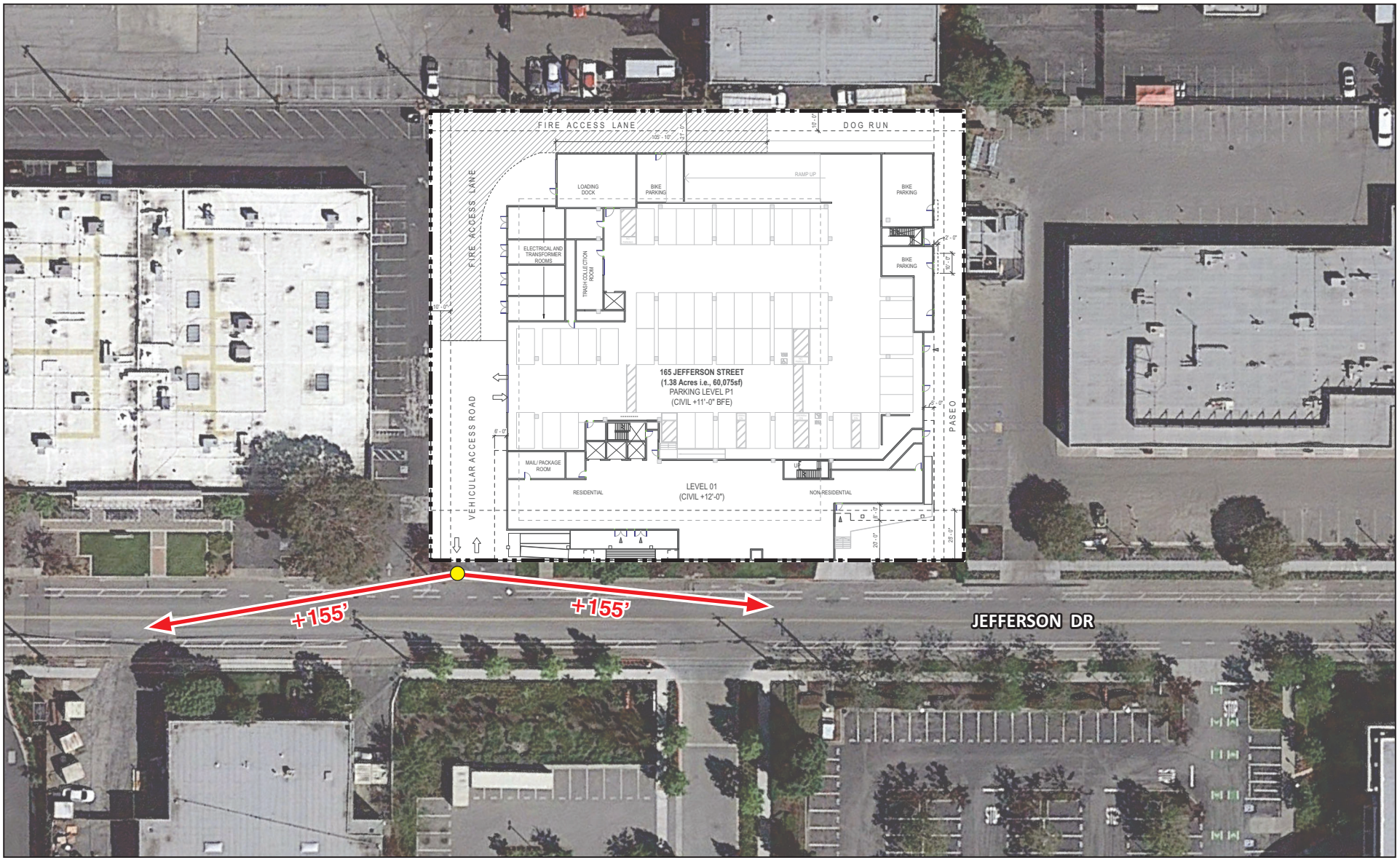

FIGURE 7

LSA

N

0 35 70

FEET

SOURCE: Google Earth

Menlo Flats
Sight Distance

I:\CMK2001\G\Sight Distance.cdr (7/1/2021)

For purposes of the gate stacking analysis, the gate control system for the proposed gate would be coded-card operated. This is a conservative analysis, as residents and employees will be able to open the gate remotely and will not need to insert a card into a reader in order to open the gate. The Crommelin service rate for a coded-card operated gate (Robert Crommelin and Associates 1972) has been used to analyze the proposed gate as presented in Table P.

Table P: Gate Service Rates

Type of Gate Control[1]	Proposed Typical Service Rate		
	Average Headway (seconds/vehicle)	Design Capacity (vehicles/hour)	Maximum Capacity (vehicles/hour)
Coded-Card-Operated Gate	8.9	340	425

[1] The type of gate control is from *Entrance-Exit Design and Control for Major Parking Facilities* (Robert Crommelin and Associates 1972).

Based on the volume of inbound vehicles and the service rates presented above, the traffic intensity (i.e., volume-to-service rate ratio) is determined. Table Q presents the gate stacking analysis for the inbound vehicles at the proposed gate. The a.m. peak-hour inbound volume of 97 vehicles was divided by the service rate of 340 vehicles per hour to determine the 0.285 traffic intensity.

Table Q: Traffic Intensity

Gate Entrance	Traffic Intensity
Project Driveway (97 Inbound Vehicles)	97/340 = 0.285

Based on the traffic intensities and the Crommelin methodology (see the Reservoir Needs vs. Traffic Intensity graph in *Entrance-Exit Design and Control for Major Parking Facilities* [Robert Crommelin and Associates 1972]), a stacking reservoir of one vehicle behind the gate is required. A standard-design passenger car is 22 ft in length. As previously described, 85 ft of storage length is provided from the back of the Jefferson Drive sidewalk to the gate entrance. As such, the minimum gate stacking distance is satisfied, and the proposed gate operation and vehicle storage length would accommodate the projected vehicle demand without queuing onto Jefferson Drive.

Parking

The project would provide 176 parking spaces in a three-level parking garage. Approximately 138 parking spaces would be designated for residents, and 38 spaces would be for nonresidents. The project is located within the Residential Mixed-Use Bonus (R-MU-B) zoning district. Based on the City's Municipal Code (Chapter 16.45.080, Parking Standards for R-MU Residential Mixed Use District), residential units require 1 parking space per dwelling unit, office use requires 2 parking spaces per 1,000 sf of office use, and eating and drinking establishment use requires 2.5 parking spaces per 1,000 sf of eating and drinking establishment use. Application of the City's parking requirements to the project site would require a minimum of 158 parking spaces for the residential use and 33 spaces for the nonresidential uses. As such, the project will not meet the minimum required parking spaces for the residential use (13 percent short of the City's Parking Code) but will meet the minimum required parking spaces for the nonresidential use.

As mentioned before, the project will implement TDM measures that would result in a VMT reduction of approximately 30 percent for both residential and nonresidential land uses. The project will be short of the City's Parking Code by 13 percent for the residential use. It is expected that the implementation of the TDM measures would result in reduction of both the project's estimated VMT and its parking demand. As such, the project is not expected to have any parking deficiency. As part of the BMR Ordinance and BMR Guidelines, the project sponsor may request a waiver from the minimum parking requirement. Therefore, if the City Council grants the waiver for the minimum number of parking spaces, the project would meet the City's parking requirements.

CONCLUSIONS

Based on the results of this TIA, the project's estimated average daily VMT is above the City's VMT threshold for both the residential and office components of the project. However, implementation of the proposed TDM Plan would result in the project's average daily VMT being below the City's VMT thresholds. Therefore, the VMT generated by the project would result in a less than significant impact.

Development of the project would result in two study area intersections operating in noncompliance with the TIA Guidelines under the Near-Term Plus Project condition and seven study intersections operating in noncompliance with the TIA Guidelines under the Cumulative Plus Project condition. With the prescribed improvements, the intersections would operate in compliance with the TIA Guidelines under the Near-Term Plus Project and Cumulative Plus Project conditions.

The project residential and nonresidential uses would access the parking garage via a single two-way gated entry point approximately 85 ft from the back of the sidewalk on Jefferson Drive. Project outbound traffic would need to be stop-controlled at the driveway before turning onto Jefferson Drive. The project driveway would meet the minimum sight distance requirements specified in the California MUTCD (Caltrans 2014).

Based on the results of the gate stacking analysis, the minimum stacking distance is satisfied at the proposed gate on the project site, and the proposed gate operation and vehicle storage length would accommodate the projected demand without queuing onto Jefferson Drive.

The project will not meet the minimum required parking spaces for the residential use but will meet the minimum required parking spaces for the nonresidential use. However, as part of the BMR Ordinance and BMR Guidelines, the project sponsor may request a waiver from the minimum parking requirement. Therefore, if the City Council grants the waiver for the minimum number of parking spaces, the project would meet the City's parking requirements.

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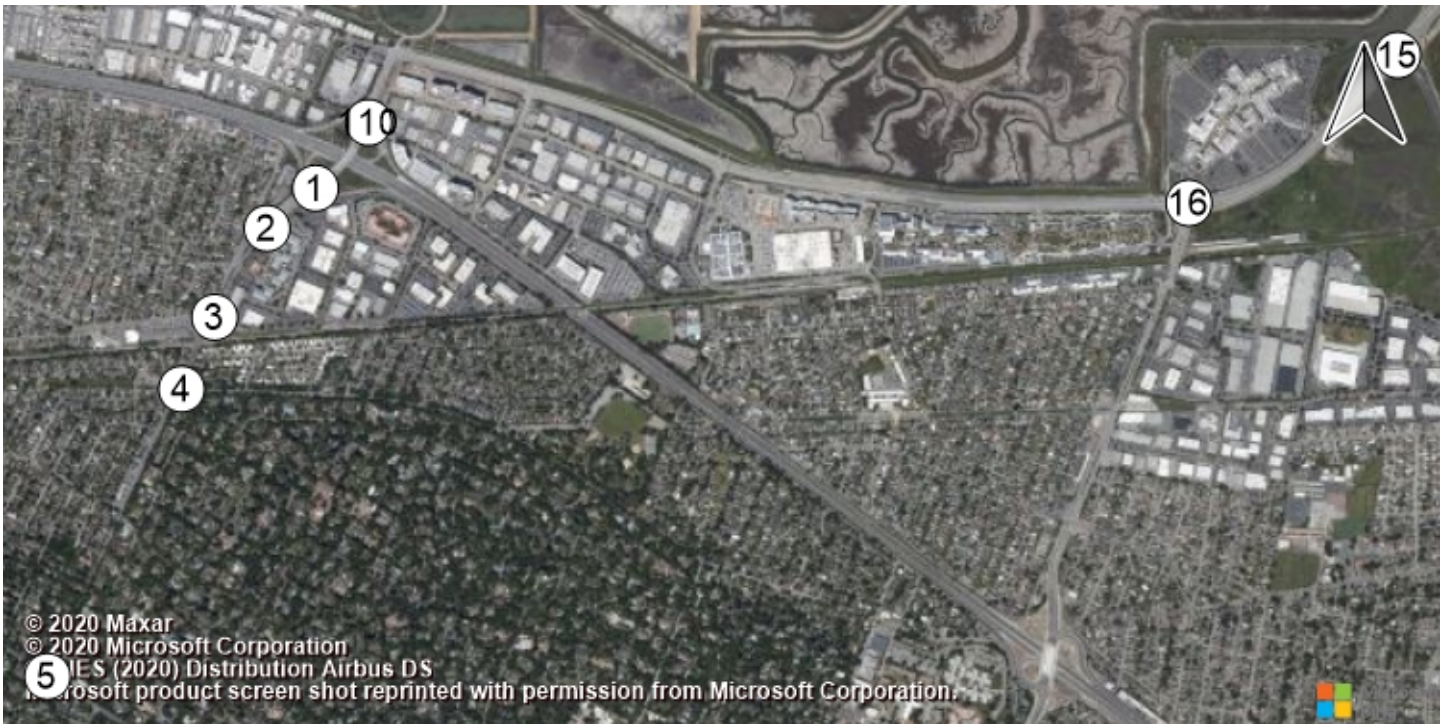
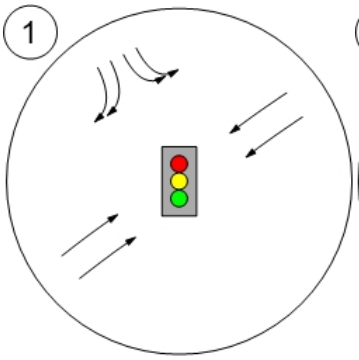
APPENDIX A

INTERSECTION GEOMETRICS

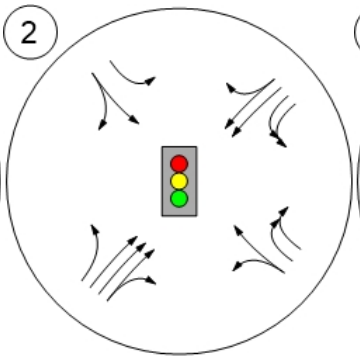
Lane Configuration and Traffic Control



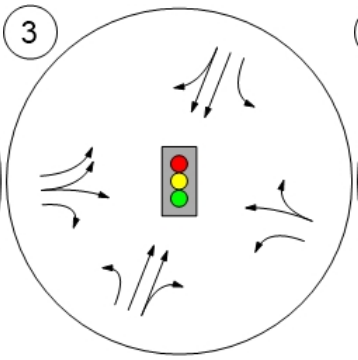
Marsh Rd (SR 84)/US 101 S



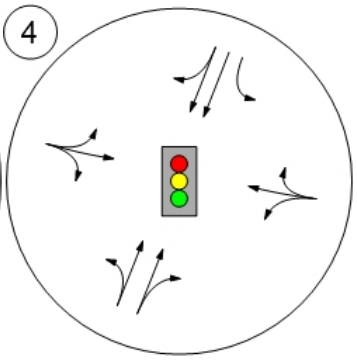
Marsh Rd/Rolison Rd-Scott D



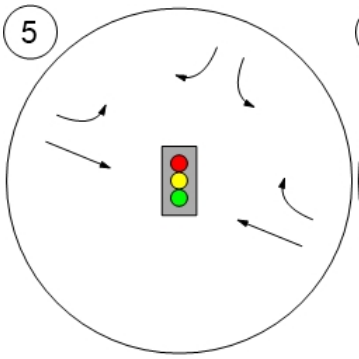
Marsh Rd/Florence St-Bohan



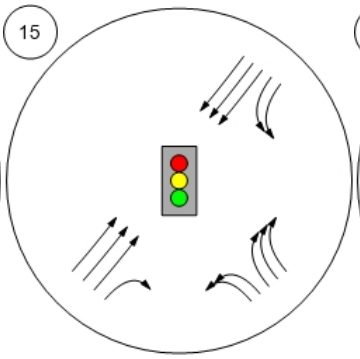
Marsh Rd/Bay Rd



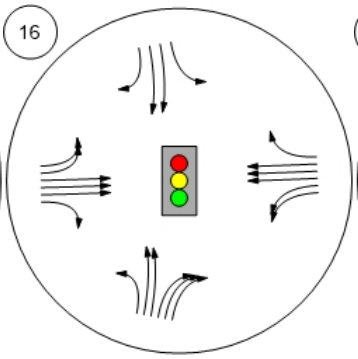
Middlefield Rd/Marsh Rd



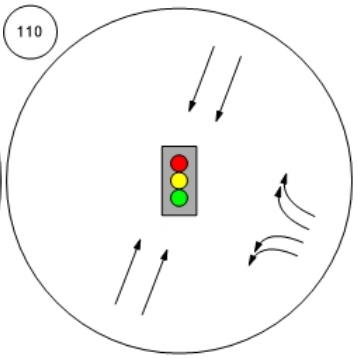
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

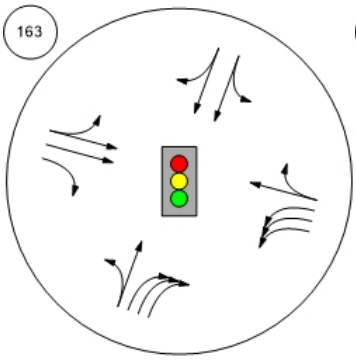


Marsh Road and US 101 NB

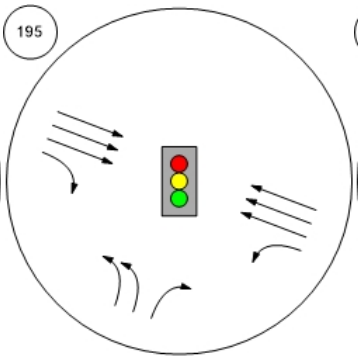


Lane Configuration and Traffic Control

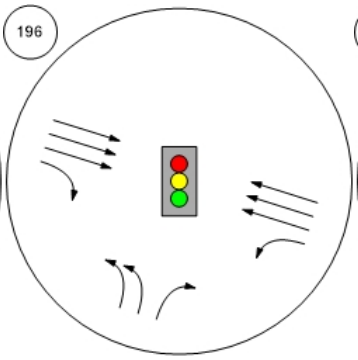
Bayfront Expy/Marsh Rd



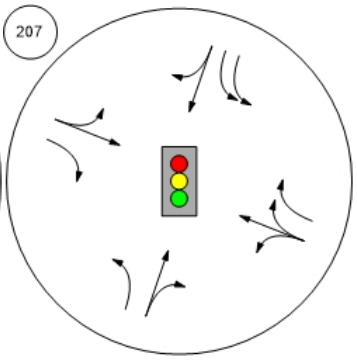
Bayfront Expy/Chilco St



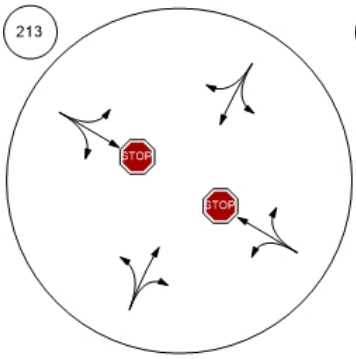
Bayfront Expy/Chrysler Drive



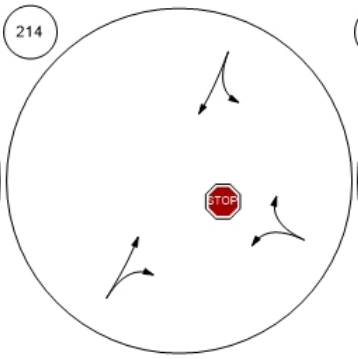
Chilco St/Constitution Dr



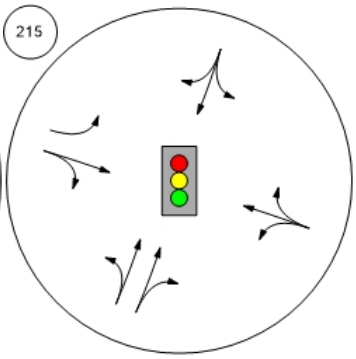
Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr



Chrysler Dr/Constitution Dr



APPENDIX B

TRANSIT INFORMATION

M1 CROSSTOWN SHUTTLE

Belle Haven to Sharon Heights

Effective June 28, 2021

The M1-Crosstown Shuttle is FREE and open to everyone. The shuttle can accommodate wheelchairs and two bicycles.

FOR MORE INFORMATION

Menlo Park Shuttles
650-330-6770
menlopark.org/shuttles

Caltrain
800-660-4287
caltrain.com

Regional Transit
Dial 5-1-1
511.org

Immediate Shuttle Assistance
MV Transportation
650-692-1003

Sign up for text alerts: smctd.com/shuttles/shuttle_text_alerts
Live Shuttle Tracker: peninsulashuttles.com

FREE Door-to-Door Shoppers' Shuttle

Tuesdays to Redwood City:	650-330-2286
Wednesdays to Menlo Park/Palo Alto:	650-330-2288
Saturdays to Menlo Park/Palo Alto:	650-330-2289

The M1-Crosstown Shuttle is funded through generous grants from our partner agencies:

C/CAG City/County Association of Governments of San Mateo County
METROPOLITAN TRANSPORTATION COMMISSION
CITY OF MENLO PARK

Inbound to Sharon Heights

	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
Terminal and Del Norte	8:15	10:49	12:07	2:32	3:27
Belle Haven Branch Library	8:19	10:53	12:11	2:36	3:31
V.A. Medical Center	8:25	10:59	12:17	2:42	3:37
Menlo Medical Clinic	8:29	11:03	12:21	2:46	3:41
MP Library, Senior services	8:35	11:09	12:27	2:52	3:47
Middlefield and Oak Grove	8:39	11:13	12:31	2:56	3:51
Crane Place	8:44	11:18	12:36	3:01	3:56
Downtown (Santa Cruz and Chestnut)	8:47	11:21	12:39	3:04	3:59
Menlo Park Caltrain	8:50	11:24	12:42	3:07	4:02
Safeway	8:54	11:28	12:46	3:11	4:06
Little House	8:58	11:32	12:50	3:15	4:10
Partridge / Kennedy	9:02	11:36	12:54	3:19	4:14
P.A. Medical Foundation	9:08	11:42	1:00	3:25	4:20
Palo Alto Caltrain	9:13	11:47	1:05	3:30	4:25
Hoover Pavilion	9:18	11:52	1:10	3:35	4:30
Stanford Shopping Center	9:20	11:54	1:12	3:37	4:32
Nordstrom / Crate and Barrel	9:23	11:57	1:15	3:40	4:35
Stanford Medical Center (900 Welch Road)	9:27	12:01	1:19	3:44	4:39
Sharon Hts. Shopping Ctr.	9:34	12:08	1:26	3:51	4:46
Menlo Commons	9:41	12:15	1:33	3:58	4:53

Outbound to Belle Haven

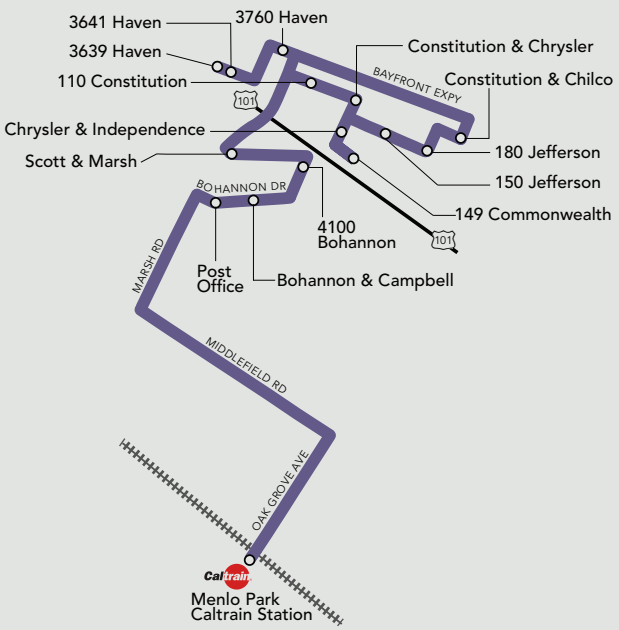
	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
Sharon Hts. Shopping Ctr.	9:00	10:01	12:55	1:38	4:23
Menlo Commons	9:07	10:08	1:02	1:45	4:30
Stanford Medical Center (Welch and Blake Wilbur)	9:13	10:14	1:08	1:51	4:36
Stanford Shopping Center	9:18	10:19	1:13	1:56	4:41
Nordstrom / Crate and Barrel	9:21	10:22	1:16	1:59	4:44
Hoover Pavilion	9:24	10:25	1:19	2:02	4:47
P.A. Medical Foundation	9:28	10:29	1:23	2:06	4:51
Palo Alto Caltrain	9:33	10:34	1:28	2:11	4:56
University and Partridge	9:39	10:40	1:34	2:17	5:02
Little House	9:42	10:43	1:37	2:20	5:05
Safeway	9:46	10:47	1:41	2:24	5:09
Menlo Park Caltrain	9:50	10:51	1:45	2:28	5:13
Downtown (Santa Cruz and Crane)	9:54	10:55	1:49	2:32	5:17
Crane Place	9:57	10:58	1:52	2:35	5:20
Middlefield and Oak Grove	10:02	11:03	1:57	2:40	5:25
MP Library, Senior services	10:08	11:09	2:03	2:46	5:31
Menlo Medical Clinic	10:13	11:14	2:08	2:51	5:36
V.A. Medical Clinic	10:19	11:20	2:14	2:57	5:42
Belle Haven Branch Library	10:25	11:26	2:20	3:03	5:48
Terminal and Del Norte	10:29	11:30	2:24	3:07	5:52

The M1-Crosstown Shuttle operates Monday to Friday. No service on federal holidays or their observed days. Exceptions: service on Columbus Day and Veterans Day; no service on the Friday after Thanksgiving.

MARSH ROAD SHUTTLE

Menlo Park Caltrain to Marsh Road Business Parks

Effective March 22, 2021



The M3-Marsh Road Shuttle is FREE and open to everyone. Stanford Health Care's Bohannon Line also provides all day service to the Bohannon Drive area.

FOR MORE INFORMATION

Menlo Park Shuttles
650-330-6770
menlopark.org/shuttles

Caltrain
800-660-4287
caltrain.com

Regional Transit
Dial 5-1-1
511.org

Stanford Health Care
650-736-8000
stanfordmedicinetransportation.org/shuttles

Sign up for text alerts: smctd.com/shuttles/shuttle_text_alerts
Live Shuttle Tracker: peninsulashuttles.com

The M3-Marsh Road Shuttle is funded through generous grants from our partner agencies:

This schedule is in response to Caltrain's modified schedule effective March 22, 2021. The second Marsh shuttle is still temporarily suspended. Resumption of the second shuttle is to be determined, pending Caltrain's full, normal schedule resumption based on the ongoing COVID-19 situation.

Morning Schedule

	RUN 1	RUN 2	RUN 3
Menlo Park Caltrain (Depart)	7:38	8:38	9:38
Post Office	7:46	8:48	9:46
Bohannon & Campbell	7:47	8:49	9:47
4100 Bohannon	7:48	8:50	9:48
Scott & Marsh	7:49	8:51	9:49
110 Constitution	7:52	8:56	9:53
Constitution & Chrysler	7:53	8:57	9:54
Chrysler & Independence	7:54	8:58	9:55
149 Commonwealth	7:55	8:59	9:56
150 Jefferson/180 Jefferson	7:57	9:01	9:58
Constitution & Chilco	7:59	9:03	10:00
3641 Haven (Elan Menlo)	8:06	9:10	10:06
3639 Haven (Anton Menlo)	8:06	9:10	10:06
3760 Haven (Quicken)	8:08	9:12	10:08
Menlo Park Caltrain (Arrive)	8:22	9:24	--

Afternoon Schedule

	RUN 1	RUN 2	RUN 3
Menlo Park Caltrain (Depart)	--	4:00	5:00
110 Constitution	3:27	4:23	5:23
Constitution & Chrysler	3:28	4:24	5:24
Chrysler & Independence	3:29	4:25	5:25
149 Commonwealth	3:30	4:26	5:26
150 Jefferson/180 Jefferson	3:32	4:28	5:28
Constitution & Chilco	3:34	4:31	5:31
3641 Haven (Elan Menlo)	3:38	4:37	5:37
3639 Haven (Anton Menlo)	3:38	4:37	5:37
3760 Haven (Quicken)	3:40	4:39	5:39
Scott & Marsh	3:45	4:46	5:46
4100 Bohannon	3:47	4:48	5:48
Bohannon & Campbell	3:48	4:49	5:49
Post Office	3:49	4:50	5:50
Menlo Park Caltrain (Arrive)	4:00	5:00	6:00

Caltrain Arrivals in Menlo Park

From San Francisco	From San Jose	Shuttle Connection
#214: 7:33	**#213:** 7:07	**Run 1** Dep. 7:38
#222: 8:33	**#221:** 8:07	**Run 2** Dep. 8:38
#230: 9:33	**#229:** 9:07	**Run 3** Dep. 9:38

Caltrain Departures from Menlo Park

Shuttle Connection	To San Jose	To San Francisco
Run 1 Arr. 4:00	**#260:** 4:33	**#263:** 4:07
Run 2 Arr. 5:00	**#268:** 5:33	**#271:** 5:07
Run 3 Arr. 6:00	**#276:** 6:33	**#279:** 6:07

The M3-Marsh Road Shuttle operates Monday to Friday. No service on federal holidays or their observed days. Exceptions: service on Columbus Day and Veterans Day; no service on the Friday after Thanksgiving.

Fares

	Local Cash	Day Pass*
Adult ..... Age 19 – 64	$2.25	$4.50
Youth ..... Age 18 and younger	$1.10	$2.00
Eligible Discount .... Age 65+, disabled & Medicare cardholder (proof of eligibility or identity required)	$1.10	$2.00

Children
Two children (age 4 and younger) ride free with each adult or eligible discount fare-paying passenger. Additional children subject to youth fare.

* **Purchase at farebox or SamTrans MobileApp. Info at www.samtrans.com/daypass**

Exact fare please. Driver does not make change.

Use Clipper® and receive a discount. Free 2-hour transfers between local SamTrans routes on Clipper or SamTrans Mobile App.

Monthly passes are available on Clipper.

For more details about fare payments, visit **www.samtrans.com/fares**

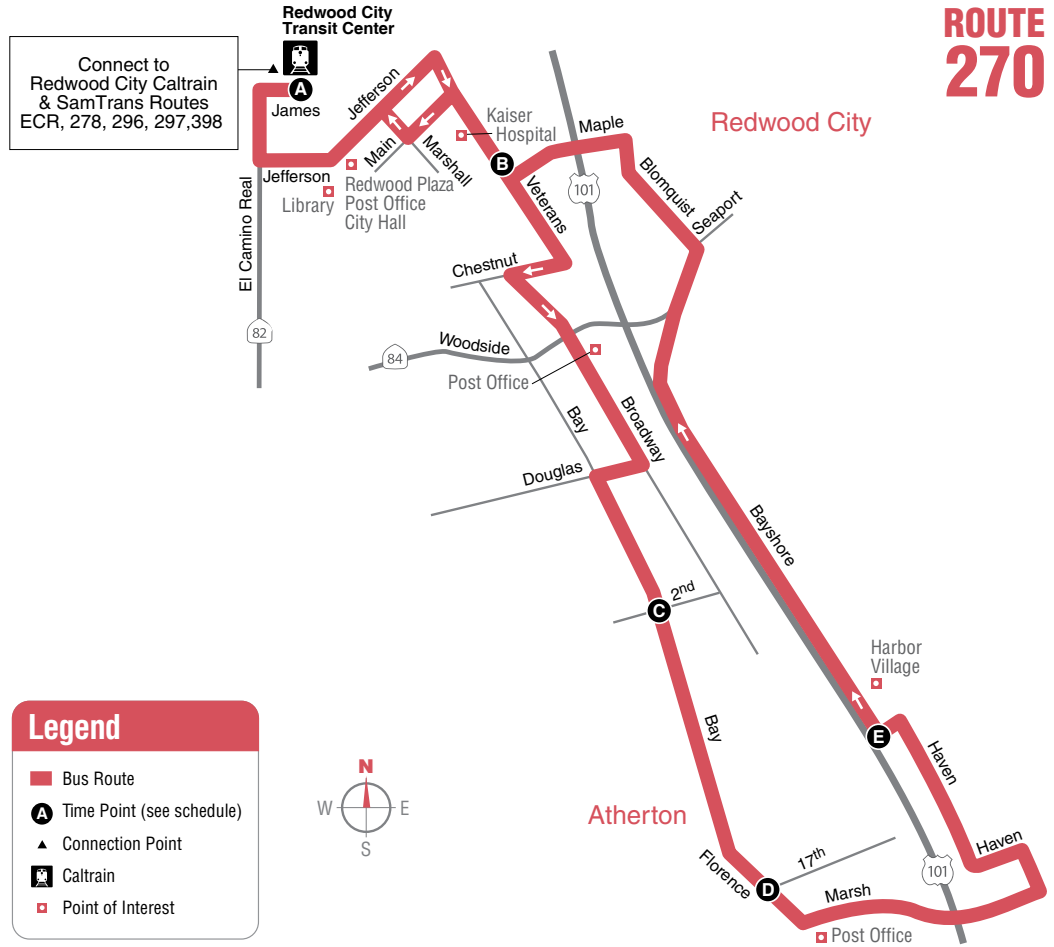
samTrans
Caltrain Connection

270

Effective 04/26/20

Redwood City
- Redwood City Transit Center
- Post Office
- Library
- City Hall
- Redwood Plaza
- Kaiser Hospital

Atherton
- Post Office



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Information/Información
1-800-660-4287
(TTY 650-508-6448)

www.samtrans.com

samTrans

Loops - Weekdays to Redwood City Transit Center

Redwood City Transit Center (A)	Kaiser Hospital (B)	Bay/ 2nd (C)	Florence/ 17th (D)	Haven/ Bayshore (E)	Veterans/ Maple (Kaiser Hospital) (B)	Redwood City Transit Center (A)
6:30	6:36	6:44	6:47	6:55	7:02	7:09
7:30	7:36	7:44	7:47	7:56	8:03	8:10
8:30	8:36	8:44	8:47	8:56	9:03	9:10
9:30	9:36	9:44	9:47	9:56	10:04	10:11
10:30	10:36	10:45	10:48	10:57	11:05	11:14
11:30	11:36	11:45	11:48	11:57	**12:05**	**12:14**
12:30	**12:36**	**12:45**	**12:48**	**12:56**	**1:04**	**1:13**
1:30	**1:36**	**1:45**	**1:48**	**1:56**	**2:04**	**2:13**
2:30	**2:36**	**2:45**	**2:48**	**2:56**	**3:04**	**3:13**
3:30	**3:36**	**3:45**	**3:48**	**3:57**	**4:04**	**4:12**
4:30	**4:36**	**4:45**	**4:48**	**4:57**	**5:04**	**5:12**
5:30	**5:36**	**5:45**	**5:48**	**5:57**	**6:04**	**6:11**
6:30	**6:36**	**6:44**	**6:47**	**6:55**	**7:01**	**7:08**

AM - light type. **PM - bold type.**
Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.

Loops - Saturdays to Redwood City Transit Center

Redwood City Transit Center (A)	Kaiser Hospital (B)	Bay/ 2nd (C)	Florence/ 17th (D)	Haven/ Bayshore (E)	Veterans/ Maple (Kaiser Hospital) (B)	Redwood City Transit Center (A)
7:30	7:36	7:44	7:47	7:56	8:03	8:10
8:30	8:36	8:44	8:47	8:56	9:03	9:10
9:30	9:36	9:44	9:47	9:56	10:04	10:11
10:30	10:36	10:45	10:48	10:57	11:05	11:14
11:30	11:36	11:45	11:48	11:57	**12:05**	**12:14**
12:30	**12:36**	**12:45**	**12:48**	**12:56**	**1:04**	**1:13**
1:30	**1:36**	**1:45**	**1:48**	**1:56**	**2:04**	**2:13**
2:30	**2:36**	**2:45**	**2:48**	**2:56**	**3:04**	**3:13**
3:30	**3:36**	**3:45**	**3:48**	**3:57**	**4:04**	**4:12**
4:30	**4:36**	**4:45**	**4:48**	**4:57**	**5:04**	**5:12**
5:30	**5:36**	**5:45**	**5:48**	**5:57**	**6:04**	**6:11**
6:30	**6:36**	**6:44**	**6:47**	**6:55**	**7:01**	**7:08**

AM - light type. **PM - bold type.**
Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.

Saturdays to Onetta Harris Center

Stanford Shopping Center (A)	Palo Alto Transit Center (B)	University/ Woodland (C)	Bay/University (D)	Newbridge/ Saratoga (E)	Onetta Harris Community Center (G)
8:03	8:09	8:18	8:23	8:27	8:33
8:33	8:39	8:48	8:53	8:57	9:03
9:03	9:10	9:19	9:24	9:28	9:34
9:33	9:40	9:50	9:56	10:00	10:06
10:03	10:09	10:19	10:25	10:29	10:36
10:33	10:39	10:49	10:55	10:59	11:06
11:03	11:09	11:19	11:25	11:29	11:36
11:33	11:39	11:49	11:55	11:59	**12:06**
12:03	**12:10**	**12:20**	**12:26**	**12:30**	**12:37**
12:32	**12:39**	**12:50**	**12:56**	**1:00**	**1:07**
1:02	**1:09**	**1:20**	**1:26**	**1:30**	**1:37**
1:32	**1:39**	**1:50**	**1:56**	**2:00**	**2:07**
2:03	**2:10**	**2:22**	**2:28**	**2:32**	**2:39**
2:30	**2:38**	**2:50**	**2:56**	**3:00**	**3:07**
3:00	**3:08**	**3:21**	**3:27**	**3:31**	**3:38**
3:30	**3:38**	**3:51**	**3:57**	**4:01**	**4:08**
4:00	**4:08**	**4:20**	**4:27**	**4:31**	**4:38**
4:30	**4:38**	**4:50**	**4:57**	**5:01**	**5:08**
5:00	**5:08**	**5:20**	**5:27**	**5:31**	**5:38**
5:30	**5:38**	**5:50**	**5:56**	**6:00**	**6:07**
6:00	**6:08**	**6:20**	**6:26**	**6:30**	**6:37**
6:30	**6:38**	**6:49**	**6:55**	**6:59**	**7:06**
7:00	**7:08**	**7:19**	**7:25**	**7:29**	**7:36**

AM - light type. **PM - bold type.**
Bus is not considered late until 5 minutes past scheduled time. Not all stops shown. Please call 1-800-660-4287 for other bus stops.

Sundays to Onetta Harris Center

Stanford Shopping Center (A)	Palo Alto Transit Center (B)	University/ Woodland (C)	Bay/University (D)	Newbridge/ Saratoga (E)	Onetta Harris Community Center (G)
8:00	8:06	8:15	8:20	8:24	8:30
8:40	8:46	8:55	9:00	9:04	9:10
9:20	9:27	9:37	9:43	9:47	9:53
10:00	10:07	10:17	10:23	10:27	10:33
10:40	10:46	10:56	11:02	11:06	11:13
11:20	11:26	11:36	11:42	11:46	11:53
12:00	**12:07**	**12:17**	**12:23**	**12:27**	**12:34**
12:40	**12:47**	**12:58**	**1:04**	**1:08**	**1:15**
1:20	**1:27**	**1:38**	**1:44**	**1:48**	**1:55**
2:00	**2:07**	**2:19**	**2:25**	**2:29**	**2:36**
2:40	**2:48**	**3:00**	**3:06**	**3:10**	**3:17**
3:20	**3:28**	**3:41**	**3:47**	**3:51**	**3:58**
4:00	**4:08**	**4:20**	**4:27**	**4:31**	**4:38**
4:40	**4:48**	**5:00**	**5:07**	**5:11**	**5:18**
5:20	**5:28**	**5:40**	**5:47**	**5:51**	**5:58**
6:00	**6:08**	**6:20**	**6:26**	**6:30**	**6:37**

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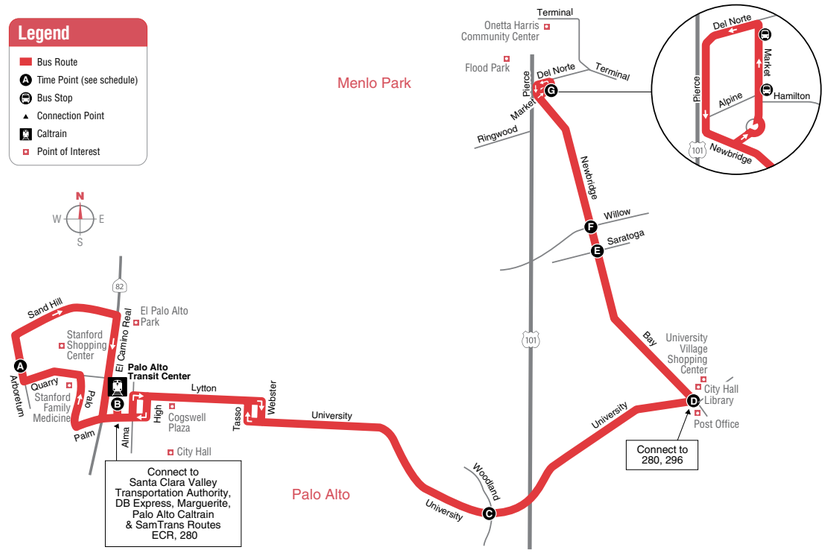

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Fares

	Local Cash	Day Pass*
Adult ..... Age 19 – 64	$2.25	$4.50
Youth ..... Age 18 and younger	$1.10	$2.00
Eligible Discount .... Age 65+, disabled & Medicare cardholder (proof of eligibility or identity required)	$1.10	$2.00

Children
Two children (age 4 and younger) ride free with each adult or eligible discount fare-paying passenger. Additional children subject to youth fare.

* **Purchase at farebox or SamTrans Mobile App. Info at www.samtrans.com/daypass**

Exact fare please. Driver does not make change.

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Caltrain Connection

Menlo Park
- Kelly Park
- Onetta Harris Community Center

East Palo Alto
- City Hall
- Library
- Post Office

Palo Alto
- Caltrain
- Transit Center
- Stanford Shopping Center

281

Effective 06/28/21

Information/Información
1-800-660-4287
(TTY 650-508-6448)
www.samtrans.com

samTrans

Saturdays to Stanford Mall

Onetta Harris Community Center (G)	Newbridge/ Willow (F)	Bay/University (D)	University/ Woodland (C)	Palo Alto Transit Center (B)	Stanford Shopping Center (A)
8:15	8:21	8:27	8:32	8:42	8:47
8:45	8:51	8:57	9:02	9:12	9:17
9:15	9:21	9:26	9:31	9:41	9:46
9:45	9:51	9:56	10:01	10:11	10:16
10:15	10:21	10:26	10:31	10:42	10:48
10:45	10:51	10:56	11:01	11:12	11:18
11:15	11:21	11:26	11:32	11:43	11:49
11:45	11:51	11:56	**12:02**	**12:13**	**12:19**
12:15	**12:21**	**12:26**	**12:32**	**12:43**	**12:49**
12:45	**12:51**	**12:56**	**1:02**	**1:13**	**1:19**
1:15	**1:21**	**1:26**	**1:32**	**1:43**	**1:49**
1:45	**1:51**	**1:56**	**2:02**	**2:14**	**2:20**
2:15	**2:21**	**2:26**	**2:32**	**2:44**	**2:50**
2:45	**2:51**	**2:56**	**3:02**	**3:15**	**3:21**
3:15	**3:20**	**3:25**	**3:31**	**3:44**	**3:50**
3:45	**3:50**	**3:55**	**4:01**	**4:14**	**4:20**
4:15	**4:20**	**4:25**	**4:31**	**4:43**	**4:49**
4:45	**4:50**	**4:55**	**5:00**	**5:12**	**5:18**
5:15	**5:20**	**5:25**	**5:30**	**5:41**	**5:47**
5:45	**5:50**	**5:55**	**6:00**	**6:11**	**6:17**
6:15	**6:20**	**6:25**	**6:30**	**6:41**	**6:47**
6:45	**6:50**	**6:55**	**7:00**	**7:11**	**7:17**
7:15	**7:20**	**7:25**	**7:29**	**7:39**	**7:45**
7:37	**7:42**	**7:47**	**7:51**	**8:00**	**8:07**

AM - light type. **PM - bold type.**
Bus is not considered late until 5 minutes past scheduled time. Not all stops shown. Please call 1-800-660-4287 for other bus stops.

Sundays to Stanford Mall

Onetta Harris Community Center (G)	Newbridge/ Willow (F)	Bay/University (D)	University/ Woodland (C)	Palo Alto Transit Center (B)	Stanford Shopping Center (A)
8:39	8:45	8:51	8:56	9:06	9:11
9:19	9:25	9:30	9:35	9:45	9:50
9:59	10:05	10:10	10:15	10:25	10:30
10:39	10:45	10:50	10:55	11:06	11:12
11:19	11:25	11:30	11:36	11:47	11:53
11:59	**12:05**	**12:10**	**12:16**	**12:27**	**12:33**
12:39	**12:45**	**12:50**	**12:56**	**1:07**	**1:13**
1:19	**1:25**	**1:30**	**1:36**	**1:47**	**1:53**
1:59	**2:05**	**2:10**	**2:16**	**2:28**	**2:34**
2:39	**2:45**	**2:50**	**2:56**	**3:08**	**3:14**
3:19	**3:24**	**3:29**	**3:35**	**3:48**	**3:54**
3:59	**4:04**	**4:09**	**4:15**	**4:28**	**4:34**
4:39	**4:44**	**4:49**	**4:54**	**5:06**	**5:12**
5:19	**5:24**	**5:29**	**5:34**	**5:45**	**5:51**
5:59	**6:04**	**6:09**	**6:14**	**6:25**	**6:31**
6:39	**6:44**	**6:49**	**6:54**	**7:05**	**7:11**

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Weekdays to Onetta Harris Center

Stanford Shopping Center (A)	Palo Alto Transit Center (B)	University/ Woodland (C)	Bay/University (D)	Newbridge/ Saratoga (E)	Onetta Harris Community Center (G)
6:00	6:06	6:15	6:20	6:24	6:30
6:30	6:36	6:45	6:50	6:54	7:00
7:00	7:06	7:15	7:20	7:24	7:30
7:30	7:36	7:45	7:50	7:54	8:00
8:00	8:06	8:15	8:20	8:24	8:30
8:30	8:36	8:45	8:50	8:54	9:00
9:00	9:07	9:16	9:21	9:25	9:31
9:30	9:37	9:47	9:53	9:57	10:03
10:00	10:07	10:17	10:23	10:27	10:33
10:30	10:36	10:46	10:52	10:56	11:03
11:00	11:06	11:16	11:22	11:26	11:33
11:30	11:36	11:46	11:52	11:56	**12:03**
12:00	**12:07**	**12:17**	**12:23**	**12:27**	**12:34**
12:30	**12:37**	**12:48**	**12:54**	**12:58**	**1:05**
1:00	**1:07**	**1:18**	**1:24**	**1:28**	**1:35**
1:30	**1:37**	**1:48**	**1:54**	**1:58**	**2:05**
2:00	**2:07**	**2:19**	**2:25**	**2:29**	**2:36**
2:30	**2:38**	**2:50**	**2:56**	**3:00**	**3:07**
3:00	**3:08**	**3:21**	**3:27**	**3:31**	**3:38**
3:30	**3:38**	**3:51**	**3:57**	**4:01**	**4:08**
4:00	**4:08**	**4:20**	**4:27**	**4:31**	**4:38**
4:23	**4:31**	**4:43**	**4:50**	**4:54**	**5:01**
4:42	**4:50**	**5:02**	**5:09**	**5:13**	**5:20**
5:02	**5:10**	**5:22**	**5:29**	**5:33**	**5:40**
5:22	**5:30**	**5:42**	**5:49**	**5:53**	**6:00**
5:43	**5:51**	**6:03**	**6:09**	**6:13**	**6:20**
6:02	**6:10**	**6:22**	**6:28**	**6:32**	**6:39**
6:30	**6:38**	**6:49**	**6:55**	**6:59**	**7:06**
7:00	**7:08**	**7:19**	**7:25**	**7:29**	**7:36**
7:30	**7:38**	**7:49**	**7:54**	**7:58**	**8:04**
8:00	**8:08**	**8:17**	**8:22**	**8:26**	**8:32**
8:30	**8:38**	**8:47**	**8:52**	**8:56**	**9:02**
9:00	**9:08**	**9:17**	**9:22**	**9:26**	**9:32**
9:30	**9:38**	**9:47**	**9:52**	**9:56**	**10:02**
10:00	**10:08**	**10:17**	**10:22**	**10:26**	**10:32**

AM - light type. **PM - bold type.**
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Weekdays to Stanford Mall

Onetta Harris Community Center (G)	Newbridge/ Willow (F)	Bay/University (D)	University/ Woodland (C)	Palo Alto Transit Center (B)	Stanford Shopping Center (A)
6:10	6:15	6:21	6:26	6:36	6:41
6:40	6:46	6:52	6:57	7:07	7:12
7:10	7:16	7:22	7:27	7:37	7:42
7:40	7:46	7:52	7:57	8:07	8:12
8:10	8:16	8:22	8:27	8:37	8:42
8:40	8:46	8:52	8:57	9:07	9:12
9:10	9:16	9:21	9:26	9:36	9:41
9:40	9:46	9:51	9:56	10:06	10:11
10:10	10:16	10:21	10:26	10:37	10:43
10:40	10:46	10:51	10:56	11:07	11:13
11:10	11:16	11:21	11:27	11:38	11:44
11:40	11:46	11:51	11:57	**12:08**	**12:14**
12:10	**12:16**	**12:21**	**12:27**	**12:38**	**12:44**
12:40	**12:46**	**12:51**	**12:57**	**1:08**	**1:14**
1:10	**1:16**	**1:21**	**1:27**	**1:38**	**1:44**
1:40	**1:46**	**1:51**	**1:57**	**2:08**	**2:14**
2:10	**2:16**	**2:21**	**2:27**	**2:39**	**2:45**
2:40	**2:46**	**2:51**	**2:57**	**3:10**	**3:16**
3:10	**3:15**	**3:20**	**3:26**	**3:39**	**3:45**
3:40	**3:45**	**3:50**	**3:56**	**4:09**	**4:15**
4:00	**4:05**	**4:10**	**4:16**	**4:28**	**4:34**
4:20	**4:25**	**4:30**	**4:36**	**4:48**	**4:54**
4:40	**4:45**	**4:50**	**4:55**	**5:07**	**5:13**
5:03	**5:08**	**5:13**	**5:18**	**5:29**	**5:35**
5:22	**5:27**	**5:32**	**5:37**	**5:48**	**5:54**
5:42	**5:47**	**5:52**	**5:57**	**6:08**	**6:14**
6:12	**6:17**	**6:22**	**6:27**	**6:38**	**6:44**
6:42	**6:47**	**6:52**	**6:57**	**7:08**	**7:14**
7:10	**7:15**	**7:20**	**7:24**	**7:34**	**7:40**
7:40	**7:45**	**7:50**	**7:54**	**8:03**	**8:10**
8:10	**8:15**	**8:20**	**8:24**	**8:33**	**8:40**
8:40	**8:45**	**8:50**	**8:54**	**9:03**	**9:10**
9:10	**9:15**	**9:20**	**9:24**	**9:33**	**9:40**
9:40	**9:45**	**9:50**	**9:54**	**10:03**	**10:10**
10:10	**10:15**	**10:20**	**10:24**	**10:33**	**10:40**

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Fares

	Local Cash	Day Pass*
Adult ..... Age 19 – 64	$2.25	$4.50
Youth ..... Age 18 and younger	$1.10	$2.00
Eligible Discount .... Age 65+, disabled & Medicare cardholder (proof of eligibility or identity required)	$1.10	$2.00

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Caltrain Connection

296

Effective 04/26/20

Redwood City
- Caltrain
- Transit Center
- City Hall
- Library

Menlo Park
- Library
- City Hall
- Caltrain
- VA Medical Center

East Palo Alto
- Library
- City Hall
- Post Office

Palo Alto
- Caltrain
- Transit Center

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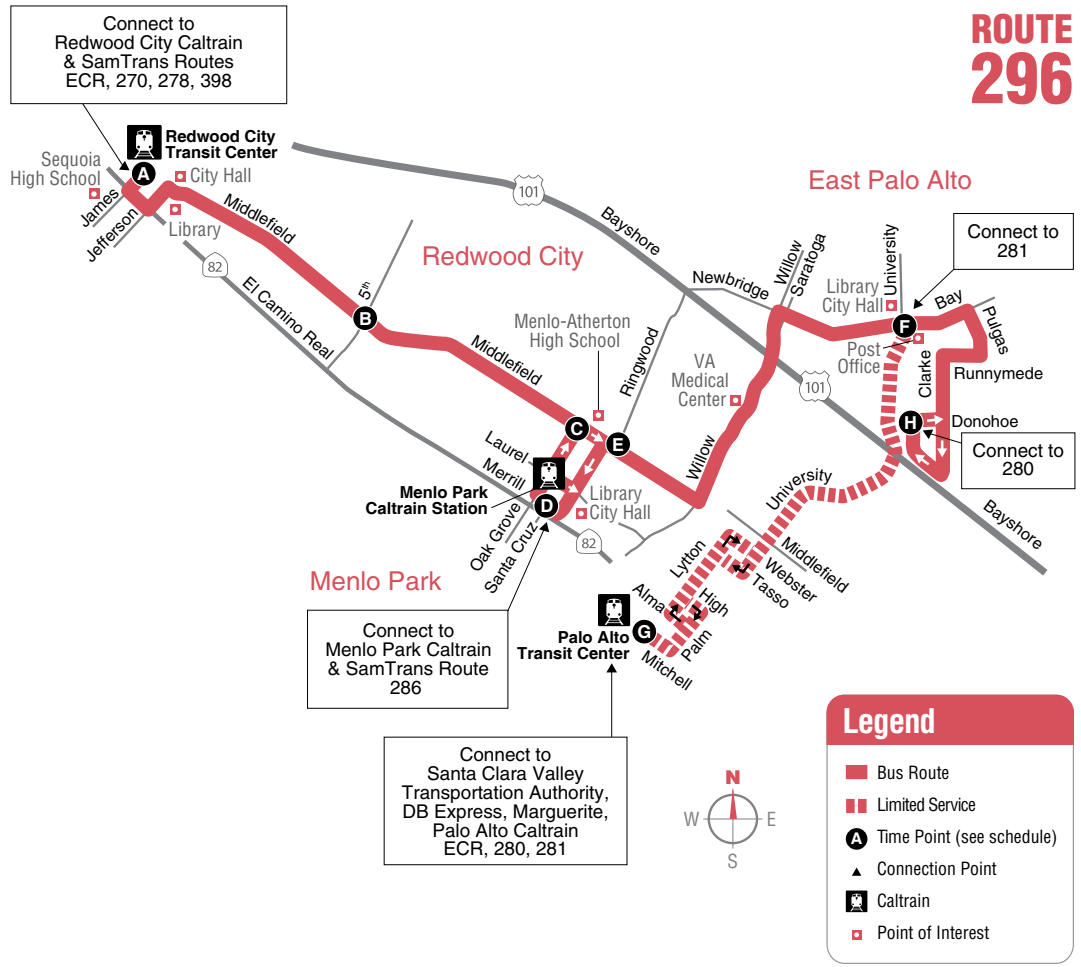
ROUTE 296



How to Use this Timetable:

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To Redwood City Transit Center

Bayshore/ Donohoe (H)	Palo Alto Transit Center (G)	Bay/ University (F)	Middlefield/ Ringwood (E)	Merrill/ Santa Cruz (D)	Middlefield/ 5th (B)	Redwood City Transit Center (A)
—	3:45	3:59	4:14	—	4:20	4:26
—	4:45	4:59	5:14	—	5:20	5:26
—	5:45	5:59	6:14	—	6:20	6:26
—	6:45	6:59	7:14	—	7:20	7:26
—	7:45	7:59	8:14	—	8:20	8:26
8:47	—	8:54	9:07	9:11	9:19	9:30
9:46	—	9:53	10:06	10:10	10:18	10:30
10:45	—	10:51	11:05	11:09	11:17	11:30
11:43	—	11:49	**12:04**	**12:08**	**12:17**	**12:30**
12:43	**—**	**12:49**	**1:04**	**1:08**	**1:17**	**1:30**
1:45	**—**	**1:51**	**2:05**	**2:09**	**2:17**	**2:30**
2:45	**—**	**2:51**	**3:05**	**3:09**	**3:17**	**3:30**
3:46	**—**	**3:52**	**4:06**	**4:10**	**4:18**	**4:30**
4:46	**—**	**4:52**	**5:06**	**5:10**	**5:18**	**5:30**
5:49	**—**	**5:55**	**6:07**	**6:11**	**6:18**	**6:30**
6:46	**—**	**6:52**	**7:03**	**7:06**	**7:13**	**7:23**
—	**7:45**	**7:59**	**8:14**	**—**	**8:20**	**8:26**
—	**8:45**	**8:59**	**9:14**	**—**	**9:20**	**9:26**
—	**9:45**	**9:59**	**10:14**	**—**	**10:20**	**10:26**
—	**10:45**	**10:59**	**11:14**	**—**	**11:20**	**11:26**
—	**11:45**	**11:59**	12:14	—	12:20	12:26

AM - light type. **PM - bold type.** Red type – Late Night and Early AM 296 trips DO NOT serve Menlo Park Caltrain. These trips serve Palo Alto Caltrain Via University Ave.
Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.

To Palo Alto Transit Center

Redwood City Transit Center (A)	Middlefield/ 5th (B)	Middlefield/ Oak Grove (C)	Merrill/ Santa Cruz (D)	Bay/ University (F)	Bayshore/ Donohoe (H)	Palo Alto Transit Center (G)
6:43	6:54	6:59	—	7:11	—	7:21
7:43	7:54	7:59	8:03	8:21	8:26	—
8:43	8:54	8:59	9:03	9:21	9:26	—
9:45	9:57	10:02	10:06	10:25	10:31	—
10:45	10:57	11:03	11:07	11:27	11:33	—
11:45	11:57	**12:03**	**12:07**	**12:27**	**12:33**	**—**
12:45	**12:59**	**1:05**	**1:09**	**1:29**	**1:36**	**—**
1:45	**1:59**	**2:05**	**2:09**	**2:29**	**2:36**	**—**
2:45	**2:59**	**3:05**	**3:09**	**3:29**	**3:36**	**—**
3:45	**4:00**	**4:06**	**4:10**	**4:30**	**4:37**	**—**
4:45	**4:59**	**5:05**	**5:09**	**5:27**	**5:34**	**—**
5:45	**5:59**	**6:05**	**6:09**	**6:27**	**6:34**	**—**
6:45	**6:58**	**7:04**	**—**	**7:16**	**—**	**7:26**
7:43	**7:53**	**7:58**	**—**	**8:10**	**—**	**8:20**
8:43	**8:53**	**8:58**	**—**	**9:10**	**—**	**9:20**
9:43	**9:53**	**9:58**	**—**	**10:10**	**—**	**10:20**
10:43	**10:53**	**10:58**	**—**	**11:10**	**—**	**11:20**
11:43	**11:53**	**11:58**	—	12:10	—	12:20
12:43	12:53	12:58	—	1:10	—	1:20
1:43	1:53	1:58	—	2:10	—	2:20

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BART/Caltrain Connection

397

Effective 01/19/20

ALL NIGHTER

San Francisco
- The Embarcadero & Ferry Building
- Mission/1st
- 11th/Market

Brisbane
- Park & Ride

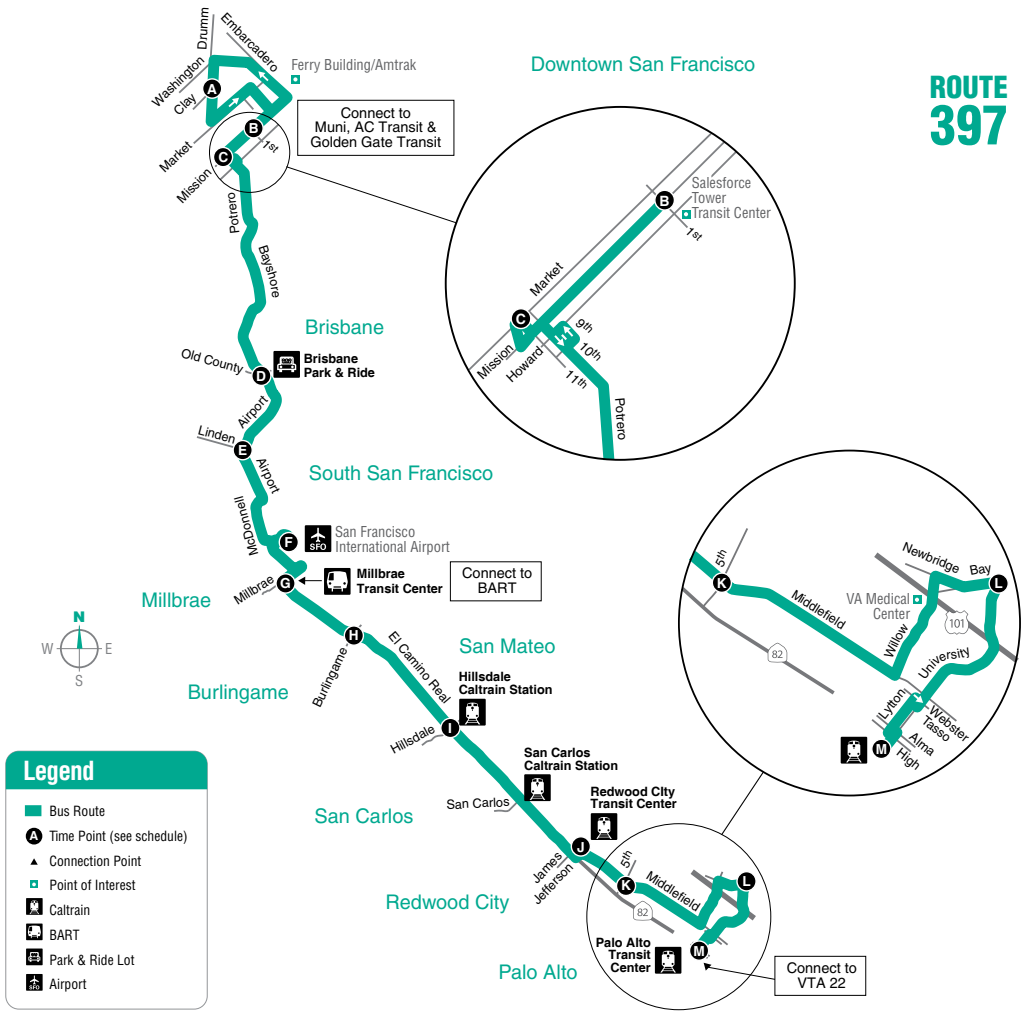
South San Francisco
San Francisco Int'l Airport
Millbrae
- Millbrae Transit Center

Burlingame
San Mateo
- Hillsdale Caltrain

San Carlos
- Caltrain

Redwood City
- Caltrain
- Transit Center

Palo Alto
- Caltrain
- Transit Center



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(TTY 650-508-6448)

www.samtrans.com

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To San Francisco

Palo Alto Transit Center (M)	Bay/ University (L)	Middlefield/ 5th (K)	Redwood City Transit Center (J)	El Camino/ Hillsdale (I)	El Camino/ Burlingame (H)	Millbrae Transit Center (G)	SF Airport Courtyard A (F)	Airport/ Linden (E)	Bayshore/ Old County (D)	Drumm/ Clay (A)
12:46	12:59	1:14	1:23	1:35	1:45	1:55	2:04	2:18	2:24	3:09
1:46	1:59	2:14	2:23	2:35	2:45	2:55	3:04	3:18	3:24	4:09
2:46	2:59	3:14	3:23	3:35	3:45	3:55	4:04	4:18	4:24	5:09

Northbound service is drop off only in San Francisco.

To Palo Alto Transit Center

Drumm/ Clay (A)	Mission/ 1st (B)	11th/ Market (C)	Bayshore/ Old County (D)	Airport/ Linden (E)	SF Airport Courtyard A (F)	Millbrae Transit Center (G)	El Camino/ Burlingame (H)	El Camino/ Hillsdale (I)	Redwood City Transit Center (J)	Middlefield/ 5th (K)	Bay/ University (L)	Palo Alto Transit Center (M)
1:08	1:15	1:24	1:46	1:53	2:06	2:17	2:25	2:36	2:53	3:01	3:17	3:32
2:08	2:15	2:24	2:46	2:53	3:06	3:17	3:25	3:36	3:53	4:01	4:17	4:32
3:08	3:15	3:24	3:46	3:53	4:06	4:17	4:25	4:36	4:53	5:01	5:17	5:32
4:08	4:15	4:24	4:46	4:53	5:06	5:17	5:25	5:36	5:53	6:01	6:17	6:32

Southbound service is pick-up only in San Francisco.

Route 397 does not operate mid-day or in the evening.

AM - light type. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown. Please call 1-800-660-4287 for other bus stops.

SOUTHBOUND Weekdays to Palo Alto Transit Center

Daly City BART (L)	Mission/ Wellington (K)	Colma BART (J)	El Camino/ McLellan (I)	San Bruno BART (H)	SF Airport* Courtyard A (G)	El Camino/ Victoria (F)	El Camino/ 4th (E)	El Camino/ Hillsdale (D)	El Camino/ San Carlos (C)	Redwood City Transit Center (B)	Palo Alto Transit Ctr (A)
—	4:16	—	4:26	—	4:42	—	—	—	—	—	—
—	—	—	—	—	—	—	—	5:05	5:17	5:26	5:43
—	—	—	—	—	—	—	—	—	5:39	5:48	6:05
4:40	—	4:57	5:05	5:16	—	5:28	5:43	5:51	6:03	6:12	6:29
4:55	—	5:12	5:20	5:31	—	5:43	5:58	6:06	6:18	6:27	6:44
5:10	—	5:27	5:35	5:46	—	5:58	6:13	6:21	6:33	6:42	6:59
5:25	—	5:42	5:50	6:01	—	6:13	6:28	6:36	6:48	6:57	7:14
5:41	—	5:58	6:06	6:17	—	6:29	6:44	6:52	7:04	7:13	7:30
5:56	—	6:13	6:21	6:32	—	6:44	6:59	7:07	7:19	7:28	7:45
6:08	—	6:24	6:32	6:44	—	6:57	7:12	7:20	7:32	7:41	8:00
6:21	—	6:38	6:46	6:58	—	7:11	7:26	7:34	7:46	7:56	8:15
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6:47	—	7:04	7:12	7:24	—	7:37	7:53	8:02	8:14	8:24	8:43
7:00	—	7:18	7:26	7:38	—	7:52	8:08	8:17	8:29	8:39	9:00
7:13	—	7:31	7:39	7:51	—	8:05	8:21	8:30	8:42	8:52	9:13
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10:43	—	11:03	11:14	11:29	—	11:44	**12:03**	**12:14**	**12:27**	**12:41**	**1:05**
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11:28	—	11:49	**12:00**	**12:16**	—	**12:31**	**12:50**	**1:02**	**1:15**	**1:29**	**1:53**
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11:58	—	**12:19**	**12:30**	**12:46**	—	**1:02**	**1:21**	**1:33**	**1:46**	**2:00**	**2:24**
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12:28	—	**12:49**	**1:01**	**1:17**	—	**1:33**	**1:51**	**2:03**	**2:16**	**2:30**	**2:54**
12:42	—	**1:03**	**1:15**	**1:31**	—	**1:47**	**2:05**	**2:17**	**2:30**	**2:44**	**3:08**
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4:35	—	**4:56**	**5:07**	**5:22**	—	**5:36**	**5:52**	**6:03**	**6:16**	**6:26**	**6:48**
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5:21	—	**5:41**	**5:52**	**6:07**	—	**6:21**	**6:36**	**6:45**	**6:58**	**7:08**	**7:30**
5:37	—	**5:57**	**6:08**	**6:23**	—	**6:37**	**6:52**	**7:01**	**7:14**	**7:23**	**7:43**
5:53	—	**6:13**	**6:24**	**6:39**	—	**6:53**	**7:08**	**7:17**	**7:30**	**7:39**	**7:59**
6:09	—	**6:29**	**6:40**	**6:55**	—	**7:09**	**7:24**	**7:33**	**7:46**	**7:55**	**8:15**
6:24	—	**6:44**	**6:55**	**7:10**	—	**7:24**	**7:39**	**7:48**	**8:01**	**8:10**	**8:30**
6:43	—	**7:02**	**7:13**	**7:28**	—	**7:42**	**7:57**	**8:05**	**8:18**	**8:27**	**8:46**
7:03	—	**7:22**	**7:32**	**7:46**	—	**8:00**	**8:15**	**8:23**	**8:36**	**8:44**	**9:03**
7:23	—	**7:42**	**7:52**	**8:06**	—	**8:20**	**8:35**	**8:43**	**8:56**	**9:04**	**9:23**
7:43	—	**8:01**	**8:11**	**8:25**	—	**8:39**	**8:54**	**9:02**	**9:15**	**9:23**	**9:42**
8:13	—	**8:31**	**8:40**	**8:53**	—	**9:07**	**9:22**	**9:30**	**9:43**	**9:51**	**10:09**
8:43	—	**9:01**	**9:10**	**9:23**	—	**9:37**	**9:52**	**10:00**	**10:12**	**10:19**	**10:37**
9:13	—	**9:31**	**9:40**	**9:53**	—	**10:06**	**10:21**	**10:29**	**10:41**	**10:48**	**11:05**
9:43	—	**10:00**	**10:09**	**10:21**	—	**10:34**	**10:49**	**10:52**	**11:02**	**11:14**	**11:31**
10:13	—	**10:30**	**10:39**	**10:51**	—	**11:04**	**11:19**	**11:26**	**11:37**	**11:44**	**12:00**
10:43	—	**10:58**	**11:06**	**11:17**	—	**11:30**	**11:45**	**11:52**	12:03	12:10	12:26
11:13	—	**11:28**	**11:36**	**11:47**	—	**11:59**	12:13	12:20	12:31	12:38	12:54
11:43	—	**11:57**	12:05	12:16	—	12:28	12:42	12:48	12:59	1:06	1:21
12:13	—	12:27	12:35	12:46	—	12:57	1:10	1:16	1:27	1:34	1:49
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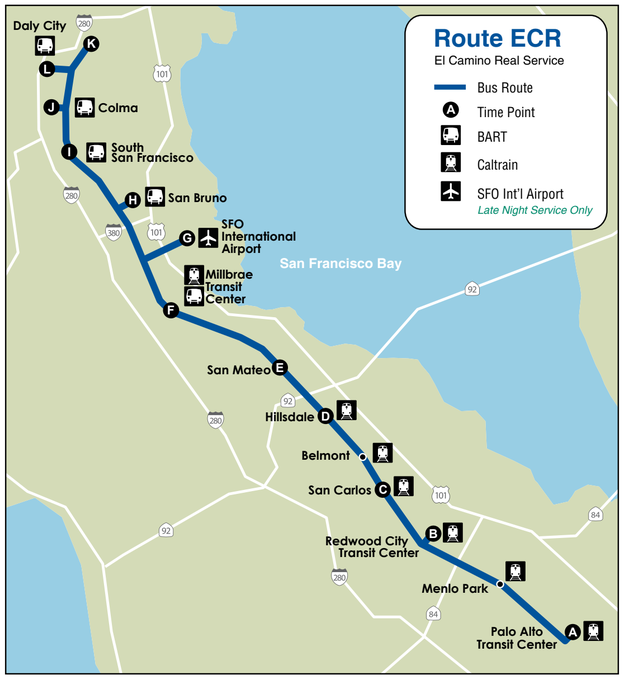
—	2:16	—	2:26	—	2:42	—	—	—	—	—	—
—	3:16	—	3:26	—	3:42	—	—	—	—	—	—

AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM).
*Stops on lower (arrival) level curbside at Courtyard A, on the center island at Terminal 2, curbside at Terminal 3 & Courtyard G. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.



Fares

	Local Cash	Day Pass*
Adult Age 19 – 64	$2.25	$4.50
Youth Age 18 and younger	$1.10	$2.00
Eligible Discount Age 65+, disabled & Medicare cardholder (proof of eligibility or identity required)	$1.10	$2.00

Children
Two children (age 4 and younger) ride free with each adult or eligible discount fare-paying passenger. Additional children subject to youth fare.

* **Purchase at farebox or SamTrans Mobile App. Info at www.samtrans.com/daypass**

Exact fare please. Driver does not make change.

Use Clipper® and receive a discount. Free 2-hour transfers between local SamTrans routes on Clipper or SamTrans Mobile App.

Monthly passes are available on Clipper.

For more details about fare payments, visit **www.samtrans.com/fares**

samTrans
El Camino Real

Daly City
Colma
South San Francisco
San Bruno
Millbrae
Burlingame
San Mateo
Belmont
San Carlos
Redwood City
Menlo Park
Palo Alto

Key Destinations:
BART stations, Caltrain stations, shopping centers and downtowns along El Camino Real

ECR

Effective 08/16/20

Information/Información
1-800-660-4287
(TTY 650-508-6448)
www.samtrans.com
samTrans

SOUTHBOUND Saturdays to Palo Alto Transit Center

Daly City BART (L)	Mission/ Wellington (K)	Colma BART (J)	El Camino/ McLellan (I)	San Bruno BART (H)	SF Airport* Courtyard A (G)	El Camino/ Victoria (F)	El Camino/ 4th (E)	El Camino/ Hillsdale (D)	El Camino/ San Carlos (C)	Redwood City Transit Center (B)	Palo Alto Transit Ctr (A)
—	4:16	—	4:26	—	4:42	—	—	—	—	—	—
—	5:16	—	5:26	—	5:42	—	—	—	—	—	—
5:41	—	5:58	6:06	6:17	—	6:29	6:44	6:52	7:04	7:13	7:30
6:10	—	6:27	6:35	6:46	—	6:59	7:14	7:22	7:34	7:43	8:02
6:29	—	6:46	6:54	7:06	—	7:19	7:34	7:42	7:54	8:04	8:23
6:50	—	7:07	7:15	7:27	—	7:40	7:56	8:05	8:17	8:27	8:46
7:09	—	7:27	7:35	7:47	—	8:01	8:17	8:26	8:38	8:48	9:09
7:26	—	7:44	7:53	8:05	—	8:19	8:35	8:44	8:56	9:07	9:28
7:45	—	8:04	8:13	8:25	—	8:39	8:55	9:05	9:17	9:28	9:49
8:04	—	8:23	8:32	8:44	—	8:58	9:15	9:25	9:37	9:48	10:10
8:20	—	8:39	8:48	9:02	—	9:16	9:33	9:43	9:56	10:10	10:32
8:37	—	8:56	9:06	9:20	—	9:34	9:51	10:02	10:15	10:29	10:51
8:54	—	9:14	9:24	9:38	—	9:52	10:10	10:21	10:34	10:48	11:11
9:13	—	9:33	9:43	9:57	—	10:11	10:29	10:40	10:53	11:07	11:30
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11:42	—	**12:03**	**12:14**	**12:30**	—	**12:46**	**1:05**	**1:17**	**1:30**	**1:44**	**2:08**
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AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM). Trip ends at SFO Airport Courtyard G
*Stops on lower (arrival) level curbside at Courtyard A, on the center island at Terminal 2, curbside at Terminal 3 & Courtyard G. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown. Please call 1-800-660-4287 for other bus stops.

SOUTHBOUND Sundays to Palo Alto Transit Center

Daly City BART (L)	Mission/ Wellington (K)	Colma BART (J)	El Camino/ McLellan (I)	San Bruno BART (H)	SF Airport* Courtyard A (G)	El Camino/ Victoria (F)	El Camino/ 4th (E)	El Camino/ Hillsdale (D)	El Camino/ San Carlos (C)	Redwood City Transit Center (B)	Palo Alto Transit Ctr (A)
—	4:16	—	4:26	—	4:42	—	—	—	—	—	—
—	5:16	—	5:26	—	5:42	—	—	—	—	—	—
5:41	—	5:57	6:05	6:17	—	6:28	6:43	6:51	7:02	7:12	7:30
6:11	—	6:27	6:35	6:47	—	6:58	7:13	7:21	7:32	7:42	8:00
6:29	—	6:45	6:53	7:05	—	7:18	7:34	7:42	7:53	8:03	8:22
6:47	—	7:03	7:12	7:24	—	7:37	7:53	8:01	8:14	8:25	8:44
7:05	—	7:22	7:31	7:43	—	7:56	8:13	8:21	8:34	8:45	9:04
7:24	—	7:42	7:51	8:03	—	8:16	8:33	8:41	8:54	9:05	9:24
7:42	—	8:00	8:09	8:23	—	8:36	8:53	9:01	9:14	9:25	9:44
8:00	—	8:19	8:28	8:42	—	8:55	9:12	9:20	9:33	9:45	10:04
8:17	—	8:36	8:45	8:59	—	9:12	9:30	9:39	9:52	10:04	10:23
8:33	—	8:52	9:01	9:15	—	9:28	9:47	9:56	10:09	10:21	10:40
8:49	—	9:08	9:17	9:31	—	9:46	10:05	10:14	10:27	10:41	11:00
9:09	—	9:28	9:38	9:52	—	10:07	10:26	10:35	10:48	11:02	11:21
9:27	—	9:47	9:57	10:11	—	10:26	10:46	10:55	11:08	11:22	11:43
9:47	—	10:07	10:17	10:31	—	10:46	11:06	11:15	11:28	11:42	**12:03**
10:05	—	10:25	10:35	10:50	—	11:05	11:25	11:35	11:48	**12:02**	**12:23**
10:24	—	10:45	10:55	11:10	—	11:25	11:45	11:55	**12:08**	**12:22**	**12:43**
10:44	—	11:05	11:15	11:30	—	11:45	**12:05**	**12:15**	**12:28**	**12:42**	**1:03**
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11:41	—	**12:03**	**12:14**	**12:29**	—	**12:44**	**1:04**	**1:15**	**1:28**	**1:42**	**2:03**
12:00	—	**12:22**	**12:33**	**12:48**	—	**1:03**	**1:23**	**1:34**	**1:47**	**2:01**	**2:23**
12:20	—	**12:42**	**12:53**	**1:08**	—	**1:23**	**1:43**	**1:54**	**2:07**	**2:20**	**2:42**
12:40	—	**1:02**	**1:13**	**1:28**	—	**1:43**	**2:03**	**2:13**	**2:26**	**2:39**	**3:01**
1:00	—	**1:22**	**1:33**	**1:48**	—	**2:03**	**2:23**	**2:33**	**2:46**	**2:59**	**3:21**
1:20	—	**1:42**	**1:53**	**2:08**	—	**2:23**	**2:43**	**2:53**	**3:06**	**3:19**	**3:41**
1:40	—	**2:02**	**2:13**	**2:28**	—	**2:43**	**3:03**	**3:13**	**3:26**	**3:39**	**4:01**
2:00	—	**2:22**	**2:33**	**2:48**	—	**3:03**	**3:22**	**3:32**	**3:45**	**3:58**	**4:20**
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2:40	—	**3:02**	**3:12**	**3:27**	—	**3:42**	**4:01**	**4:11**	**4:24**	**4:37**	**4:59**
3:00	—	**3:22**	**3:32**	**3:47**	—	**4:02**	**4:20**	**4:30**	**4:43**	**4:56**	**5:18**
3:20	—	**3:42**	**3:52**	**4:07**	—	**4:22**	**4:40**	**4:50**	**5:03**	**5:15**	**5:37**
3:40	—	**4:02**	**4:12**	**4:27**	—	**4:42**	**5:00**	**5:10**	**5:22**	**5:34**	**5:56**
4:00	—	**4:21**	**4:31**	**4:46**	—	**5:01**	**5:19**	**5:29**	**5:41**	**5:53**	**6:14**
4:20	—	**4:41**	**4:51**	**5:06**	—	**5:20**	**5:38**	**5:48**	**6:00**	**6:11**	**6:31**
4:40	—	**5:01**	**5:11**	**5:26**	—	**5:40**	**5:58**	**6:08**	**6:20**	**6:31**	**6:51**
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5:40	—	**6:00**	**6:09**	**6:23**	—	**6:37**	**6:53**	**7:03**	**7:15**	**7:26**	**7:45**
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6:18	—	**6:37**	**6:46**	**7:00**	—	**7:14**	**7:30**	**7:39**	**7:50**	**8:00**	**8:19**
6:37	—	**6:56**	**7:05**	**7:19**	—	**7:33**	**7:49**	**7:58**	**8:09**	**8:19**	**8:38**
7:01	—	**7:20**	**7:29**	**7:42**	—	**7:56**	**8:12**	**8:21**	**8:31**	**8:41**	**8:59**
7:34	—	**7:53**	**8:02**	**8:15**	—	**8:29**	**8:44**	**8:52**	**9:02**	**9:12**	**9:30**
8:04	—	**8:23**	**8:32**	**8:44**	—	**8:58**	**9:13**	**9:21**	**9:31**	**9:41**	**9:58**
8:34	—	**8:53**	**9:02**	**9:14**	—	**9:28**	**9:43**	**9:51**	**10:00**	**10:09**	**10:26**
9:03	—	**9:22**	**9:31**	**9:43**	—	**9:57**	**10:12**	**10:20**	**10:29**	**10:38**	**10:55**
9:36	—	**9:54**	**10:02**	**10:14**	—	**10:28**	**10:43**	**10:51**	**11:00**	**11:09**	**11:26**
10:06	—	**10:24**	**10:32**	**10:44**	—	**10:58**	**11:13**	**11:20**	**11:29**	**11:37**	**11:51**
10:37	—	**10:55**	**11:03**	**11:15**	—	**11:29**	**11:42**	**11:49**	**11:58**	12:06	12:20
11:09	—	**11:27**	**11:35**	**11:47**	—	**11:59**	12:12	12:19	12:28	12:36	12:49
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12:12	—	12:28	12:36	12:48	—	12:59	1:12	1:18	1:27	1:35	1:48
12:42	—	12:58	1:06	1:18	—	1:29	1:42	1:48	1:57	2:05	2:18
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—	2:16	—	2:26	—	2:42	—	—	—	—	—	—
—	3:16	—	3:26	—	3:42	—	—	—	—	—	—

AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM). Trip ends at SFO Airport Courtyard G.
*Stops on lower (arrival) level curbside at Courtyard A, on the center island at Terminal 2, curbside at Terminal 3 & Courtyard G. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown. Please call 1-800-660-4287 for other bus stops.

NORTHBOUND Weekdays to Daly City BART

Palo Alto Transit Center (A)	Redwood City Transit Center (B)	El Camino/ San Carlos (C)	El Camino/ Hillsdale (D)	El Camino/ 5th (E)	El Camino/ Linden (F)	SF Airport* Courtyard A (G)	San Bruno BART (H)	El Camino/ McLellan (I)	Colma BART (J)	Mission/ Wellington (K)	Daly City BART (L)
—	—	—	—	—	—	4:42	—	4:58	—	5:10	—
4:06	4:21	4:29	4:37	4:43	4:55	—	5:13	5:20	5:26	5:32	5:38
4:36	4:51	4:59	5:07	5:13	5:25	—	5:43	5:50	5:56	6:02	6:08
—	—	—	—	—	5:44	—	6:02	6:11	6:17	6:23	6:29
5:02	5:17	5:25	5:33	5:39	5:51	—	6:09	6:18	6:24	6:30	6:36
5:17	5:32	5:40	5:48	5:54	6:06	—	6:24	6:33	6:39	6:45	6:51
5:27	5:42	5:50	5:58	6:04	6:16	—	6:34	6:43	6:49	6:55	7:01
5:45	6:00	6:08	6:16	6:22	6:36	—	6:57	7:06	7:12	7:18	7:24
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6:00	6:15	6:23	6:31	6:37	6:51	—	7:12	7:21	7:27	7:34	7:41
6:15	6:30	6:38	6:46	6:52	7:06	—	7:27	7:36	7:42	7:49	7:56
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6:43	6:59	7:07	7:15	7:21	7:35	—	7:58	8:07	8:13	8:20	8:27
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7:26	7:44	7:53	8:02	8:09	8:24	—	8:48	8:58	9:05	9:13	9:20
7:41	7:59	8:08	8:17	8:24	8:41	—	9:05	9:15	9:22	9:30	9:37
7:55	8:13	8:22	8:31	8:38	8:55	—	9:19	9:29	9:36	9:44	9:51
8:09	8:27	8:37	8:47	8:54	9:11	—	9:35	9:45	9:52	10:00	10:07
8:23	8:42	8:52	9:02	9:09	9:26	—	9:50	10:00	10:07	10:15	10:22
8:38	8:57	9:07	9:17	9:24	9:41	—	10:06	10:16	10:23	10:31	10:38
8:52	9:11	9:21	9:31	9:38	9:55	—	10:20	10:30	10:37	10:45	10:52
9:06	9:25	9:35	9:45	9:54	10:12	—	10:37	10:47	10:54	11:02	11:09
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9:35	9:54	10:04	10:16	10:25	10:43	—	11:08	11:18	11:25	11:34	11:42
9:50	10:10	10:22	10:34	10:43	11:01	—	11:26	11:36	11:43	11:52	**12:00**
10:05	10:25	10:37	10:49	10:58	11:16	—	11:42	11:52	11:59	**12:08**	**12:16**
10:20	10:40	10:52	11:04	11:13	11:31	—	11:57	**12:07**	**12:14**	**12:23**	**12:31**
10:35	10:55	11:07	11:19	11:28	11:46	—	**12:12**	**12:22**	**12:29**	**12:38**	**12:46**
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11:05	11:25	11:37	11:50	**12:01**	**12:19**	—	**12:45**	**12:55**	**1:02**	**1:11**	**1:19**
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11:35	11:57	**12:09**	**12:22**	**12:33**	**12:51**	—	**1:18**	**1:29**	**1:37**	**1:46**	**1:54**
11:50	**12:13**	**12:25**	**12:38**	**12:49**	**1:07**	—	**1:34**	**1:45**	**1:53**	**2:02**	**2:10**
12:05	**12:28**	**12:40**	**12:53**	**1:04**	**1:22**	—	**1:49**	**2:00**	**2:08**	**2:17**	**2:25**
12:19	**12:42**	**12:54**	**1:07**	**1:18**	**1:36**	—	**2:03**	**2:14**	**2:22**	**2:31**	**2:39**
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1:44	**2:07**	**2:20**	**2:33**	**2:44**	**3:02**	—	**3:29**	**3:40**	**3:48**	**3:57**	**4:05**
1:59	**2:23**	**2:36**	**2:49**	**3:00**	**3:18**	—	**3:45**	**3:56**	**4:04**	**4:13**	**4:21**
2:14	**2:38**	**2:51**	**3:04**	**3:15**	**3:33**	—	**4:00**	**4:11**	**4:19**	**4:28**	**4:36**
2:29	**2:53**	**3:06**	**3:18**	**3:29**	**3:47**	—	**4:14**	**4:25**	**4:34**	**4:43**	**4:51**
2:44	**3:08**	**3:21**	**3:33**	**3:44**	**4:02**	—	**4:28**	**4:39**	**4:48**	**4:57**	**5:05**
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3:14	**3:38**	**3:51**	**4:03**	**4:14**	**4:32**	—	**4:58**	**5:09**	**5:18**	**5:27**	**5:35**
3:29	**3:53**	**4:06**	**4:18**	**4:28**	**4:46**	—	**5:12**	**5:23**	**5:32**	**5:41**	**5:49**
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AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM).
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NORTHBOUND Saturdays to Daly City BART

Palo Alto Transit Center (A)	Redwood City Transit Center (B)	El Camino/ San Carlos (C)	El Camino/ Hillsdale (D)	El Camino/ 5th (E)	El Camino/ Linden (F)	SF Airport* Courtyard A (G)	San Bruno BART (H)	El Camino/ McLellan (I)	Colma BART (J)	Mission/ Wellington (K)	Daly City BART (L)
—	—	—	—	—	—	4:42	—	4:58	—	5:10	—
4:47	5:02	5:10	5:18	5:24	5:36	—	5:54	6:01	6:07	6:13	6:19
5:16	5:31	5:39	5:47	5:53	6:05	—	6:23	6:32	6:38	6:44	6:50
5:44	5:59	6:07	6:15	6:21	6:35	—	6:53	7:02	7:08	7:14	7:20
6:09	6:24	6:32	6:40	6:46	7:00	—	7:21	7:30	7:36	7:43	7:50
6:35	6:51	6:59	7:07	7:13	7:27	—	7:50	7:59	8:05	8:12	8:19
6:51	7:07	7:16	7:25	7:32	7:47	—	8:10	8:19	8:25	8:33	8:40
7:11	7:27	7:36	7:45	7:52	8:07	—	8:30	8:40	8:47	8:55	9:02
7:28	7:46	7:55	8:04	8:11	8:26	—	8:50	9:00	9:07	9:15	9:22
7:46	8:04	8:13	8:22	8:29	8:46	—	9:10	9:20	9:27	9:35	9:42
8:04	8:22	8:32	8:42	8:49	9:06	—	9:30	9:40	9:47	9:55	10:02
8:23	8:42	8:52	9:02	9:09	9:26	—	9:50	10:00	10:07	10:15	10:22
8:42	9:01	9:11	9:21	9:28	9:45	—	10:10	10:20	10:27	10:35	10:42
9:00	9:19	9:29	9:39	9:48	10:06	—	10:31	10:41	10:48	10:56	11:03
9:18	9:37	9:47	9:59	10:08	10:26	—	10:51	11:01	11:08	11:16	11:23
9:37	9:56	10:06	10:18	10:27	10:45	—	11:10	11:20	11:27	11:36	11:44
9:55	10:15	10:27	10:39	10:48	11:06	—	11:31	11:41	11:48	11:57	**12:05**
10:15	10:35	10:47	10:59	11:08	11:26	—	11:52	**12:02**	**12:09**	**12:18**	**12:26**
10:36	10:56	11:08	11:20	11:29	11:47	—	**12:13**	**12:23**	**12:30**	**12:39**	**12:47**
10:54	11:14	11:26	11:39	11:50	**12:08**	—	**12:34**	**12:44**	**12:51**	**1:00**	**1:08**
11:13	11:33	11:45	11:58	**12:09**	**12:27**	—	**12:53**	**1:03**	**1:10**	**1:19**	**1:27**
11:32	11:54	**12:06**	**12:19**	**12:30**	**12:48**	—	**1:15**	**1:26**	**1:34**	**1:43**	**1:51**
11:51	**12:14**	**12:26**	**12:39**	**12:50**	**1:08**	—	**1:35**	**1:46**	**1:54**	**2:03**	**2:11**
12:10	**12:33**	**12:45**	**12:58**	**1:09**	**1:27**	—	**1:54**	**2:05**	**2:13**	**2:22**	**2:30**
12:30	**12:53**	**1:06**	**1:19**	**1:30**	**1:48**	—	**2:15**	**2:26**	**2:34**	**2:43**	**2:51**
12:50	**1:13**	**1:26**	**1:39**	**1:50**	**2:08**	—	**2:35**	**2:46**	**2:54**	**3:03**	**3:11**
1:10	**1:33**	**1:46**	**1:59**	**2:10**	**2:28**	—	**2:55**	**3:06**	**3:14**	**3:23**	**3:31**
1:30	**1:53**	**2:06**	**2:19**	**2:30**	**2:48**	—	**3:15**	**3:26**	**3:34**	**3:43**	**3:51**
1:50	**2:14**	**2:27**	**2:40**	**2:51**	**3:09**	—	**3:36**	**3:47**	**3:55**	**4:04**	**4:12**
2:10	**2:34**	**2:47**	**3:00**	**3:11**	**3:29**	—	**3:56**	**4:07**	**4:15**	**4:24**	**4:32**
2:30	**2:54**	**3:07**	**3:19**	**3:30**	**3:48**	—	**4:14**	**4:25**	**4:34**	**4:43**	**4:51**
2:50	**3:14**	**3:27**	**3:39**	**3:50**	**4:08**	—	**4:34**	**4:45**	**4:54**	**5:03**	**5:11**
3:10	**3:34**	**3:47**	**3:59**	**4:10**	**4:28**	—	**4:54**	**5:05**	**5:14**	**5:23**	**5:31**
3:30	**3:54**	**4:06**	**4:18**	**4:28**	**4:46**	—	**5:12**	**5:23**	**5:32**	**5:41**	**5:49**
3:50	**4:14**	**4:26**	**4:38**	**4:48**	**5:06**	—	**5:32**	**5:43**	**5:52**	**6:01**	**6:09**
4:10	**4:34**	**4:46**	**4:58**	**5:08**	**5:26**	—	**5:52**	**6:03**	**6:12**	**6:20**	**6:28**
4:30	**4:53**	**5:04**	**5:16**	**5:26**	**5:44**	—	**6:10**	**6:21**	**6:30**	**6:38**	**6:46**
4:50	**5:13**	**5:24**	**5:36**	**5:46**	**6:04**	—	**6:30**	**6:41**	**6:50**	**6:58**	**7:06**
5:10	**5:33**	**5:44**	**5:56**	**6:06**	**6:23**	—	**6:47**	**6:58**	**7:07**	**7:15**	**7:22**
5:30	**5:53**	**6:03**	**6:13**	**6:22**	**6:39**	—	**7:03**	**7:13**	**7:21**	**7:29**	**7:36**
5:50	**6:12**	**6:22**	**6:32**	**6:41**	**6:58**	—	**7:22**	**7:32**	**7:40**	**7:48**	**7:55**
6:10	**6:32**	**6:42**	**6:52**	**7:01**	**7:18**	—	**7:42**	**7:52**	**8:00**	**8:08**	**8:15**
6:30	**6:52**	**7:02**	**7:12**	**7:21**	**7:38**	—	**8:02**	**8:12**	**8:20**	**8:27**	**8:33**
6:50	**7:12**	**7:22**	**7:32**	**7:41**	**7:58**	—	**8:22**	**8:32**	**8:40**	**8:47**	**8:53**
7:20	**7:41**	**7:51**	**8:01**	**8:10**	**8:27**	—	**8:51**	**9:00**	**9:07**	**9:14**	**9:20**
7:50	**8:11**	**8:21**	**8:31**	**8:40**	**8:56**	—	**9:17**	**9:26**	**9:33**	**9:40**	**9:46**
8:20	**8:40**	**8:50**	**8:59**	**9:06**	**9:22**	—	**9:43**	**9:52**	**9:59**	**10:06**	**10:12**
8:50	**9:10**	**9:20**	**9:29**	**9:36**	**9:52**	—	**10:13**	**10:21**	**10:27**	**10:34**	**10:40**
9:20	**9:39**	**9:48**	**9:57**	**10:04**	**10:19**	—	**10:39**	**10:47**	**10:53**	**11:00**	**11:06**
9:50	**10:09**	**10:17**	**10:26**	**10:33**	**10:48**	—	**11:08**	**11:16**	**11:22**	**11:29**	**11:35**
10:20	**10:39**	**10:47**	**10:55**	**11:01**	**11:15**	—	**11:33**	**11:40**	**11:46**	**11:53**	**11:59**
10:50	**11:09**	**11:17**	**11:25**	**11:31**	**11:45**	—	12:03	12:10	12:16	12:23	12:29
11:20	**11:37**	**11:45**	**11:52**	**11:58**	12:12	—	12:30	12:37	12:43	12:50	12:56
11:50	12:07	12:15	12:22	12:28	12:42	—	1:00	1:07	1:13	1:20	1:26
—	—	—	—	—	—	2:42	—	2:58	—	3:10	—
—	—	—	—	—	—	3:42	—	3:58	—	4:10	—
—	—	—	—	—	—	3:42	—	3:58	—	4:10	—

AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM).
*Stops on lower (arrival) level curbside at Courtyard A, on the center island at Terminal 2, curbside at Terminal 3 & Courtyard G. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.

NORTHBOUND Sundays to Daly City BART

Palo Alto Transit Center (A)	Redwood City Transit Center (B)	El Camino/ San Carlos (C)	El Camino/ Hillsdale (D)	El Camino/ 5th (E)	El Camino/ Linden (F)	SF Airport* Courtyard A (G)	San Bruno BART (H)	El Camino/ McLellan (I)	Colma BART (J)	Mission/ Wellington (K)	Daly City BART (L)
—	—	—	—	—	—	4:42	—	4:58	—	5:10	—
4:50	5:05	5:12	5:20	5:25	5:38	—	5:55	6:03	6:09	6:16	6:22
5:50	6:05	6:12	6:20	6:25	6:40	—	6:59	7:08	7:14	7:21	7:28
6:14	6:30	6:37	6:45	6:50	7:05	—	7:27	7:37	7:44	7:51	7:58
6:36	6:52	6:59	7:07	7:12	7:27	—	7:50	8:00	8:07	8:14	8:21
6:57	7:13	7:20	7:28	7:34	7:49	—	8:12	8:22	8:29	8:36	8:43
7:12	7:29	7:38	7:46	7:52	8:07	—	8:30	8:40	8:47	8:54	9:01
7:29	7:47	7:56	8:04	8:10	8:25	—	8:48	8:58	9:05	9:12	9:19
7:47	8:05	8:14	8:22	8:28	8:43	—	9:06	9:16	9:24	9:31	9:38
8:06	8:24	8:33	8:41	8:47	9:02	—	9:26	9:36	9:44	9:51	9:58
8:23	8:41	8:50	8:58	9:04	9:21	—	9:45	9:55	10:03	10:11	10:18
8:38	8:56	9:05	9:15	9:22	9:39	—	10:03	10:14	10:22	10:30	10:37
8:57	9:17	9:26	9:36	9:43	10:00	—	10:24	10:35	10:43	10:51	10:58
9:14	9:34	9:43	9:53	10:00	10:17	—	10:41	10:52	11:00	11:09	11:17
9:29	9:49	9:58	10:09	10:18	10:35	—	10:59	11:10	11:19	11:28	11:36
9:48	10:08	10:18	10:29	10:38	10:55	—	11:19	11:30	11:39	11:48	11:56
10:06	10:27	10:37	10:48	10:57	11:14	—	11:39	11:50	11:59	**12:08**	**12:16**
10:25	10:46	10:56	11:08	11:17	11:34	—	11:59	**12:10**	**12:19**	**12:28**	**12:36**
10:45	11:06	11:16	11:28	11:37	11:54	—	**12:19**	**12:30**	**12:39**	**12:48**	**12:56**
11:03	11:24	11:34	11:46	11:55	**12:12**	—	**12:39**	**12:50**	**12:59**	**1:08**	**1:16**
11:23	11:44	11:54	**12:06**	**12:15**	**12:32**	—	**12:59**	**1:10**	**1:19**	**1:28**	**1:36**
11:43	**12:04**	**12:14**	**12:26**	**12:35**	**12:52**	—	**1:19**	**1:30**	**1:39**	**1:48**	**1:56**
12:03	**12:26**	**12:36**	**12:48**	**12:57**	**1:14**	—	**1:41**	**1:52**	**2:01**	**2:10**	**2:18**
12:23	**12:46**	**12:56**	**1:08**	**1:17**	**1:34**	—	**2:01**	**2:12**	**2:21**	**2:30**	**2:38**
12:43	**1:06**	**1:16**	**1:28**	**1:37**	**1:54**	—	**2:21**	**2:32**	**2:41**	**2:50**	**2:58**
1:03	**1:26**	**1:36**	**1:48**	**1:58**	**2:15**	—	**2:42**	**2:53**	**3:02**	**3:11**	**3:19**
1:23	**1:46**	**1:56**	**2:08**	**2:18**	**2:35**	—	**3:02**	**3:13**	**3:22**	**3:31**	**3:39**
1:43	**2:06**	**2:16**	**2:28**	**2:38**	**2:55**	—	**3:21**	**3:32**	**3:41**	**3:50**	**3:58**
2:03	**2:26**	**2:36**	**2:48**	**2:58**	**3:15**	—	**3:41**	**3:52**	**4:01**	**4:10**	**4:18**
2:23	**2:46**	**2:56**	**3:08**	**3:18**	**3:35**	—	**4:01**	**4:12**	**4:21**	**4:30**	**4:38**
2:43	**3:06**	**3:16**	**3:28**	**3:38**	**3:55**	—	**4:21**	**4:32**	**4:41**	**4:50**	**4:58**
3:03	**3:26**	**3:36**	**3:48**	**3:58**	**4:15**	—	**4:41**	**4:52**	**5:01**	**5:10**	**5:18**
3:23	**3:46**	**3:56**	**4:08**	**4:18**	**4:35**	—	**5:01**	**5:12**	**5:21**	**5:30**	**5:38**
3:43	**4:06**	**4:16**	**4:28**	**4:38**	**4:55**	—	**5:21**	**5:32**	**5:41**	**5:50**	**5:58**
4:03	**4:26**	**4:36**	**4:48**	**4:58**	**5:15**	—	**5:41**	**5:52**	**6:01**	**6:10**	**6:18**
4:23	**4:46**	**4:56**	**5:07**	**5:17**	**5:34**	—	**6:00**	**6:11**	**6:19**	**6:27**	**6:35**
4:43	**5:05**	**5:15**	**5:26**	**5:36**	**5:53**	—	**6:19**	**6:29**	**6:37**	**6:45**	**6:53**
5:03	**5:25**	**5:35**	**5:46**	**5:56**	**6:12**	—	**6:36**	**6:46**	**6:54**	**7:02**	**7:10**
5:23	**5:45**	**5:55**	**6:06**	**6:15**	**6:31**	—	**6:55**	**7:05**	**7:13**	**7:21**	**7:29**
5:43	**6:05**	**6:14**	**6:24**	**6:33**	**6:49**	—	**7:13**	**7:23**	**7:31**	**7:39**	**7:47**
6:03	**6:24**	**6:33**	**6:43**	**6:52**	**7:08**	—	**7:32**	**7:42**	**7:50**	**7:58**	**8:05**
6:23	**6:44**	**6:53**	**7:03**	**7:12**	**7:28**	—	**7:52**	**8:02**	**8:09**	**8:17**	**8:24**
6:43	**7:04**	**7:13**	**7:23**	**7:32**	**7:48**	—	**8:11**	**8:21**	**8:28**	**8:36**	**8:43**
7:05	**7:26**	**7:35**	**7:45**	**7:53**	**8:09**	—	**8:32**	**8:42**	**8:49**	**8:57**	**9:04**
7:25	**7:46**	**7:54**	**8:03**	**8:11**	**8:27**	—	**8:50**	**9:00**	**9:07**	**9:14**	**9:20**
7:45	**8:04**	**8:12**	**8:21**	**8:29**	**8:45**	—	**9:08**	**9:17**	**9:23**	**9:30**	**9:36**
8:05	**8:24**	**8:32**	**8:41**	**8:49**	**9:05**	—	**9:25**	**9:34**	**9:40**	**9:47**	**9:53**
8:25	**8:44**	**8:52**	**9:01**	**9:08**	**9:23**	—	**9:43**	**9:52**	**9:58**	**10:05**	**10:11**
8:55	**9:13**	**9:21**	**9:30**	**9:37**	**9:52**	—	**10:12**	**10:21**	**10:27**	**10:34**	**10:40**
9:25	**9:43**	**9:51**	**10:00**	**10:07**	**10:22**	—	**10:42**	**10:51**	**10:57**	**11:04**	**11:10**
9:55	**10:13**	**10:21**	**10:30**	**10:37**	**10:51**	—	**11:11**	**11:20**	**11:26**	**11:33**	**11:39**
10:25	**10:43**	**10:50**	**10:58**	**11:04**	**11:17**	—	**11:37**	**11:45**	**11:51**	**11:58**	12:04
10:55	**11:12**	**11:19**	**11:27**	**11:33**	**11:46**	—	12:03	12:11	12:17	12:24	12:30
11:25	**11:42**	**11:49**	**11:56**	12:02	12:14	—	12:31	12:38	12:43	12:50	12:56
11:55	12:12	12:19	12:26	12:32	12:44	—	1:01	1:08	1:13	1:20	1:26
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AM - light type. **PM - bold type.** Green Type - Late Night Service (1 - 4 AM).
*Stops on lower (arrival) level curbside at Courtyard A, on the center island at Terminal 2, curbside at Terminal 3 & Courtyard G. Bus is not considered late until 5 minutes past scheduled time. Not all stops shown.
Please call 1-800-660-4287 for other bus stops.

ROUTE 81

School-Days Only

AM to Menlo-Artherton High

	Bus Stops	Mon, Tue, Thurs, & Fri Only	
J	Clarke/Tinsley	7:43a	—
	Pulgas/Bayshore		
	Pulgas/Gaillardia		
I	Pulgas/O'Connor	7:48a	—
	Pulgas/Sage		
	Pulgas/Gadren		
	Pulgas/Weeks		
	Bay/Pulgas		
	Bay/Clarke		
H	Bay/University	7:57a	—
	University/Sacramento		
	University/Runnymede		
	University/Bell		
	2111 University (Bell Park)		
	Bayshore/Cooley		
G	Bayshore/Newell	8:08a	—
	Bayshore/Woodland		
	Woodland/Newell		
	Woodland/University		
	Manhattan/O'Connor		
	Okeefe/Euclid		
	Okeefe/Menalto		
	Menalto/O'Keefe		
	Gilbert/Menalto		
C	Willow/Nash	8:18a	8:18a
	Willow/Blackburn		
	Middlefield/Santa Margarita		
	Middlefield/Survey		
B	Middlefield/Ringwood	8:30a	8:30a

PM to Clarke/Bayshore

	Bus Stops	Mon, Tue, Thurs, & Fri Only	
A	Middlefield/Oak Grove	1:25p	1:30p
	Middlefield/Survey		
	Middlefield/Linfield		
	Middlefield/Santa Margarita		
	Willow/Blackburn		
C	Willow/Gilbert	1:35p	1:40p
	Gilbert/Willow		
	Menalto/Oak		
	Okeefe/Menalto		
	Okeefe/Euclid		
	Woodland/Manhattan		
	Bayshore/Cooley		
	Bayshore/Newell		
	Bayshore/Woodland		
	Woodland/Newell		
	Woodland/University		
	University/Donohoe		
	University/Bell		
	University/Runnymede		
	Bay/University (Farside)		
	Bay/Clarke		
	Bay/Pulgas		
	Pulgas/Weeks		
	Pulgas/Gadren		
	Pulgas/Sage		
	Pulgas/O'Connor		
	Pulgas/Oakes		
	Pulgas/Bayshore		
J	Clarke /Bayshore	—	2:16p

ROUTE 81

School-Days Only

AM to Menlo-Artherton High

	Bus Stops	Mon, Tue, Thurs, & Fri Only	
F	Purdue/Fordham	—	7:44a
	Kavanaugh/Gloria Way		
	Kavanaugh/Kirkwood		
	Hamilton/Carlton		
	Hamilton/Hollyburne		
	Hamilton/Hazel		
	Terminal/Modoc		
E	Onetta Harris Community Ctr	—	7:59a
	Market/Del Norte		
	Market/Alpine		
	Newbridge/Pierce		
	Newbridge/Almanor		
	Newbridge/Windermere		
	Newbridge/Hollyburne		
D	Newbridge/Carlton	—	8:08a
	Willow/Coleman		
C	Willow/Nash	8:18a	8:18a
	Willow/Blackburn		
	Middlefield/Santa Margarita		
	Middlefield/Survey		
B	Middlefield/Ringwood	8:30a	8:30a

PM to Purdue/Fordham

	Bus Stops	Mon, Tue, Thurs, & Fri Only	
A	Middlefield/Oak Grove	1:25p	1:30p
	Middlefield/Survey		
	Middlefield/Linfield		
	Middlefield/Santa Margarita		
	Willow/Blackburn		
	Willow/Gilbert		
	Willow/Coleman		
	Willow/O'Keefe		
	Willow/Chester		
	Newbridge/Madera		
	Newbridge/Hollyburne		
	Newbridge/Windermere		
	Newbridge/Alamanor		
	Newbridge/Market		
	Market/Hamilton		
	Market/Del Norte		
	Onetta Harris Community Ctr		
	Terminal/Almanor		
	Hamilton/Henderson		
	Hamilton/Hollyburne		
	Kavanaugh/Kirkwood		
	Kavanaugh/Farrington		
	Notre Dame/Illinois		
F	Purdue/Fordham	2:04p	—

Bus Fares	Cash	Clipper*	Day Pass	Monthly Pass
Youth (Age 18 & younger)	**$1.10**	**$1.00**	**$2.00**	**$27.00**
Adult (Age 19 through 64)	**$2.25**	**$2.05**	**$4.50**	**$65.60**

*Free 2-hour transfers between local SamTrans routes on Clipper or SamTrans Mobile App.

Tickets available on SamTrans Mobile

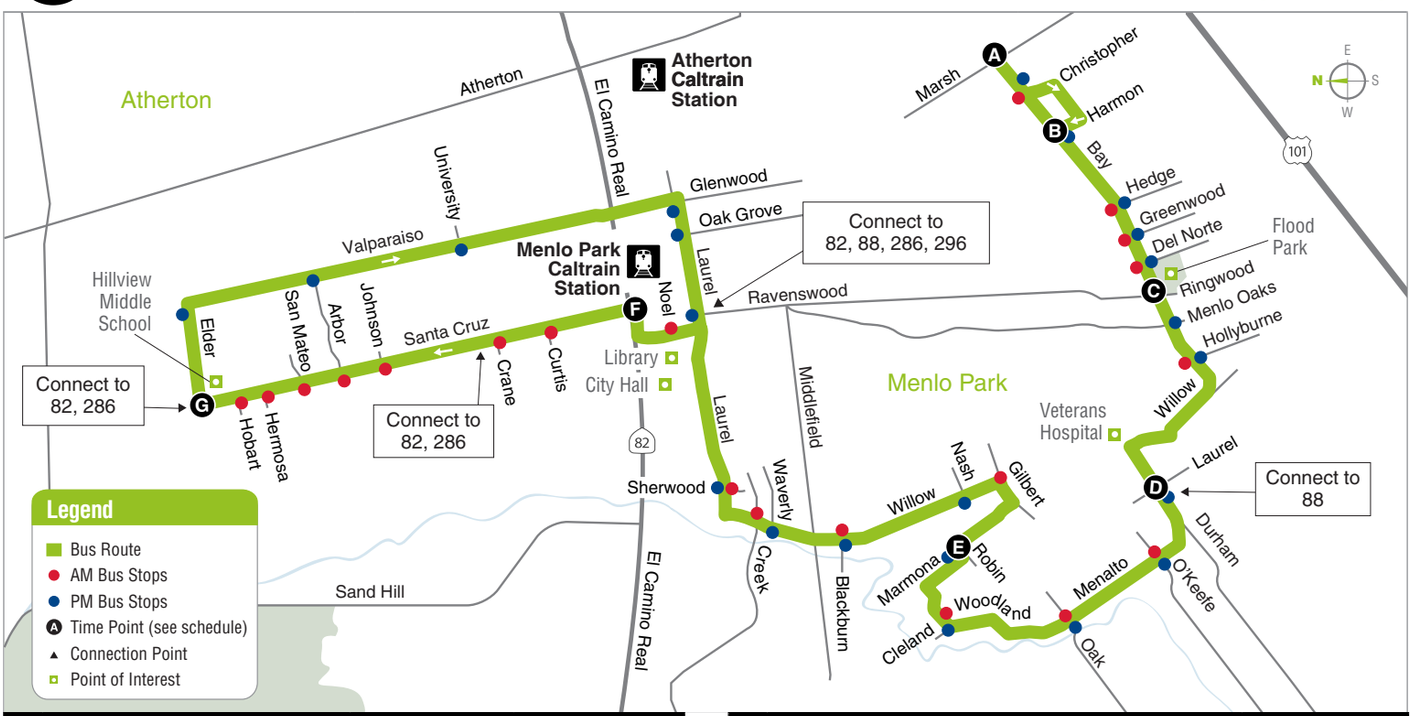
Call 1-800-660-4287
(TTY 650-508-6448)

samtrans.com/81
Effective 03/28/21

samTrans

ROUTE 83

School-Days Only



AM to Kennedy Middle School

Bus Stops	Weekdays	
B Bay/Harmon	7:18a	7:23a
Bay/Hedge		
Bay/Greenwood		
Bay/Del Norte		
C Bay/Ringwood	7:28a	7:33a
Bay/Hollyburne		
D Durham/Laurel	7:36a	7:41a
Menalto/O'Keefe		
Woodland/Cleland		
F Marmona/Robin	7:43a	7:48a
Willow/Nash		
Willow/Blackburn		
Willow/Waverley		
Laurel/Sherwood		
Ravenswood/Noel		
E Merrill/Santa Cruz	7:53a	7:58a
Santa Cruz/Curtis		
Santa Cruz/Crane		
Santa Cruz/Johnson		
Santa Cruz/Arbor		
Santa Cruz/San Mateo		
Santa Cruz/Hermosa		
Santa Cruz/Hobart		
G Hillview Middle School	8:00a	8:05a

PM to Florence/17th

Bus Stops	Weekdays	Wed & Thurs Only
G Hillview Middle School	2:43p	3:21p
Valparaiso/Elder		
Valparaiso/Arbor		
Valparaiso/University		
Laurel/Glenwood		
Laurel/Oak Grove		
Laurel/Ravenswood		
Laurel/Sherwood		
Willow/Creek		
Willow/Blackburn		
Gilbert/Willow		
Marmona/Robin		
Woodland/Woodland		
Menalto/Oak		
Menalto/O'Keefe		
Durham/Laurel		
Bay/Hollyburne		
Bay/Menlo Oaks		
Bay/Del Norte		
Bay/Greenwood		
Bay/Hedge		
Bay/Harmon		
Bay/Christopher		
A Bay/Marsh	3:27p	4:05p

Bus Fares	Cash	Clipper*	Day Pass	Monthly Pass
Youth (Age 18 & younger)	**$1.10**	**$1.00**	**$2.00**	**$27.00**
Adult (Age 19 through 64)	**$2.25**	**$2.05**	**$4.50**	**$65.60**

*Free 2-hour transfers between local SamTrans routes on Clipper or SamTrans Mobile App.

Tickets available on SamTrans Mobile

Call 1-800-660-4287
(TTY 650-508-6448)

samtrans.com/83
Effective 08/16/20

samTrans

U Monday through Friday except holidays
To Stanford Shopping Center

Fremont BART	Fremont/ Centerville Amtrak	Ardenwood Park & Ride	Embarcadero Road & Wildwood Lane	Stanford Oval	Stanford Shopping Center
6:00a	6:10a	6:22a	6:44a	6:53a	6:59a
6:30a	6:41a	6:53a	7:23a	7:35a	7:41a
7:10a	7:21a	7:34a	8:13a	8:27a	8:33a
7:45a	7:56a	8:09a	8:48a	9:02a	9:08a
8:20a	8:31a	8:44a	9:20a	9:34a	9:40a

U Monday through Friday except holidays
To Fremont BART

Stanford Oval	Stanford Shopping Center	Embarcadero Road & Wildwood Lane	Ardenwood Park & Ride	Fremont/ Centerville Amtrak	Fremont BART
2:45p	**2:53p**	**3:05p**	**3:37p**	**3:53p**	**4:05p**
3:20p	**3:28p**	**3:40p**	**4:12p**	**4:28p**	**4:40p**
4:20p	**4:29p**	**4:40p**	**5:19p**	**5:37p**	**5:48p**
4:40p	**4:49p**	**5:00p**	**5:39p**	**5:57p**	**6:08p**
5:25p	**5:34p**	**5:45p**	**6:24p**	**6:42p**	**6:53p**
5:55p	**6:03p**	**6:14p**	**6:49p**	**7:03p**	**7:12p**

U

AC TRANSIT SCHEDULE

EFFECTIVE:
August 9, 2020

Fremont

Fremont BART
Liberty Way & Walnut Avenue
Centerville Amtrak/ACE
Ardenwood Park & Ride
(Highway 84)

Stanford University

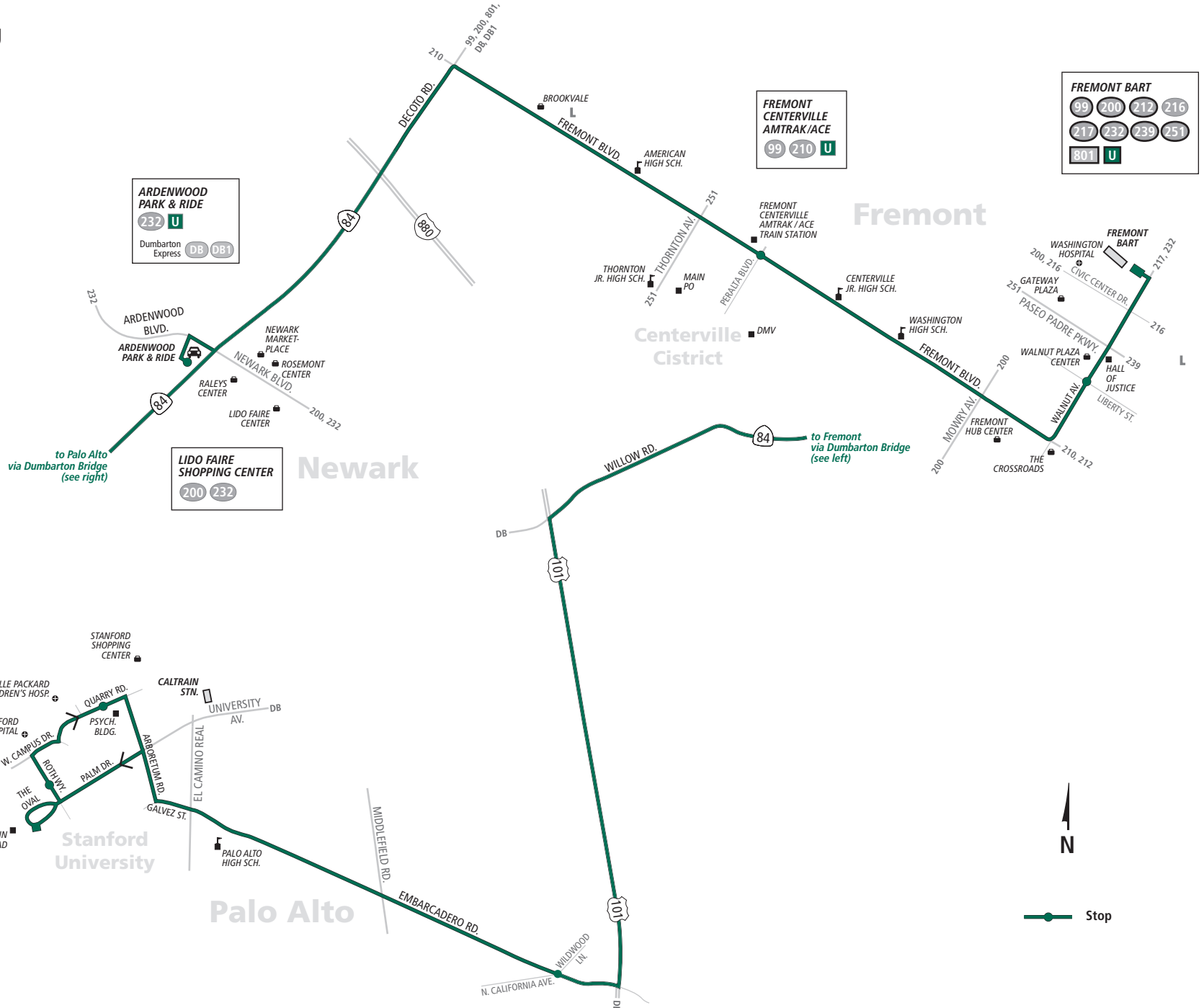
Stanford Oval
Stanford Medical Center
Stanford Shopping Center

Transbay Bus

Monday through Friday except holidays

No Local Passengers Allowed

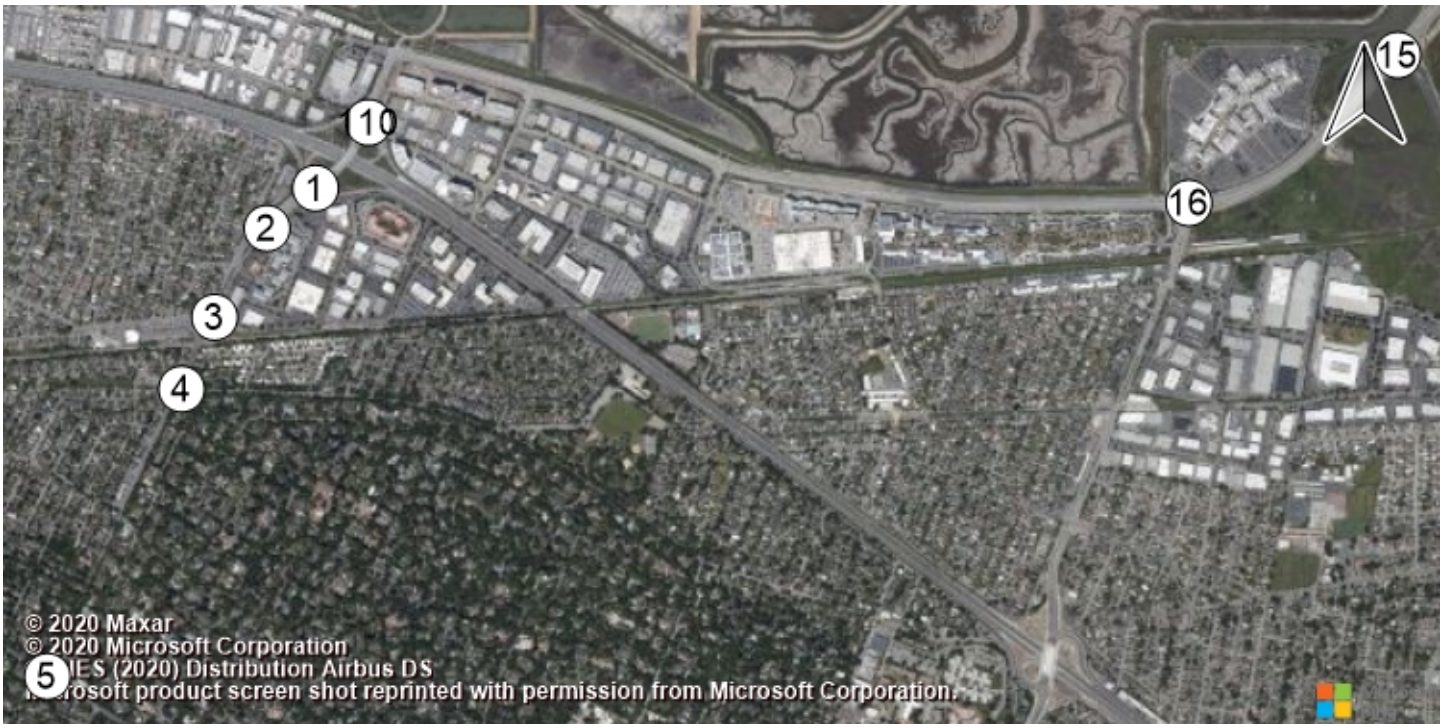
Line U


ARDENWOOD PARK & RIDE
232 U
Dumbarton Express DB DB1
LIDO FAIRE SHOPPING CENTER
200 232
FREMONT CENTERVILLE AMTRAK/ACE
99 210 U
FREMONT BART
99 200 212 216
217 232 239 251
801 U
to Palo Alto via Dumbarton Bridge (see right)
to Fremont via Dumbarton Bridge (see left)
99, 200, 801, DB, DB1
DECOTO RD.
BROOKVALE
FREMONT BLVD.
AMERICAN HIGH SCH.
880
84
ARDENWOOD BLVD.
NEWARK MARKET-PLACE
ROSEMONT CENTER
NEWARK BLVD.
RALEY'S CENTER
LIDO FAIRE CENTER
200, 232
THORNTON JR. HIGH SCH.
THORNTON AV.
MAIN PO
PERALTA BLVD.
FREMONT CENTERVILLE AMTRAK / ACE TRAIN STATION
CENTERVILLE JR. HIGH SCH.
WASHINGTON HIGH SCH.
DMV
Fremont
Centerville Cistrict
Newark
WASHINGTON HOSPITAL
CIVIC CENTER DR.
GATEWAY PLAZA
PASEO PADRE PKWY.
WALNUT PLAZA CENTER
HALL OF JUSTICE
LIBERTY ST.
WALNUT AV.
MOWRY AV.
FREMONT HUB CENTER
THE CROSSROADS
WILLOW RD.
101
STANFORD SHOPPING CENTER
LUCILLE PACKARD CHILDREN'S HOSP.
QUARRY RD.
CALTRAIN STN.
UNIVERSITY AV.
STANFORD HOSPITAL
PSYCH. BLDG.
W. CAMPUS DR.
ROTH WY.
PALM DR.
ARBORETUM RD.
EL CAMINO REAL
THE OVAL
MAIN QUAD
GALVEZ ST.
PALO ALTO HIGH SCH.
Stanford University
Palo Alto
MIDDLEFIELD RD.
EMBARCADERO RD.
WILDWOOD LN.
N. CALIFORNIA AVE.
N
Stop

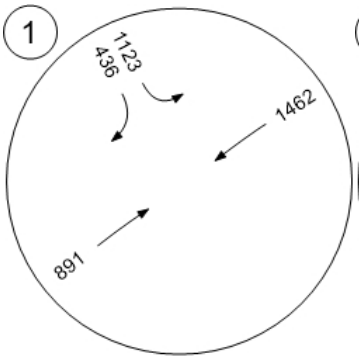
APPENDIX C

VISTRO TRAFFIC VOLUMES AND PROJECT TRIP DISTRIBUTION

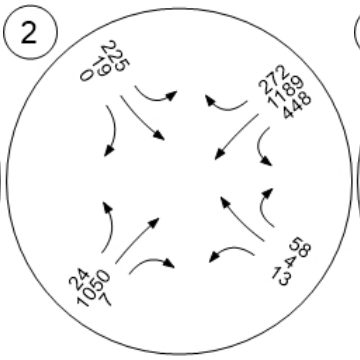
Traffic Volume - Future Total Volume Existing AM



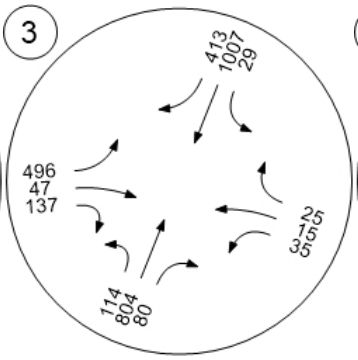
Marsh Rd (SR 84)/US 101 S



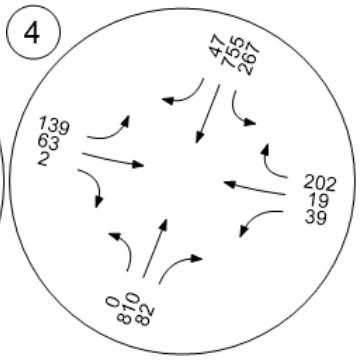
Marsh Rd/Rolison Rd-Scott D



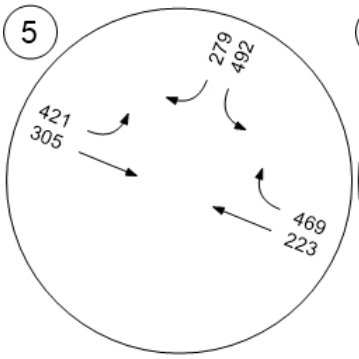
Marsh Rd/Florence St-Bohan



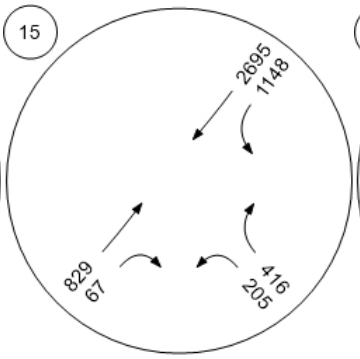
Marsh Rd/Bay Rd



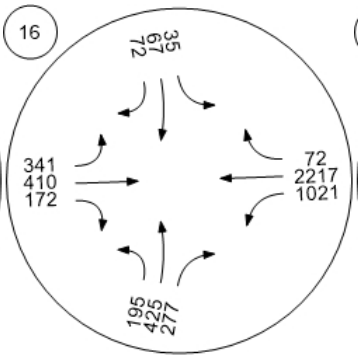
Middlefield Rd/Marsh Rd



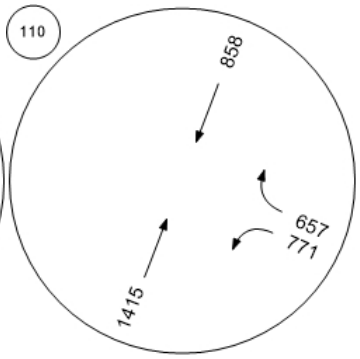
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

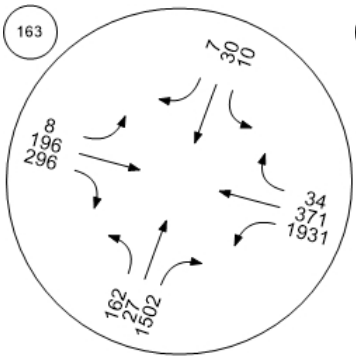


Marsh Road and US 101 NB

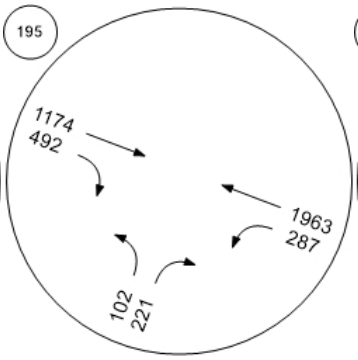


Traffic Volume - Future Total Volume

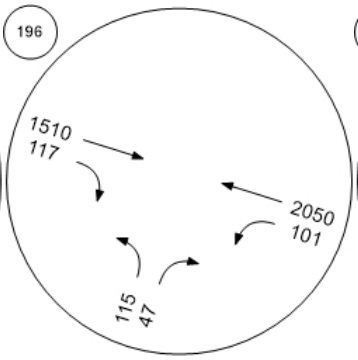
Bayfront Expy/Marsh Rd



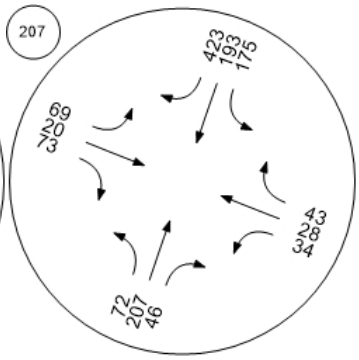
Bayfront Expy/Chilco St



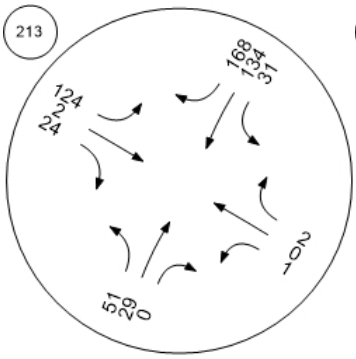
Bayfront Expy/Chrysler Drive



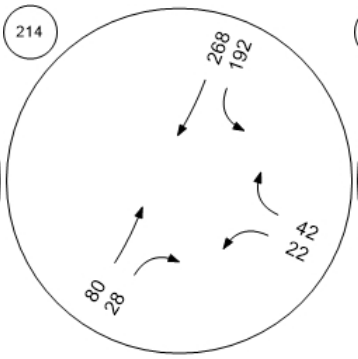
Chilco St/Constitution Dr



Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr



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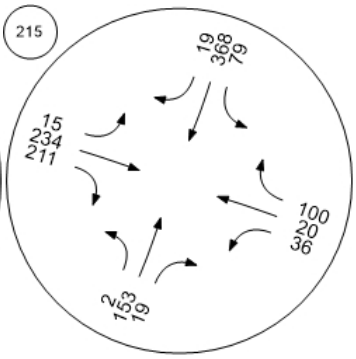
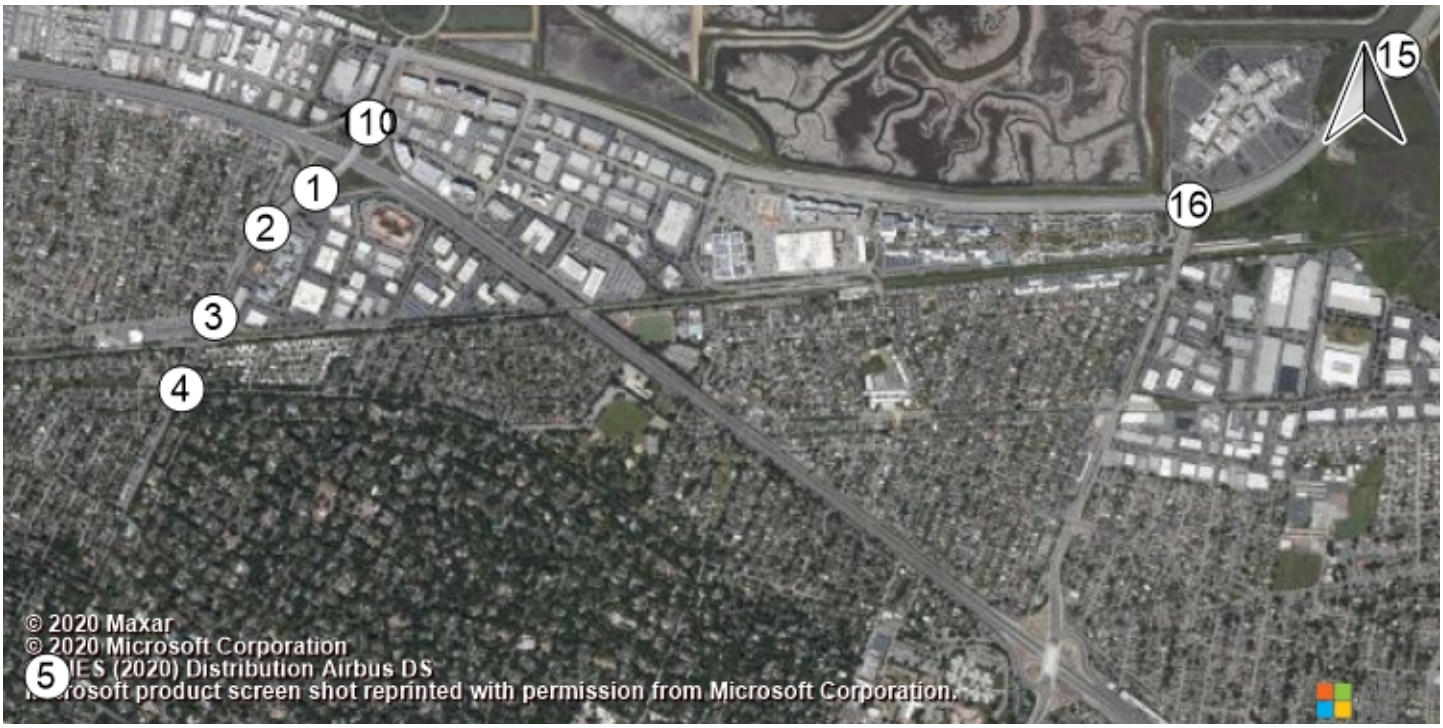
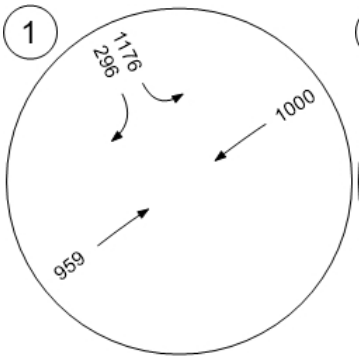


Traffic Volume - Future Total Volume

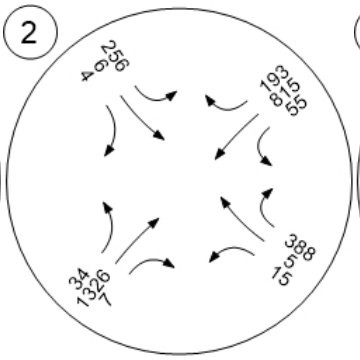
Existing PM



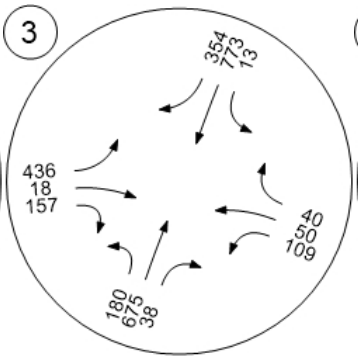
Marsh Rd (SR 84)/US 101 S



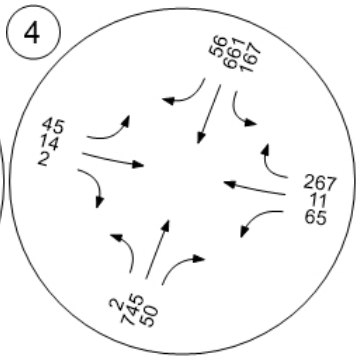
Marsh Rd/Rolison Rd-Scott D



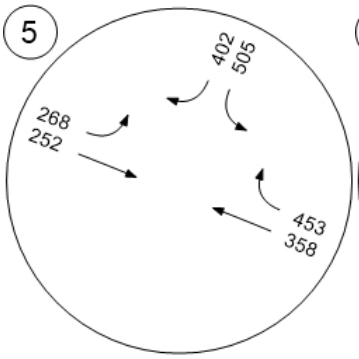
Marsh Rd/Florence St-Bohan



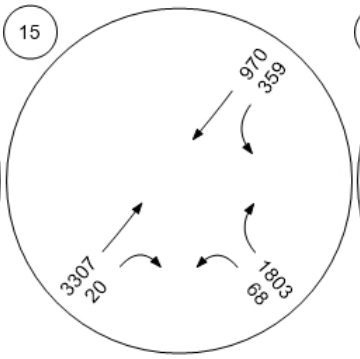
Marsh Rd/Bay Rd



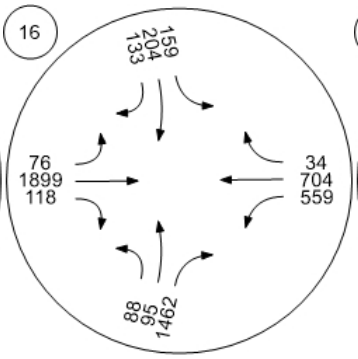
Middlefield Rd/Marsh Rd



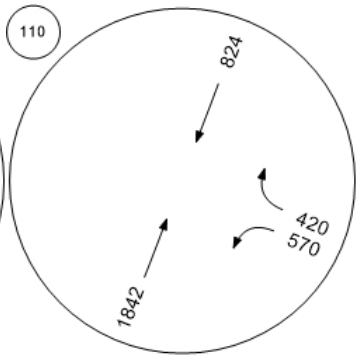
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

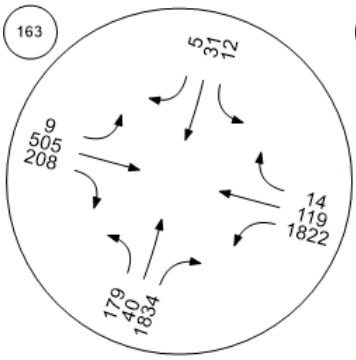


Marsh Road/101 NB Ramps

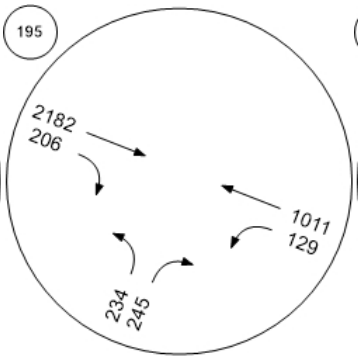


Traffic Volume - Future Total Volume

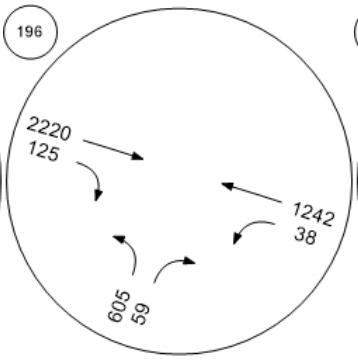
Bayfront Expy/Marsh Rd



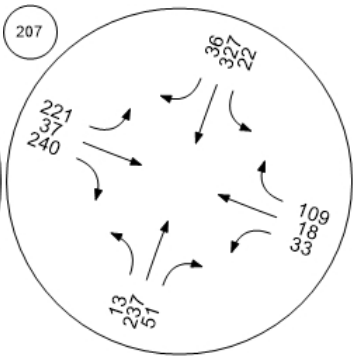
Bayfront Expy/Chilco St



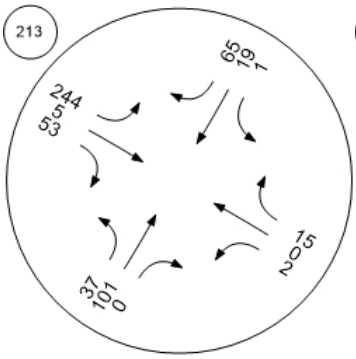
Bayfront Expy/Chrysler Drive



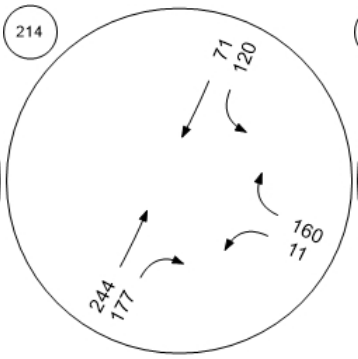
Chilco St/Constitution Dr



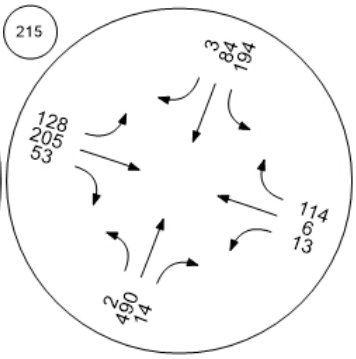
Chrysler Dr/Independence Dr



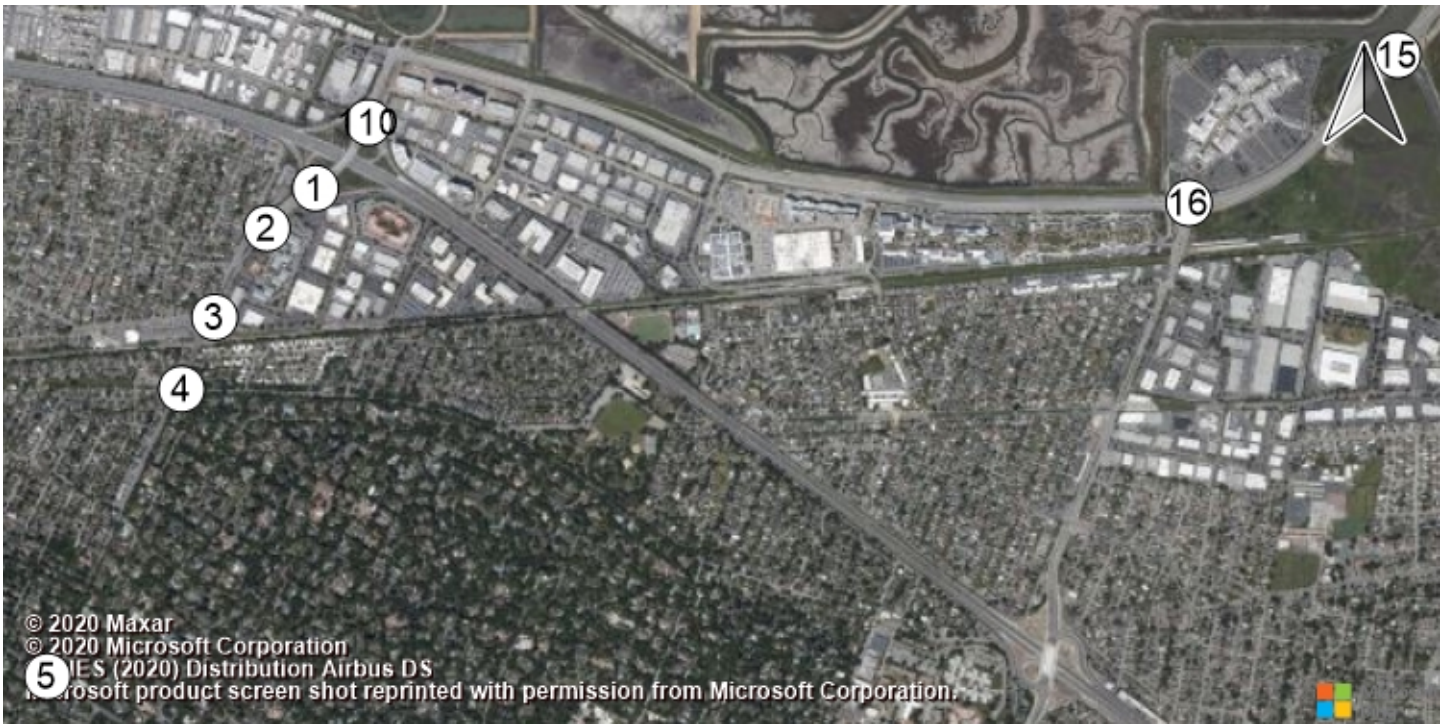
Chrysler Dr/Jefferson Dr



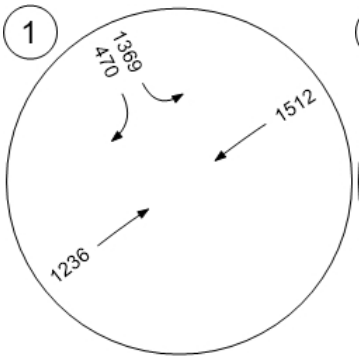
Chrysler Dr/Constitution Dr



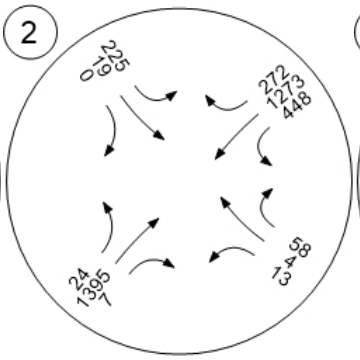
Traffic Volume - Future Total Volume | Near-Term AM



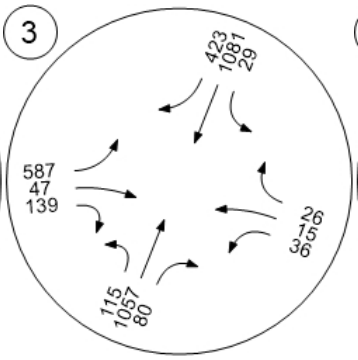
Marsh Rd (SR 84)/US 101 S



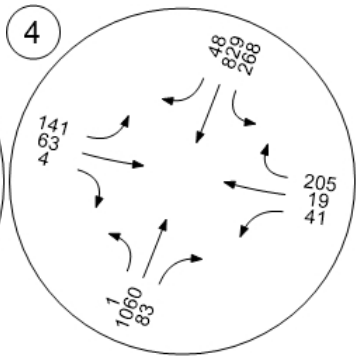
Marsh Rd/Rolison Rd-Scott D



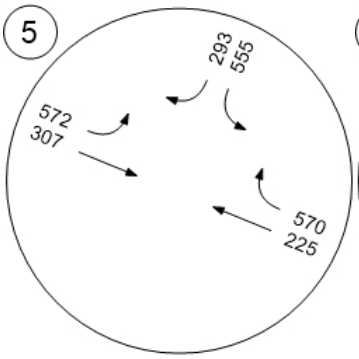
Marsh Rd/Florence St-Bohan



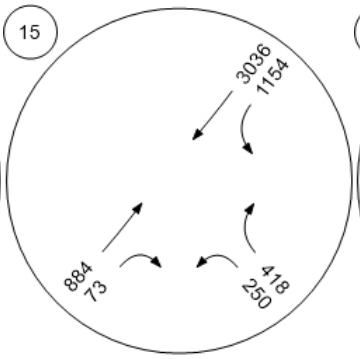
Marsh Rd/Bay Rd



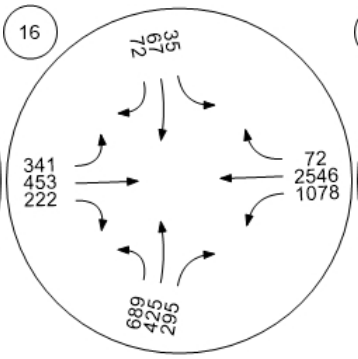
Middlefield Rd/Marsh Rd



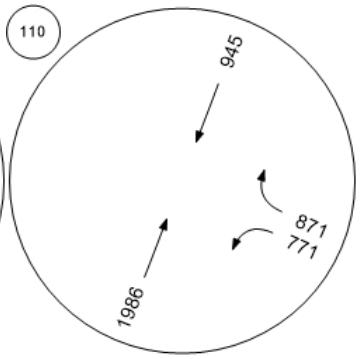
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

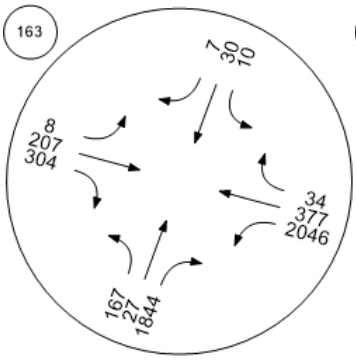


Marsh Road and US 101 NB

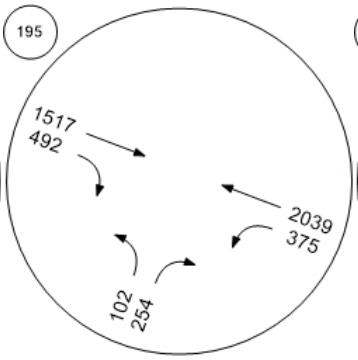


Traffic Volume - Future Total Volume

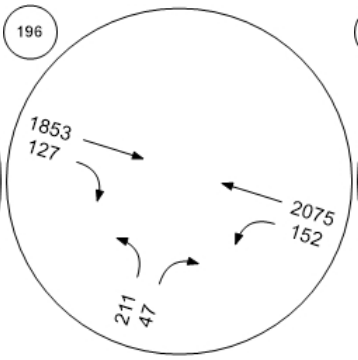
Bayfront Expy/Marsh Rd



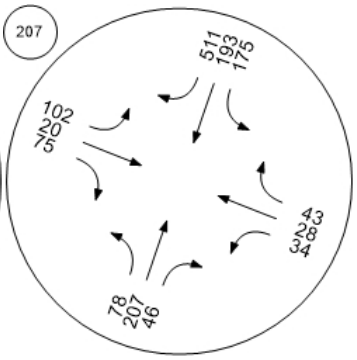
Bayfront Expy/Chilco St



Bayfront Expy/Chrysler Drive



Chilco St/Constitution Dr



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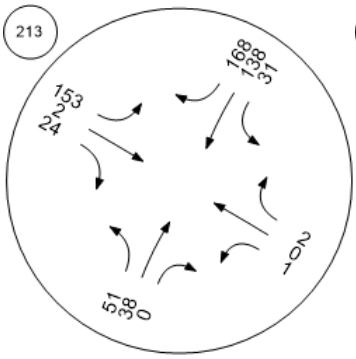

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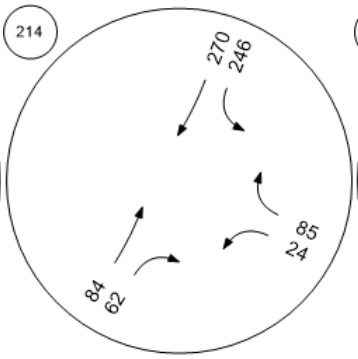

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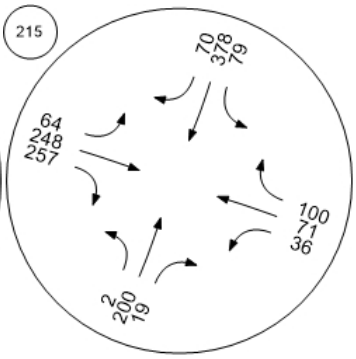
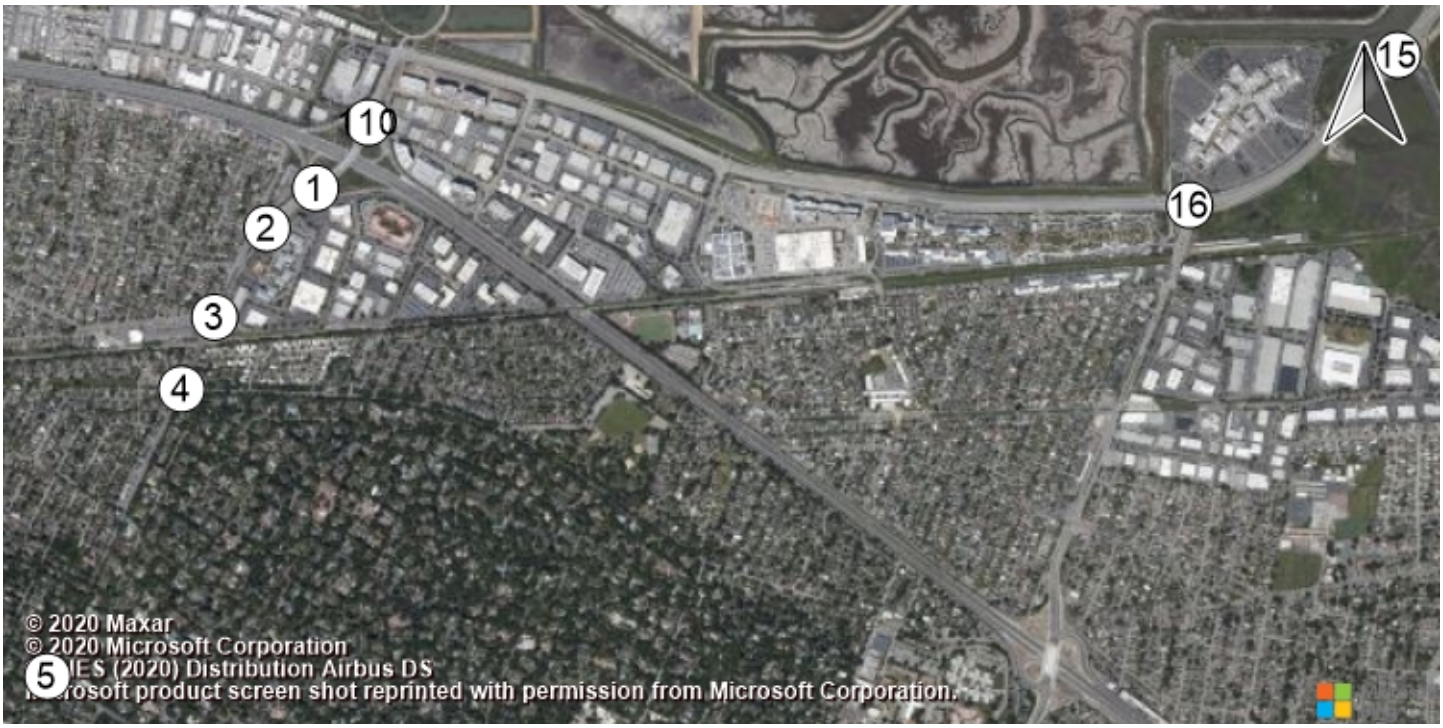
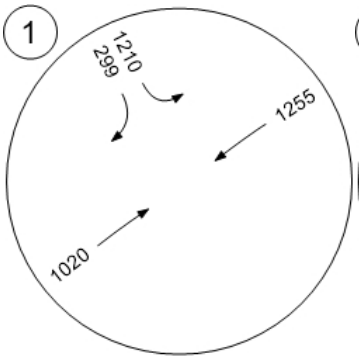


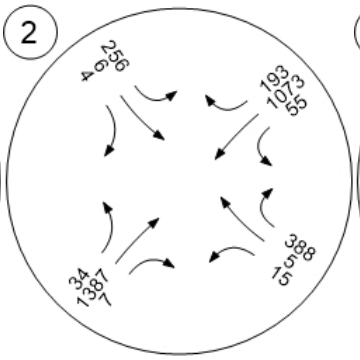
Traffic Volume - Future Total Volume | Near-Term PM



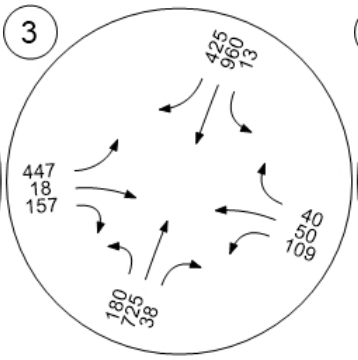
Marsh Rd (SR 84)/US 101 S



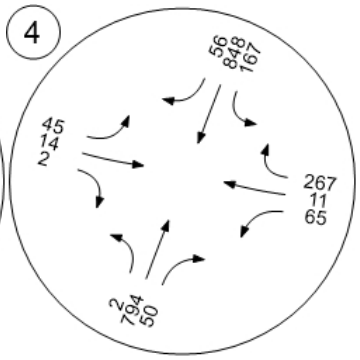
Marsh Rd/Rolison Rd-Scott D



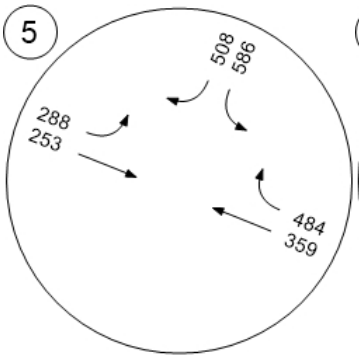
Marsh Rd/Florence St-Bohan



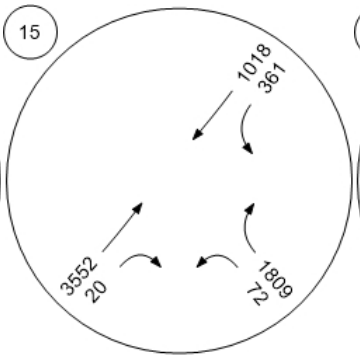
Marsh Rd/Bay Rd



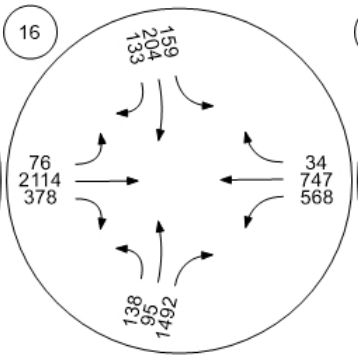
Middlefield Rd/Marsh Rd



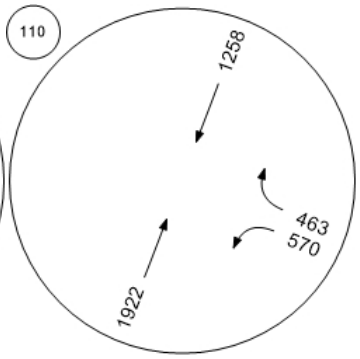
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

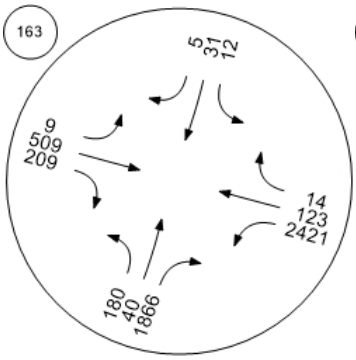


Marsh Road/101 NB Ramps

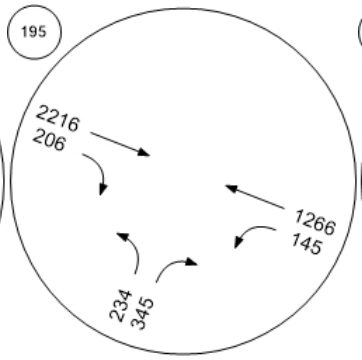


Traffic Volume - Future Total Volume

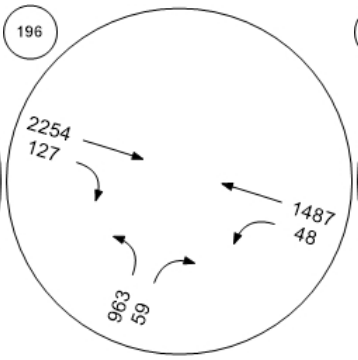
Bayfront Expy/Marsh Rd



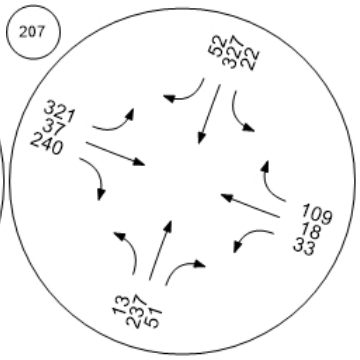
Bayfront Expy/Chilco St



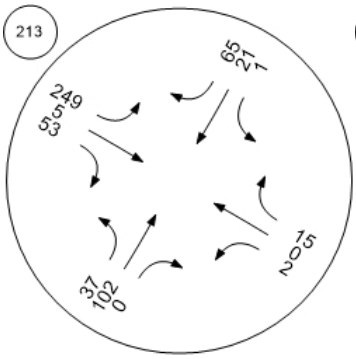
Bayfront Expy/Chrysler Drive



Chilco St/Constitution Dr



Chrysler Dr/Independence Dr



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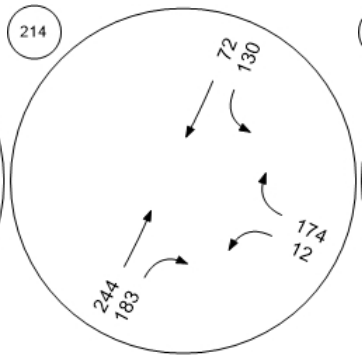

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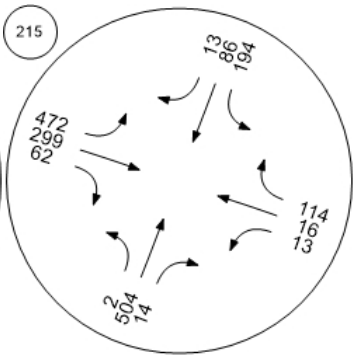
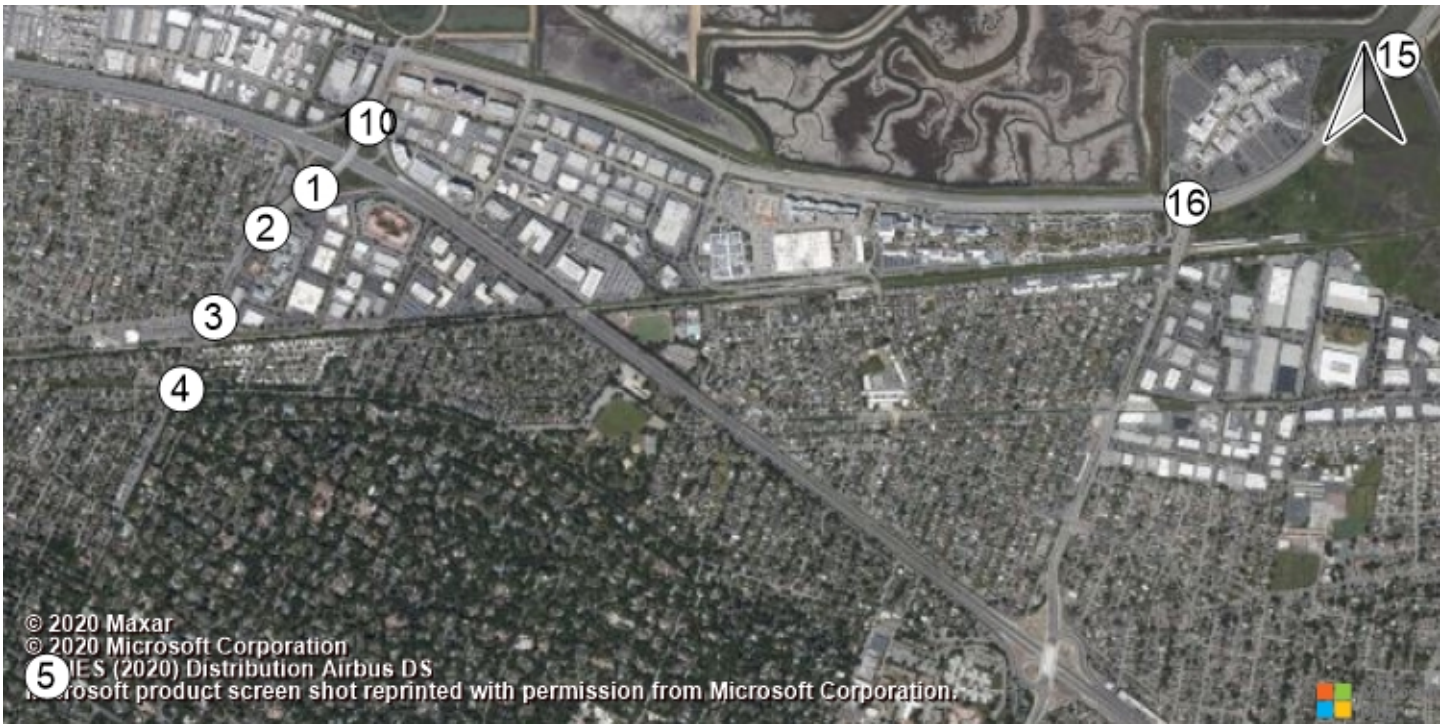
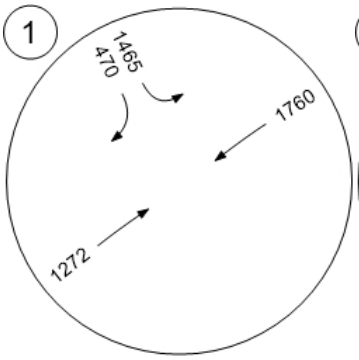


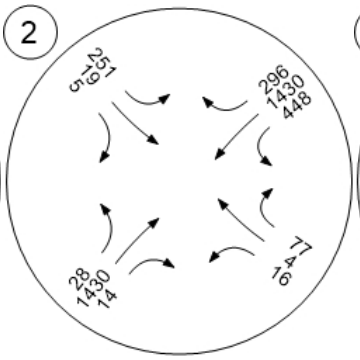
Traffic Volume - Future Total Volume | Cumulative AM



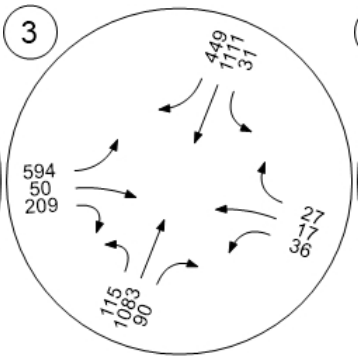
Marsh Rd (SR 84)/US 101 S



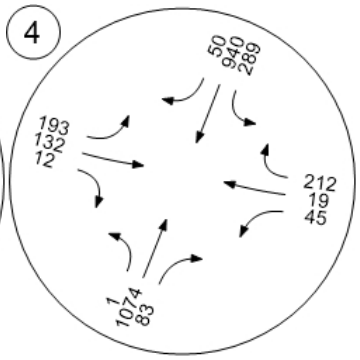
Marsh Rd/Rolison Rd-Scott D



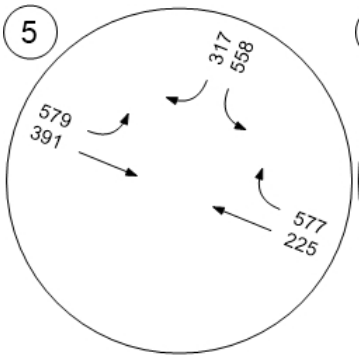
Marsh Rd/Florence St-Bohan



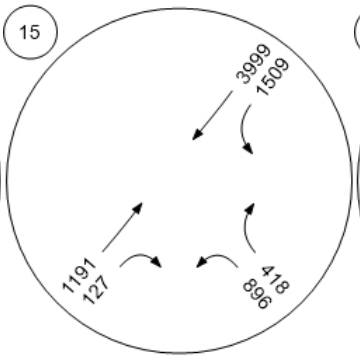
Marsh Rd/Bay Rd



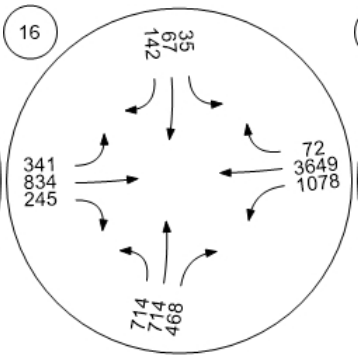
Middlefield Rd/Marsh Rd



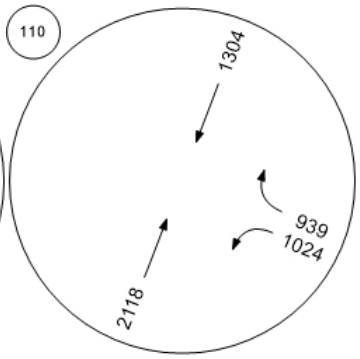
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

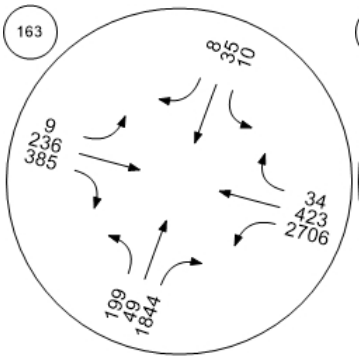


Marsh Road and US 101 NB

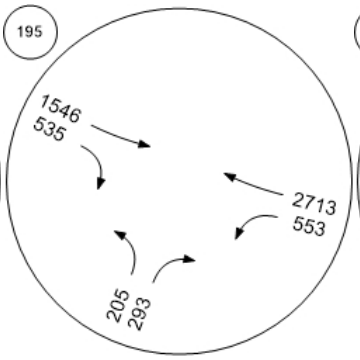


Traffic Volume - Future Total Volume

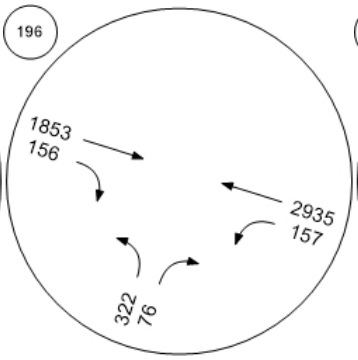
Bayfront Expy/Marsh Rd



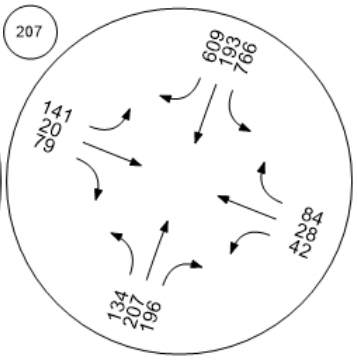
Bayfront Expy/Chilco St



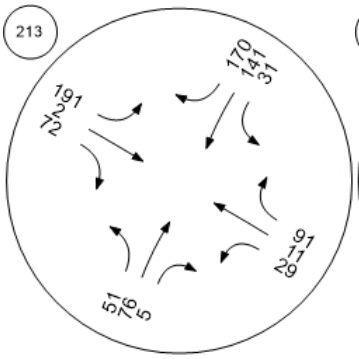
Bayfront Expy/Chrysler Drive



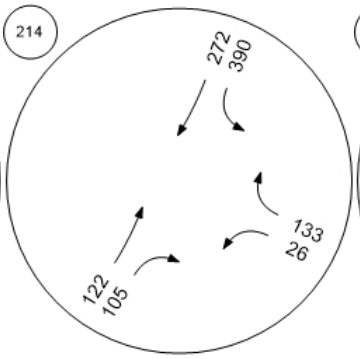
Chilco St/Constitution Dr



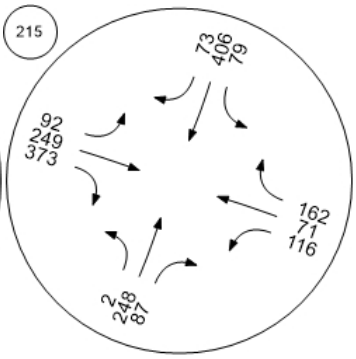
Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr

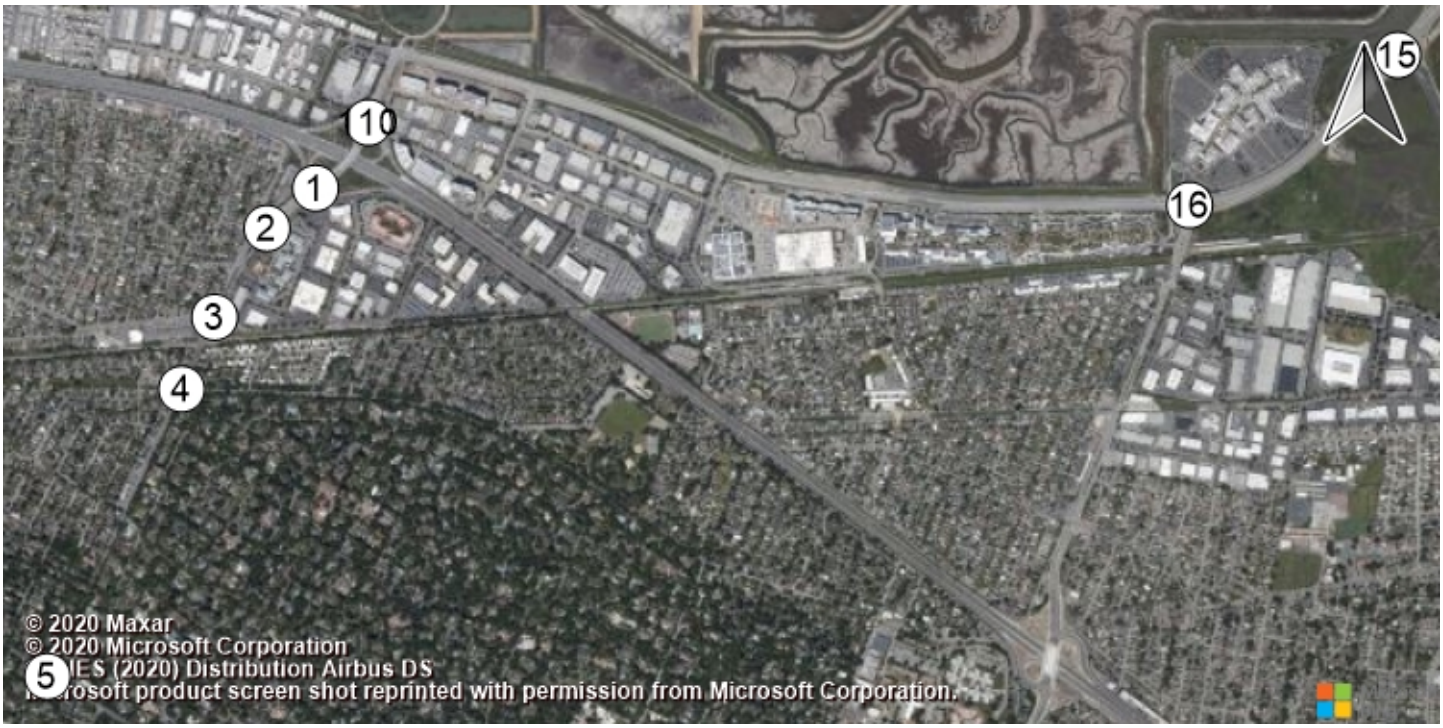


Chrysler Dr/Constitution Dr

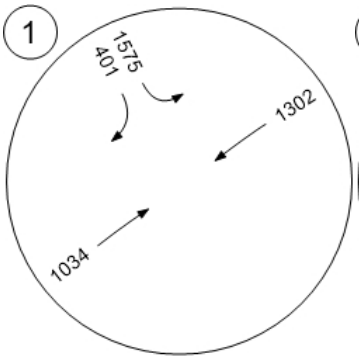


Traffic Volume - Future Total Volume

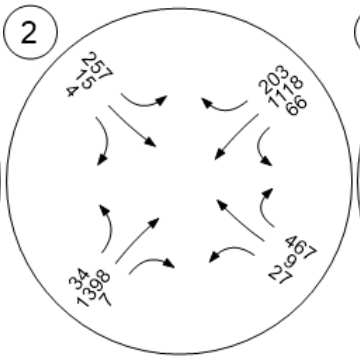
Cumulative PM



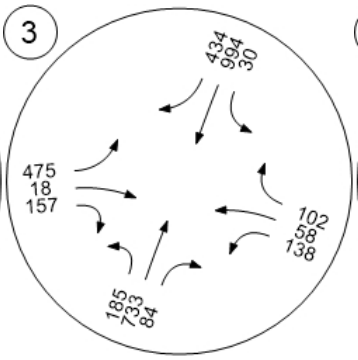
Marsh Rd (SR 84)/US 101 S



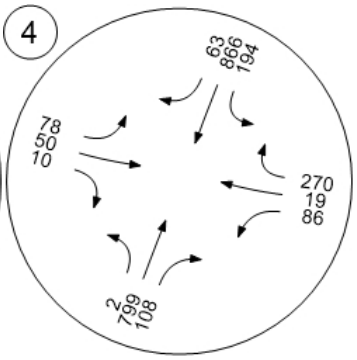
Marsh Rd/Rolison Rd-Scott D



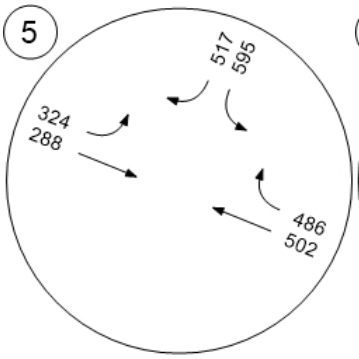
Marsh Rd/Florence St-Bohan



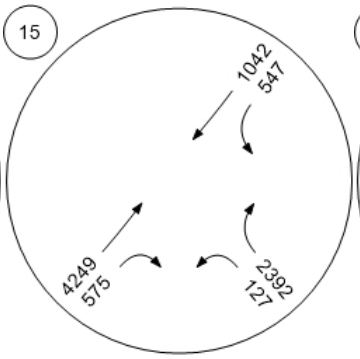
Marsh Rd/Bay Rd



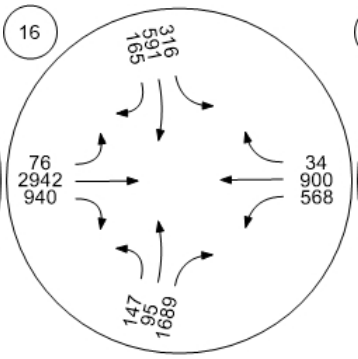
Middlefield Rd/Marsh Rd



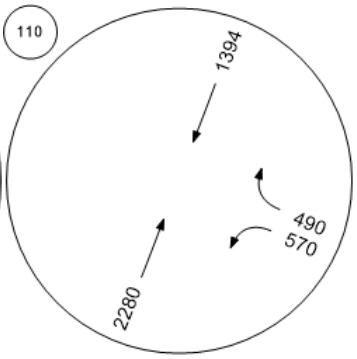
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

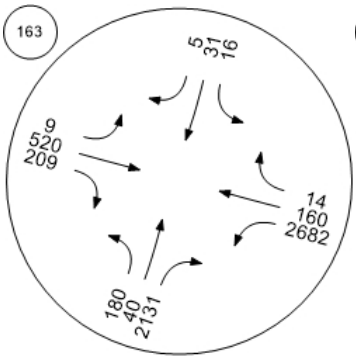


Marsh Road/101 NB Ramps

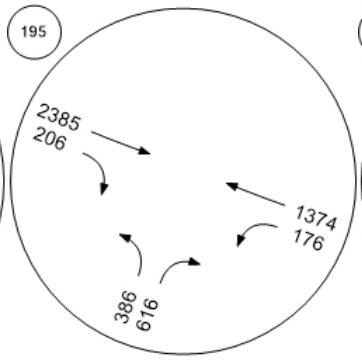


Traffic Volume - Future Total Volume

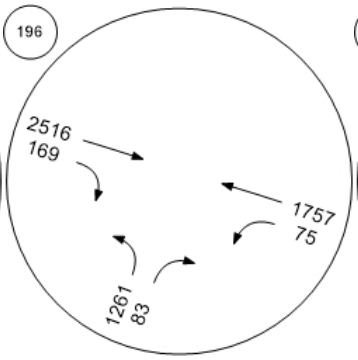
Bayfront Expy/Marsh Rd



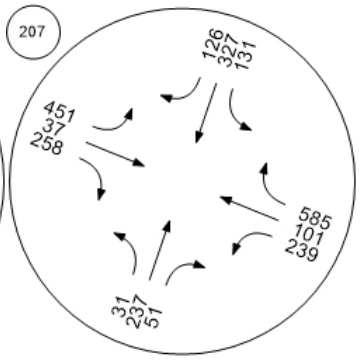
Bayfront Expy/Chilco St



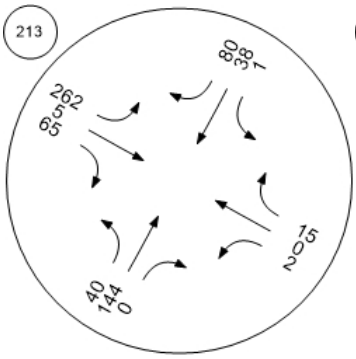
Bayfront Expy/Chrysler Drive



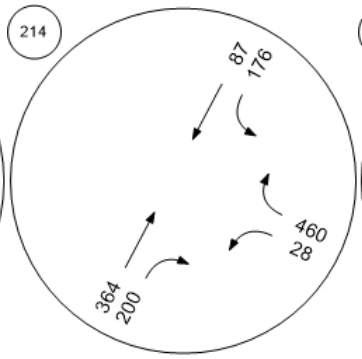
Chilco St/Constitution Dr



Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr



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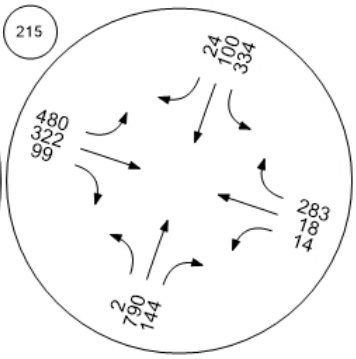
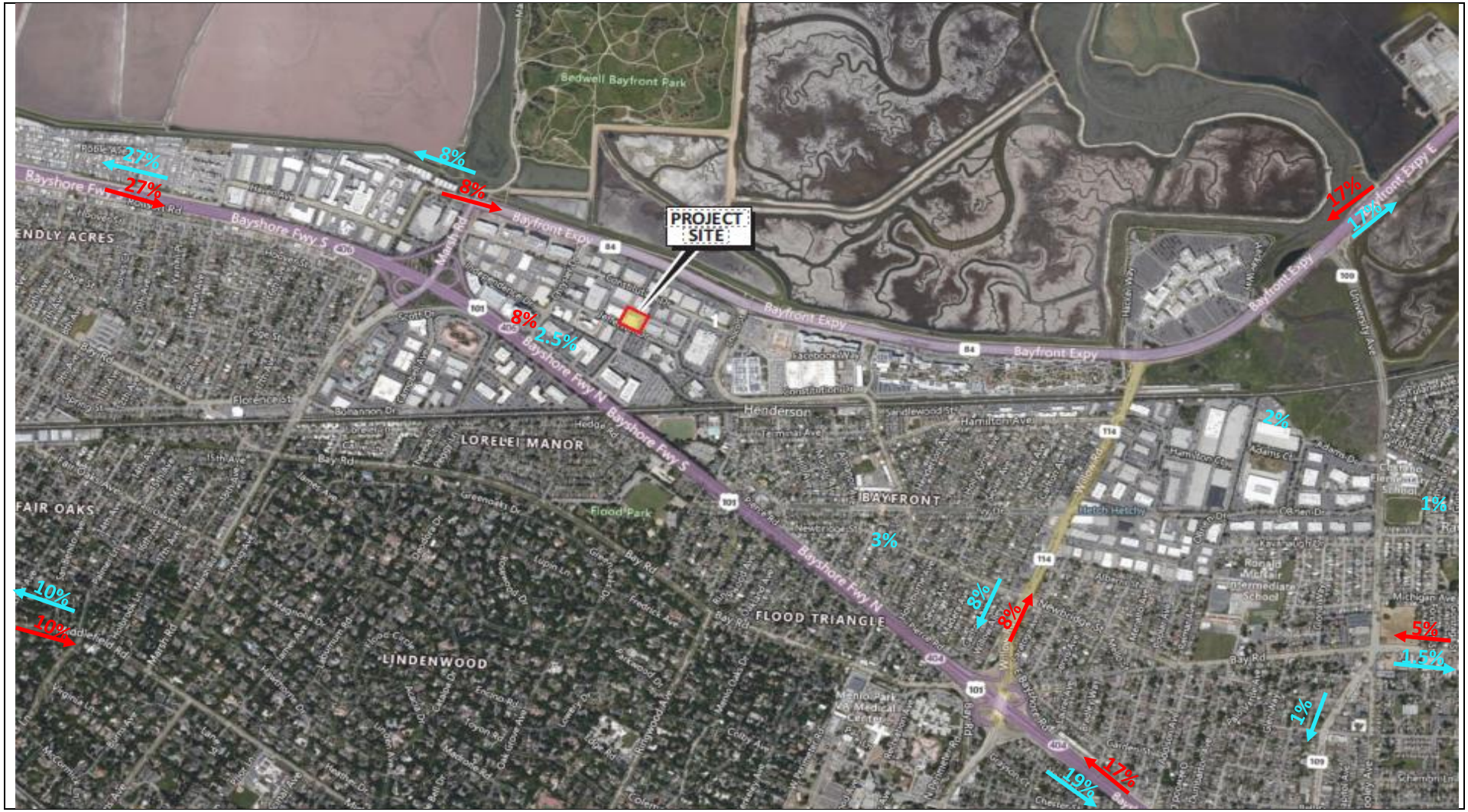




LSA

FIGURE A

Legend

- Inbound Trip Distribution Percentage
- Outbound Trip Distribution Percentage

Menlo Flats

Project Trip Distribution - AM Peak Hour

\\acorp04\ptrprojects\CMK2001 Menlo Flats\BACKGROUND\Transportation\xls\Proj Trip Distribution - AM.xls 9/9/2021

LSA

FIGURE B

Legend

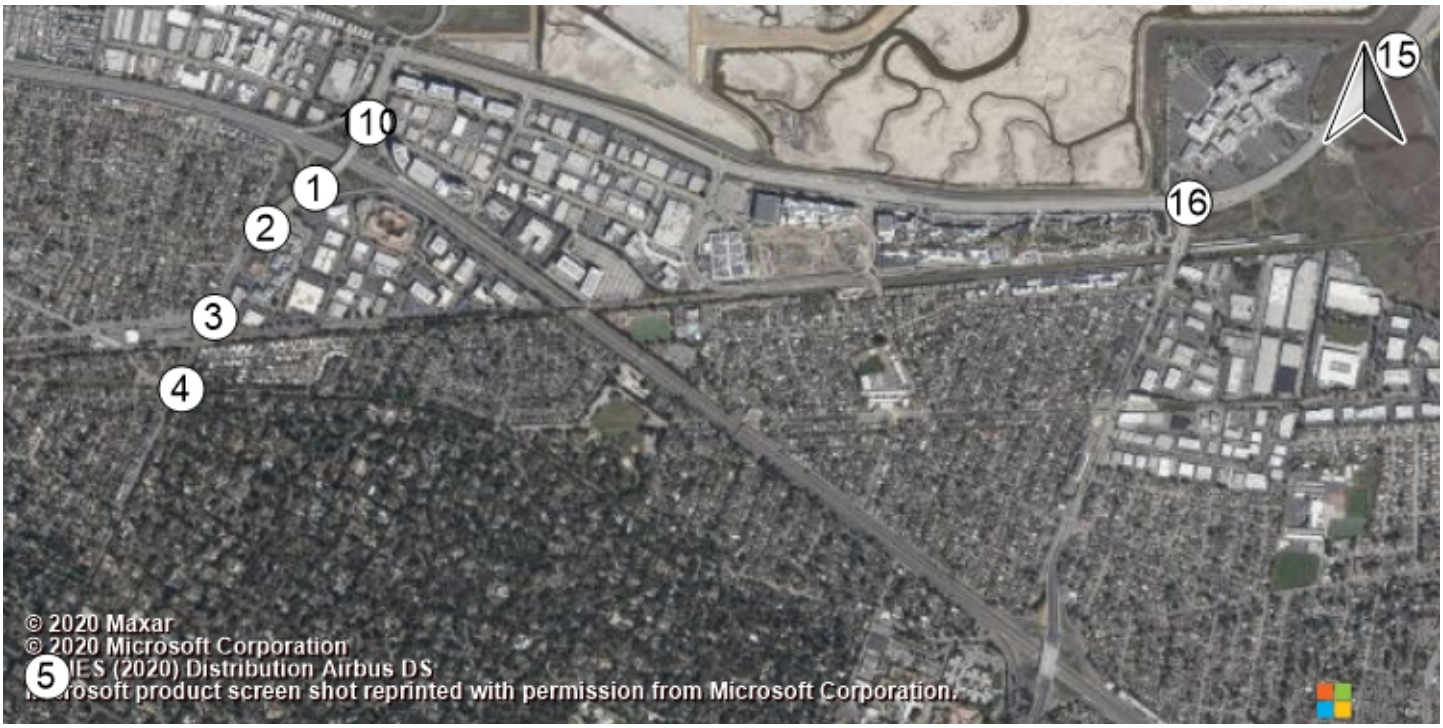
Inbound Trip Distribution Percentage

Outbound Trip Distribution Percentage

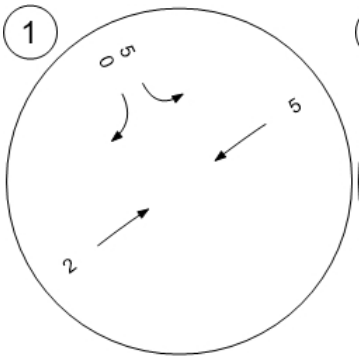
Menlo Flats

Project Trip Distribution - PM Peak Hour

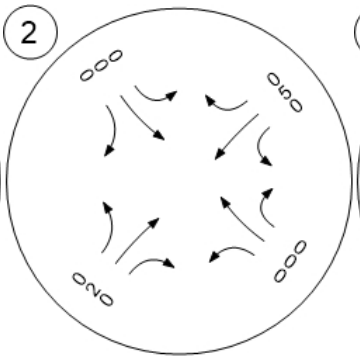
Traffic Volume - Net New Site Trips | Project Only - AM



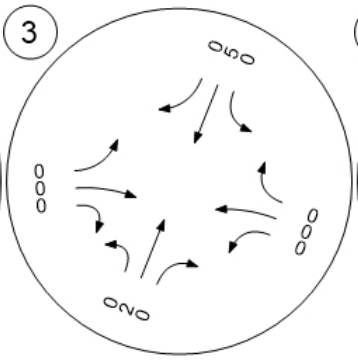
Marsh Rd (SR 84)/US 101 S



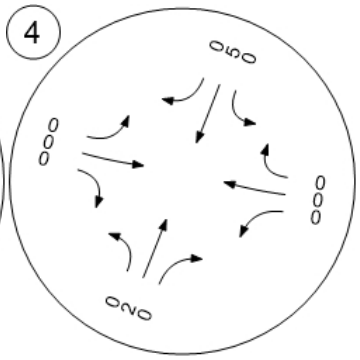
Marsh Rd/Rolison Rd-Scott D



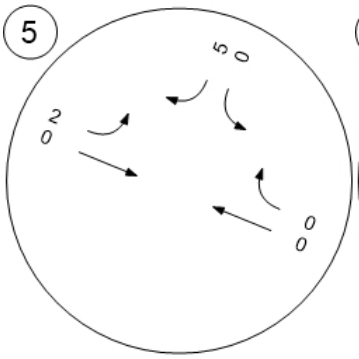
Marsh Rd/Florence St-Bohan



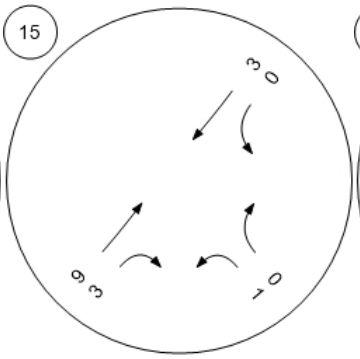
Marsh Rd/Bay Rd



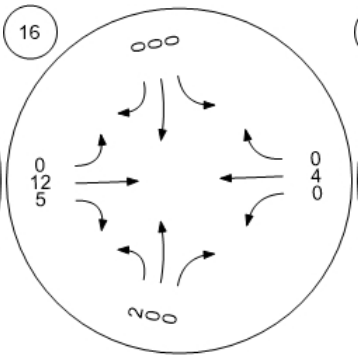
Middlefield Rd/Marsh Rd



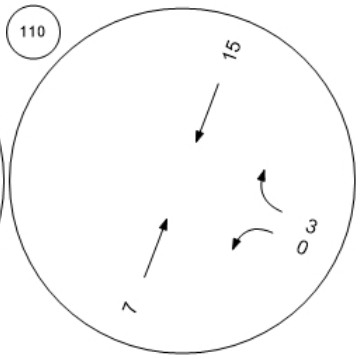
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

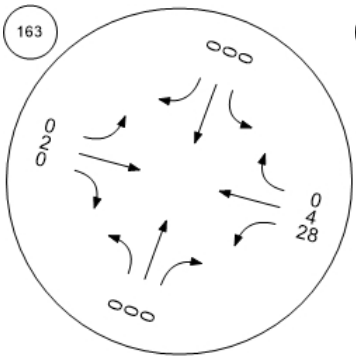


Marsh Road and US 101 NB

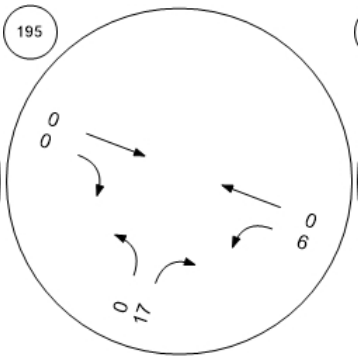


Traffic Volume - Net New Site Trips

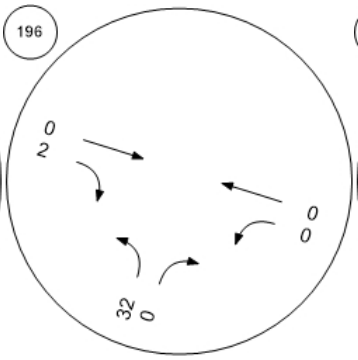
Bayfront Expy/Marsh Rd



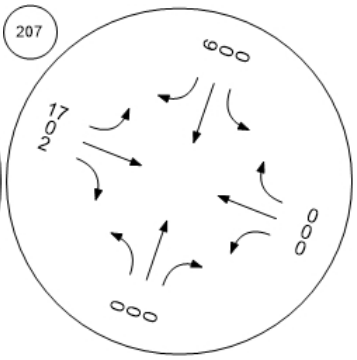
Bayfront Expy/Chilco St



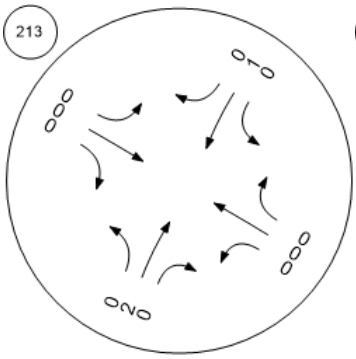
Bayfront Expy/Chrysler Drive



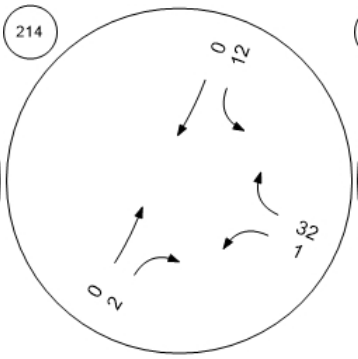
Chilco St/Constitution Dr



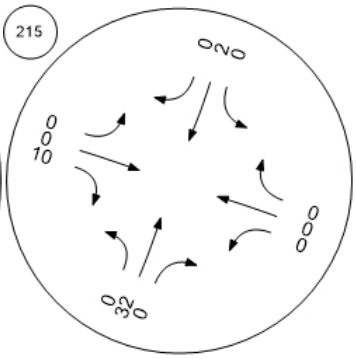
Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr

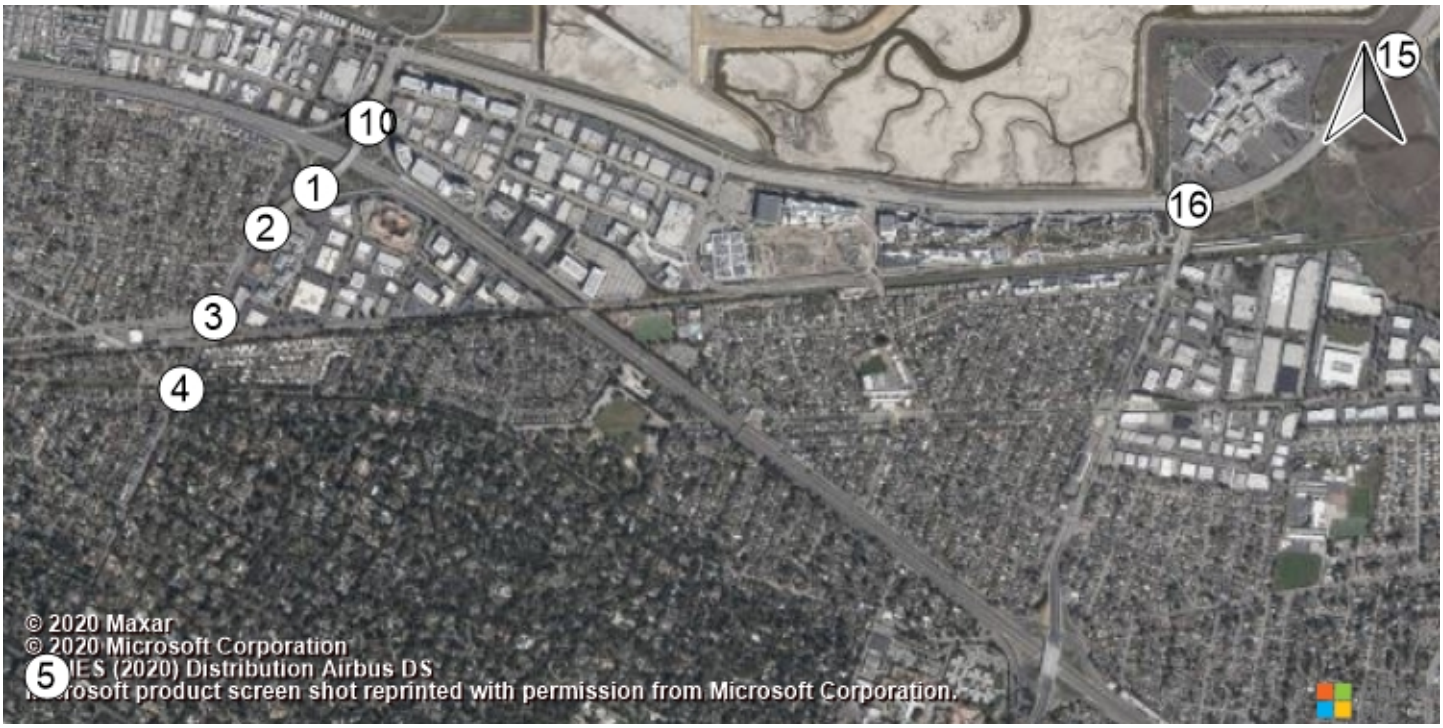


Chrysler Dr/Constitution Dr

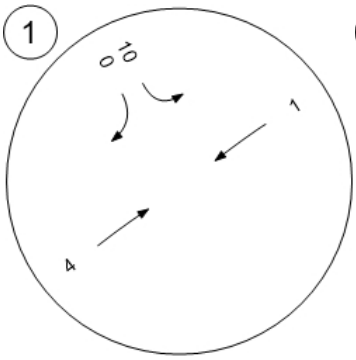


Traffic Volume - Net New Site Trips

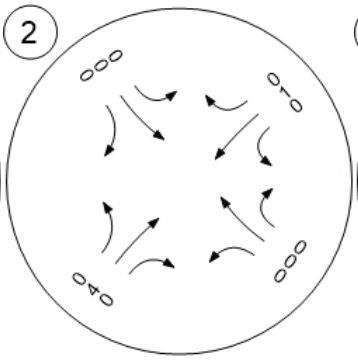
Project Only - PM



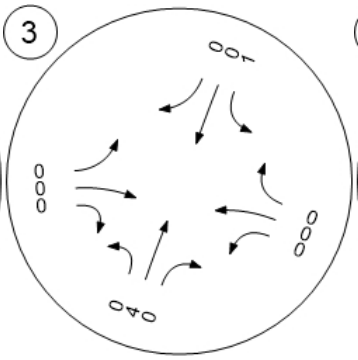
Marsh Rd (SR 84)/US 101 S



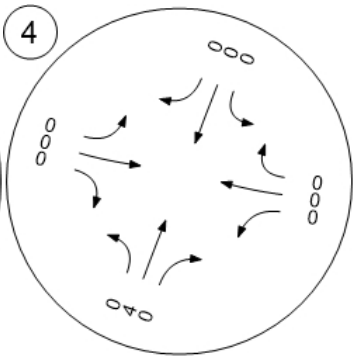
Marsh Rd/Rolison Rd-Scott D



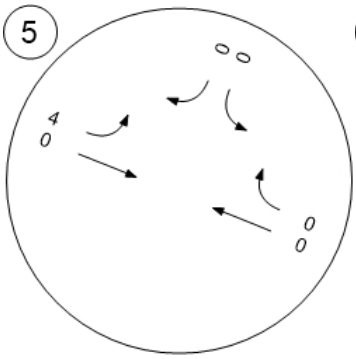
Marsh Rd/Florence St-Bohan



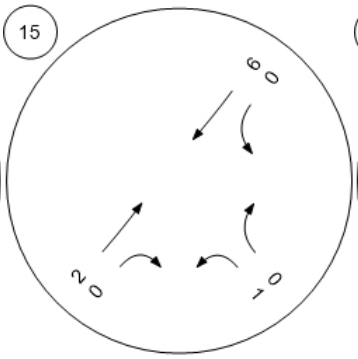
Marsh Rd/Bay Rd



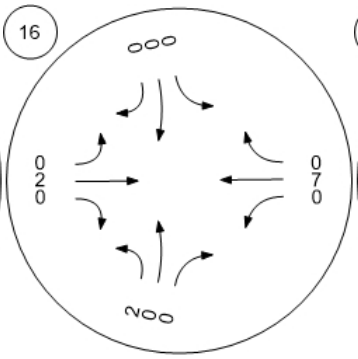
Middlefield Rd/Marsh Rd



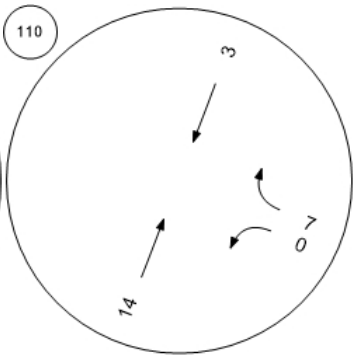
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

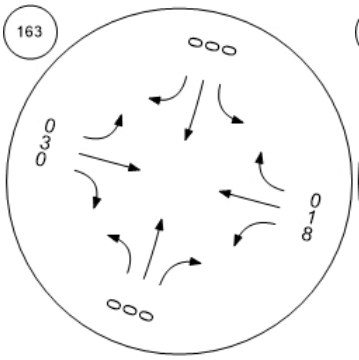


Marsh Road/101 NB Ramps

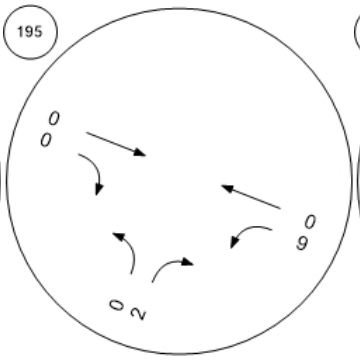


Traffic Volume - Net New Site Trips

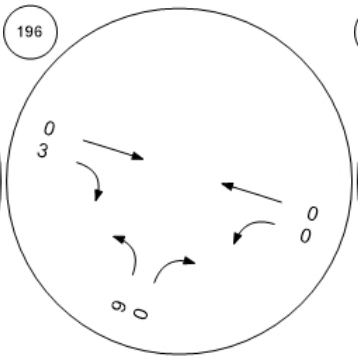
Bayfront Expy/Marsh Rd



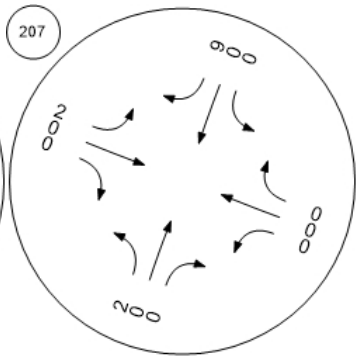
Bayfront Expy/Chilco St



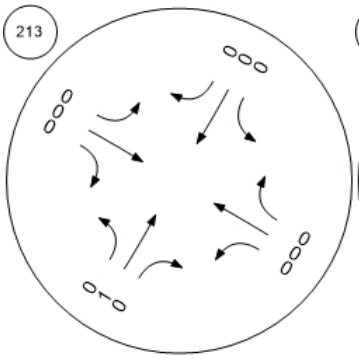
Bayfront Expy/Chrysler Drive



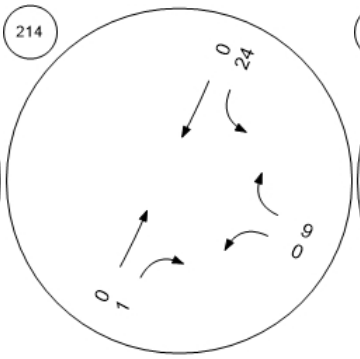
Chilco St/Constitution Dr



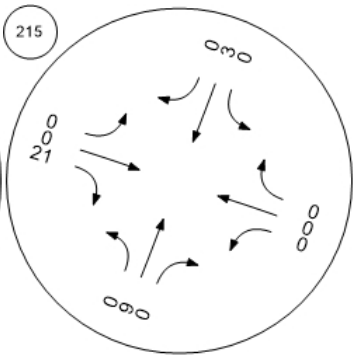
Chrysler Dr/Independence Dr



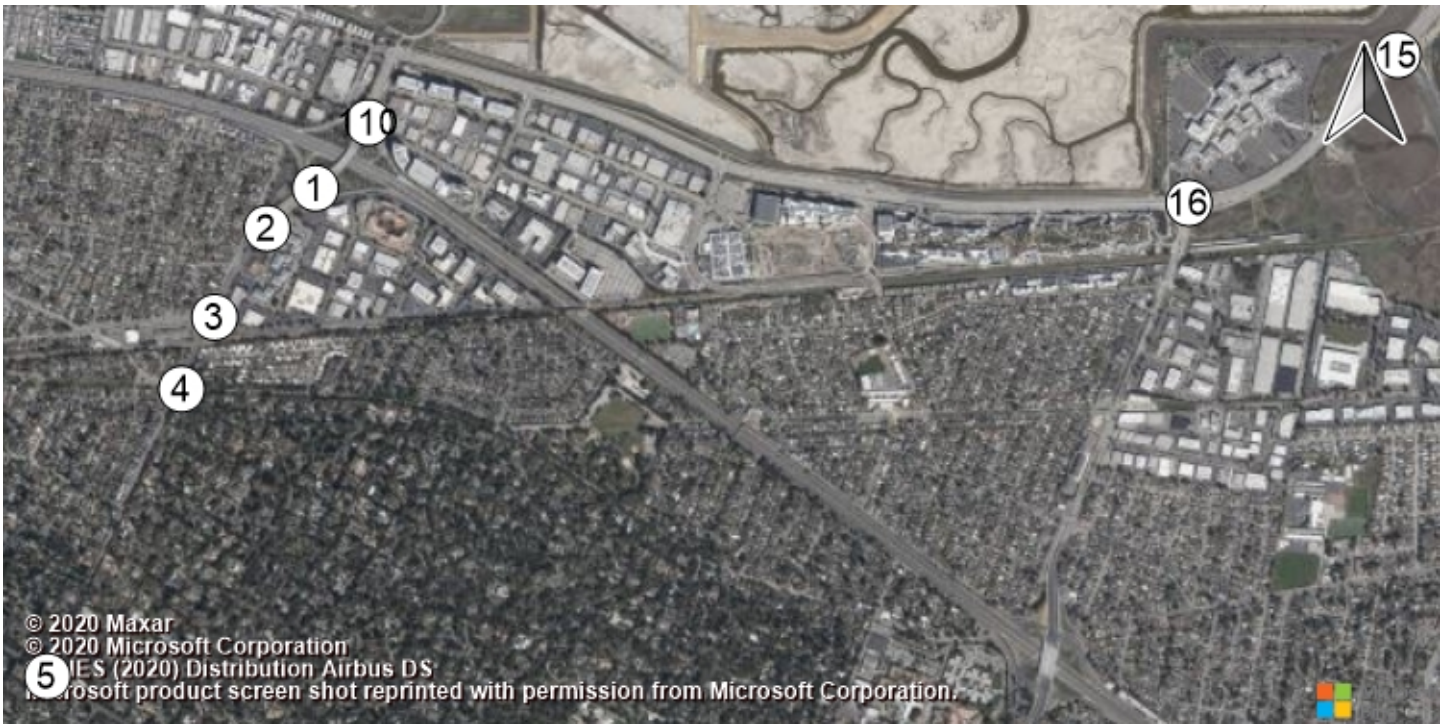
Chrysler Dr/Jefferson Dr



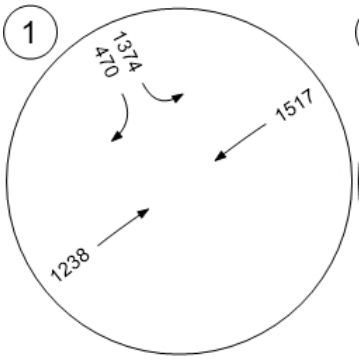
Chrysler Dr/Constitution Dr



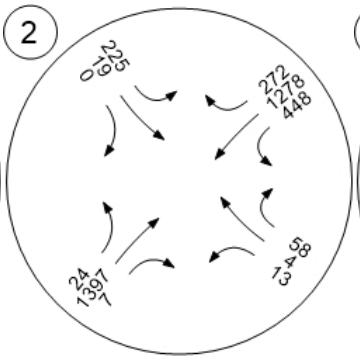
Traffic Volume - Future Total Volume



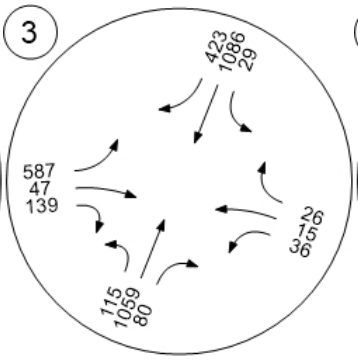
Marsh Rd (SR 84)/US 101 S



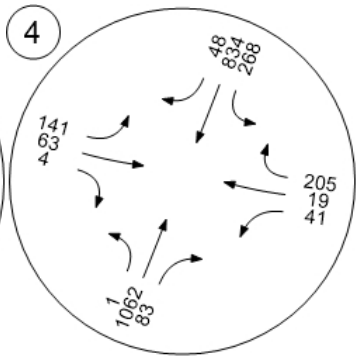
Marsh Rd/Rolison Rd-Scott D



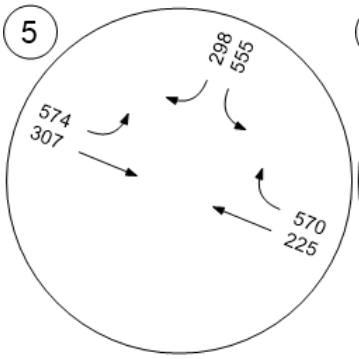
Marsh Rd/Florence St-Bohan



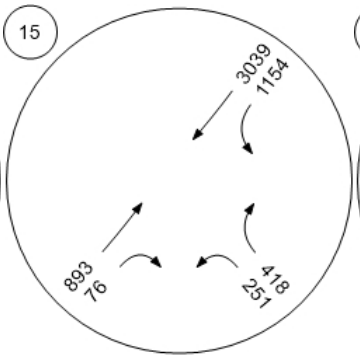
Marsh Rd/Bay Rd



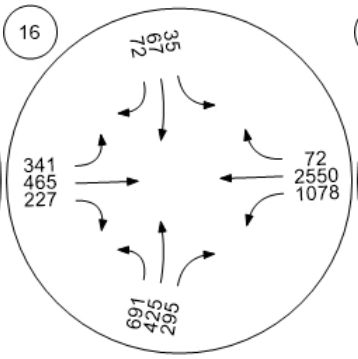
Middlefield Rd/Marsh Rd



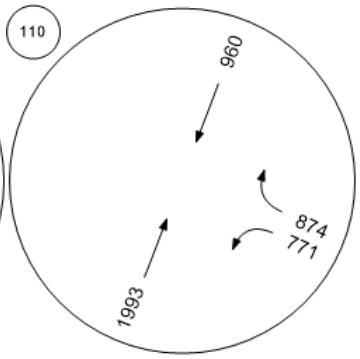
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

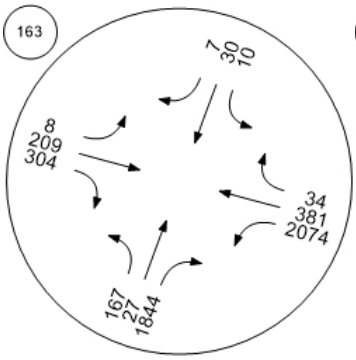


Marsh Road and US 101 NB

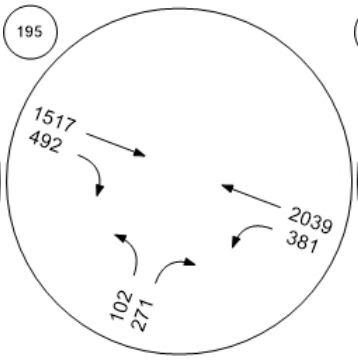


Traffic Volume - Future Total Volume

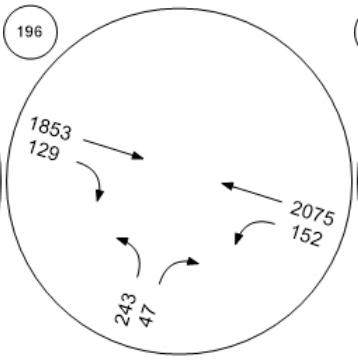
Bayfront Expy/Marsh Rd



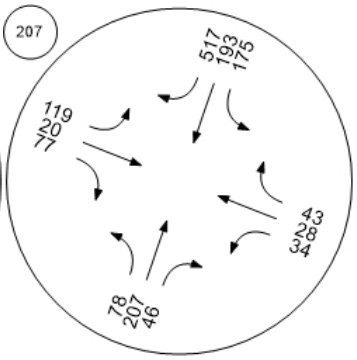
Bayfront Expy/Chilco St



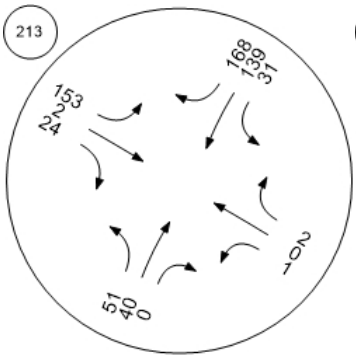
Bayfront Expy/Chrysler Drive



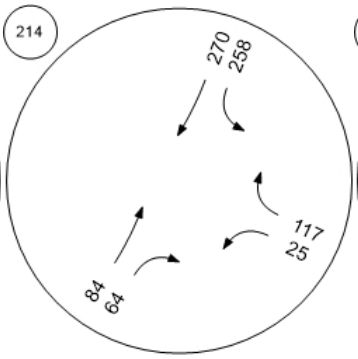
Chilco St/Constitution Dr



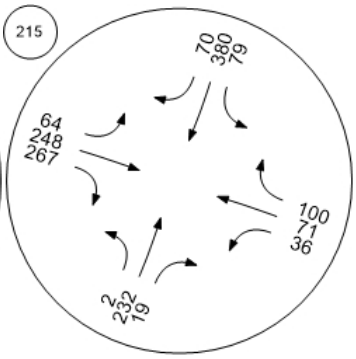
Chrysler Dr/Independence Dr



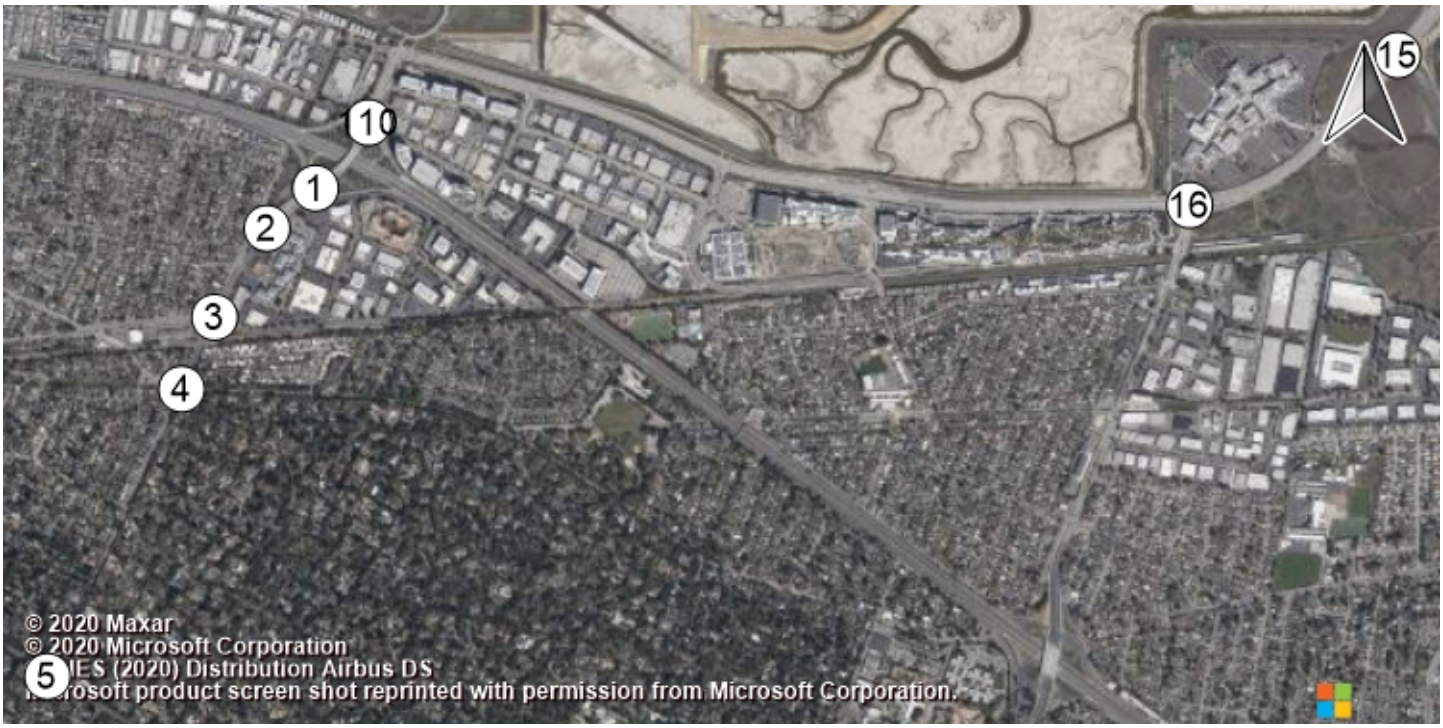
Chrysler Dr/Jefferson Dr



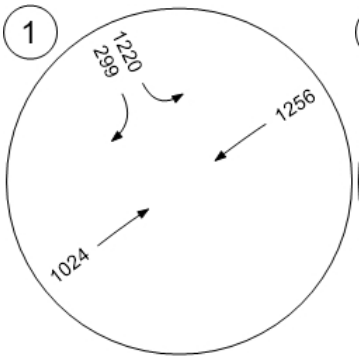
Chrysler Dr/Constitution Dr



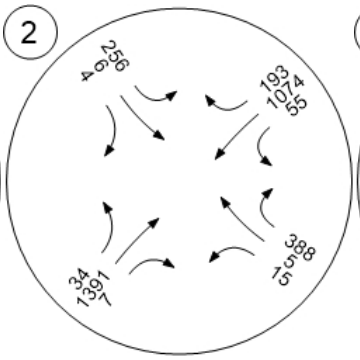
Traffic Volume - Future Total Volume



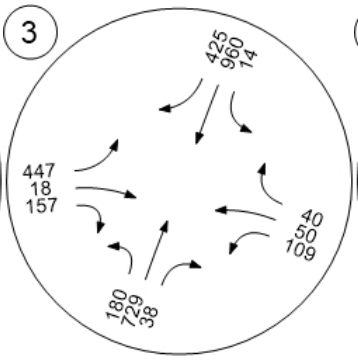
Marsh Rd (SR 84)/US 101 S



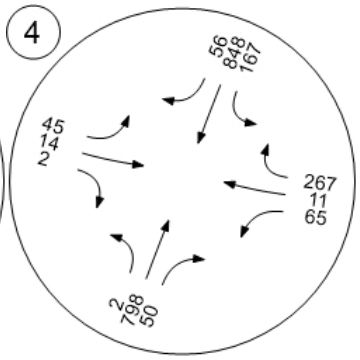
Marsh Rd/Rolison Rd-Scott D



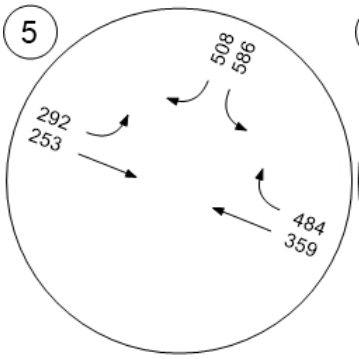
Marsh Rd/Florence St-Bohan



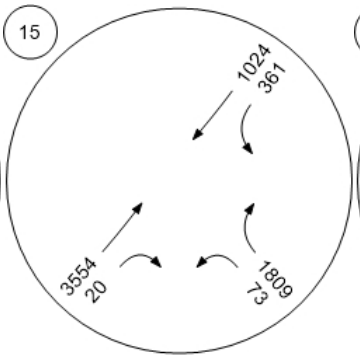
Marsh Rd/Bay Rd



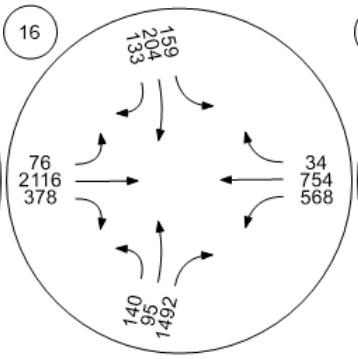
Middlefield Rd/Marsh Rd



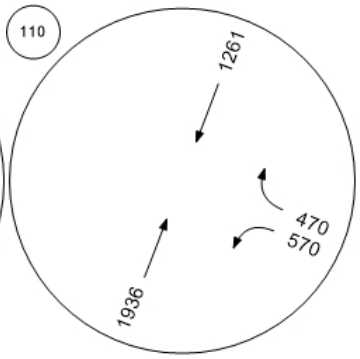
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

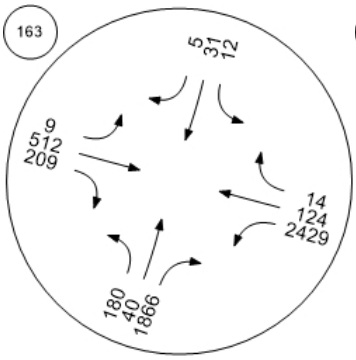


Marsh Road/101 NB Ramps

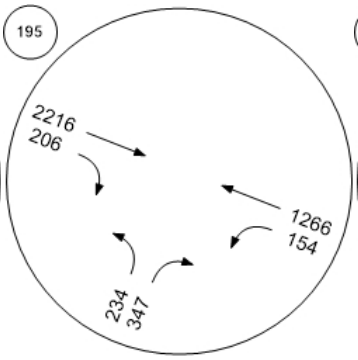


Traffic Volume - Future Total Volume

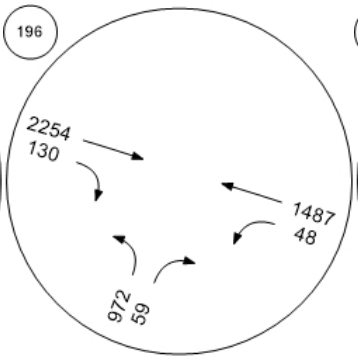
Bayfront Expy/Marsh Rd



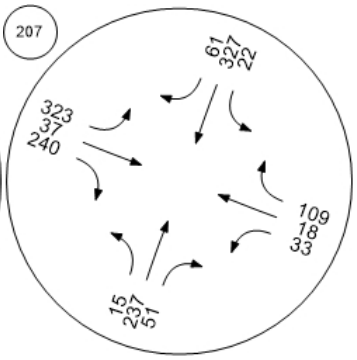
Bayfront Expy/Chilco St



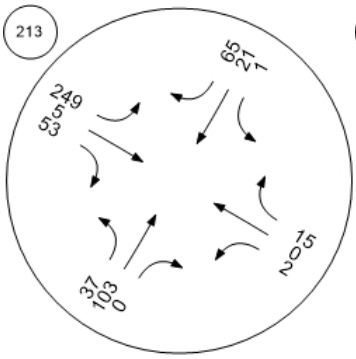
Bayfront Expy/Chrysler Drive



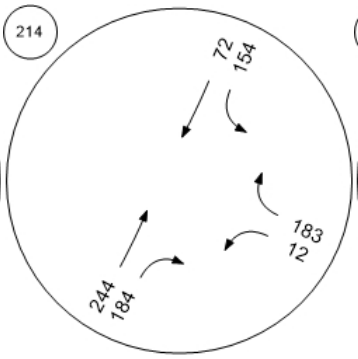
Chilco St/Constitution Dr



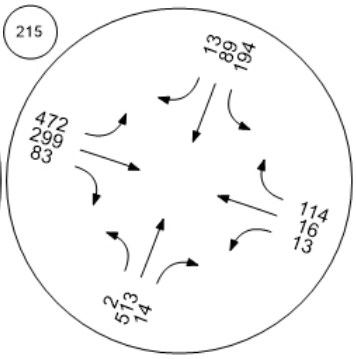
Chrysler Dr/Independence Dr



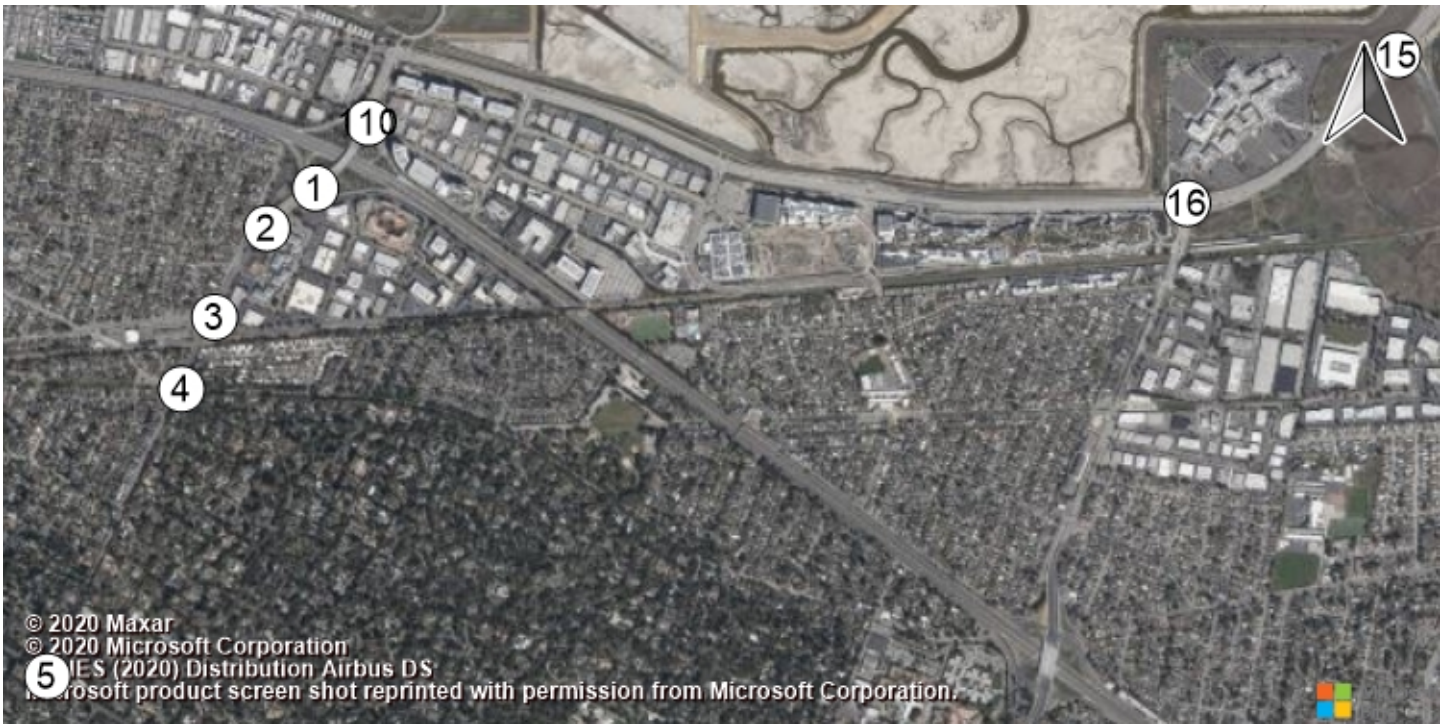
Chrysler Dr/Jefferson Dr



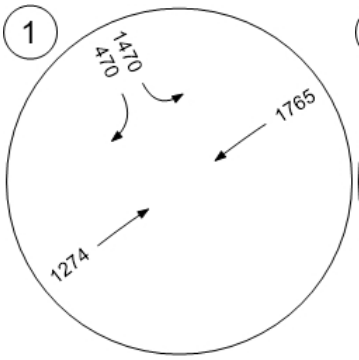
Chrysler Dr/Constitution Dr



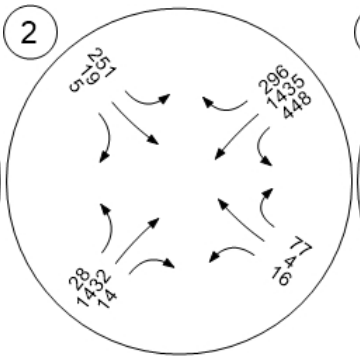
Traffic Volume - Future Total Volume



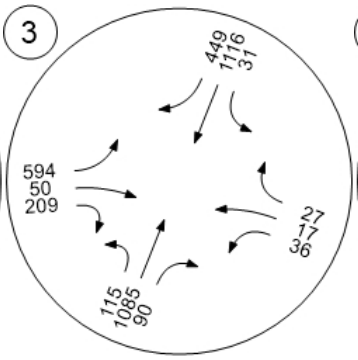
Marsh Rd (SR 84)/US 101 S



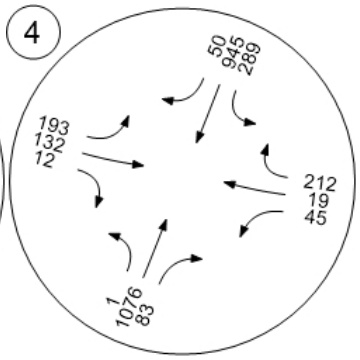
Marsh Rd/Rolison Rd-Scott D



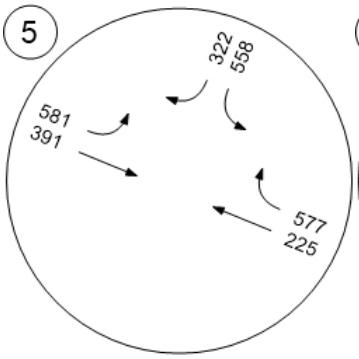
Marsh Rd/Florence St-Bohan



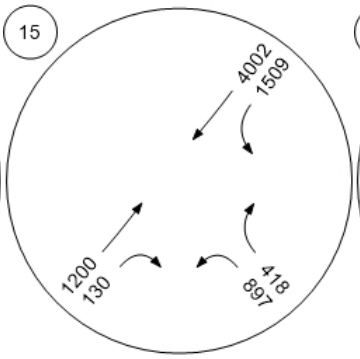
Marsh Rd/Bay Rd



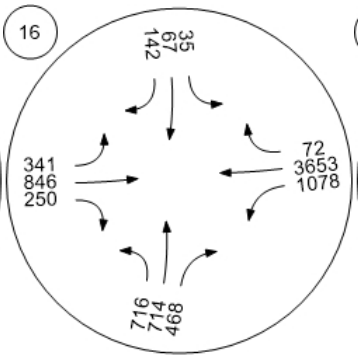
Middlefield Rd/Marsh Rd



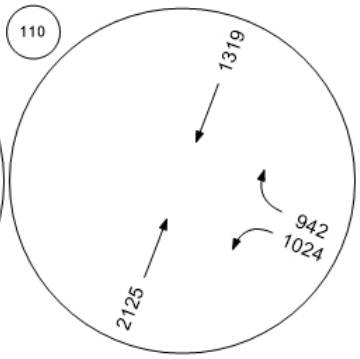
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

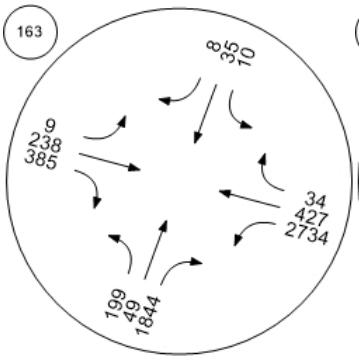


Marsh Road and US 101 NB

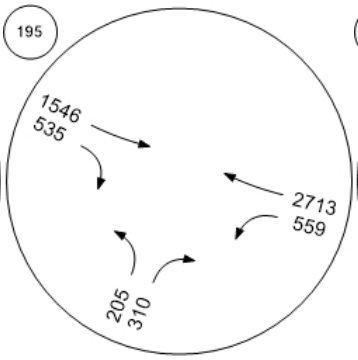


Traffic Volume - Future Total Volume

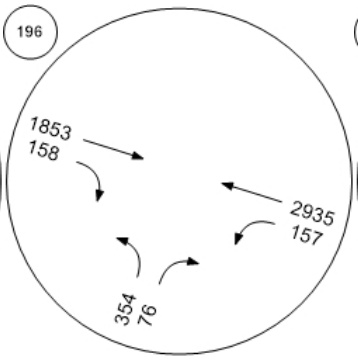
Bayfront Expy/Marsh Rd



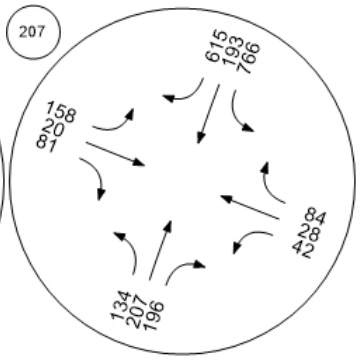
Bayfront Expy/Chilco St



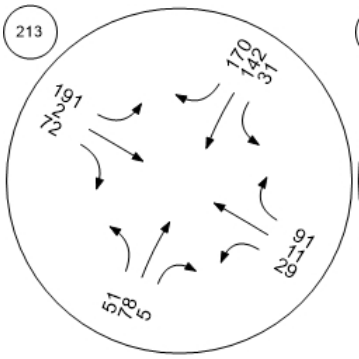
Bayfront Expy/Chrysler Drive



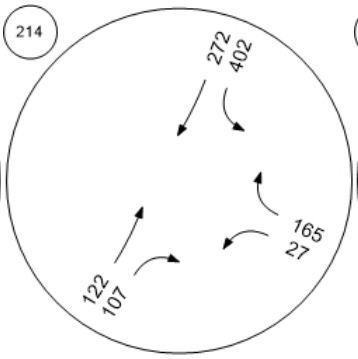
Chilco St/Constitution Dr



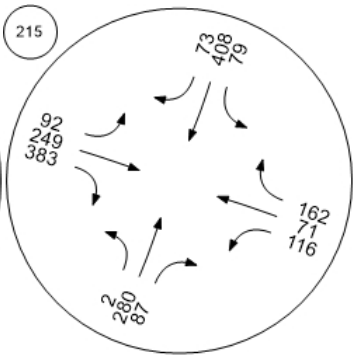
Chrysler Dr/Independence Dr



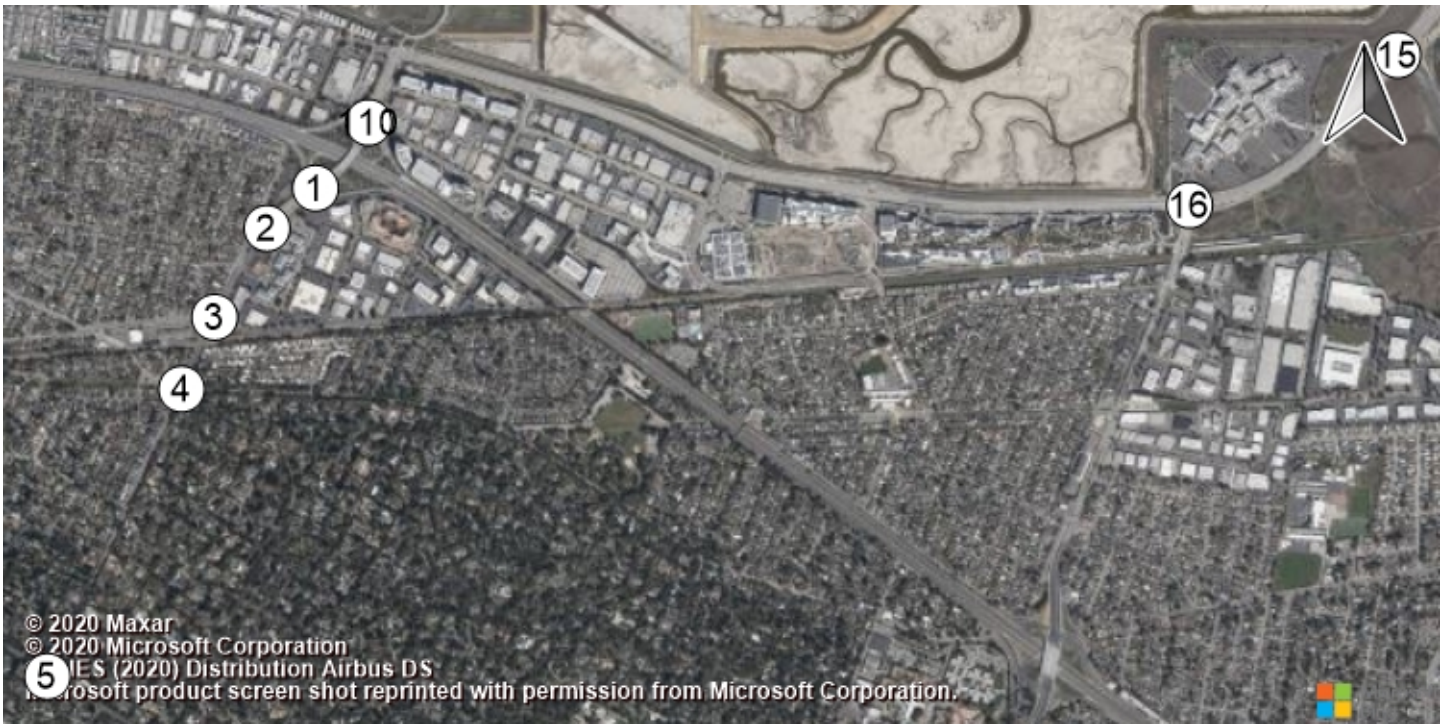
Chrysler Dr/Jefferson Dr



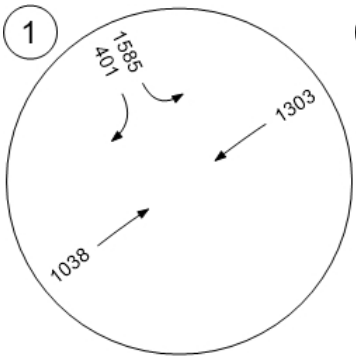
Chrysler Dr/Constitution Dr



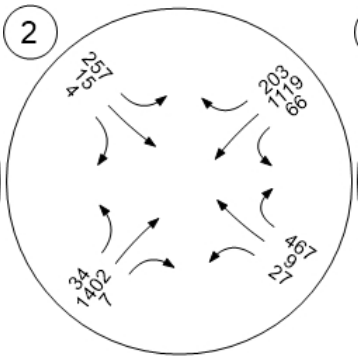
Traffic Volume - Future Total Volume



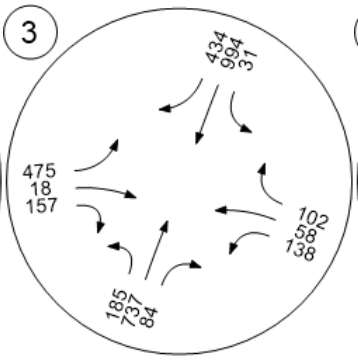
Marsh Rd (SR 84)/US 101 S



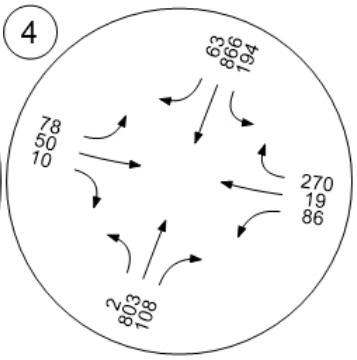
Marsh Rd/Rolison Rd-Scott D



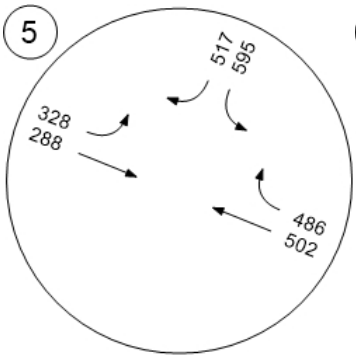
Marsh Rd/Florence St-Bohan



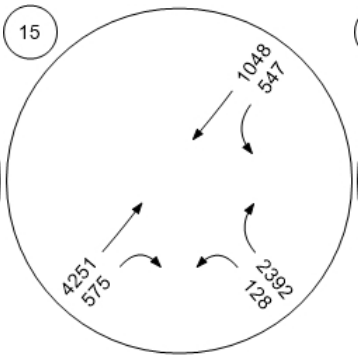
Marsh Rd/Bay Rd



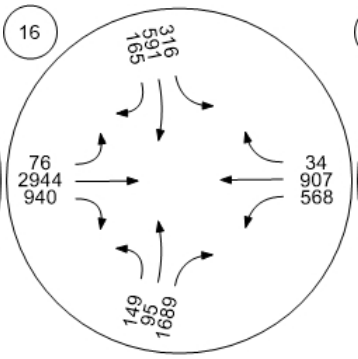
Middlefield Rd/Marsh Rd



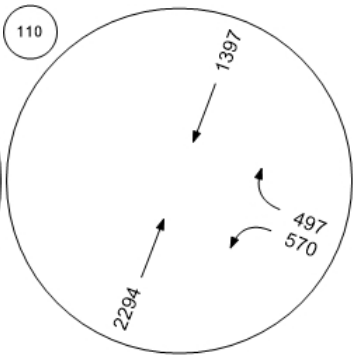
Bayfront Expy (SR 84)/Univer



Bayfront Expy (SR 84)/Willow

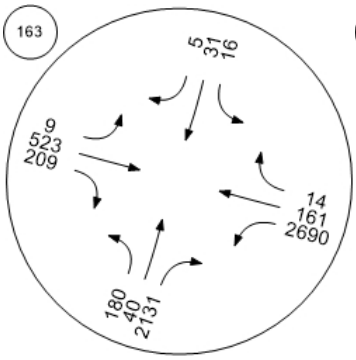


Marsh Road/101 NB Ramps

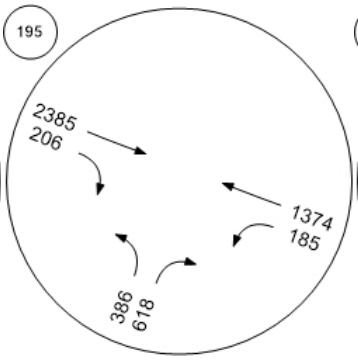


Traffic Volume - Future Total Volume

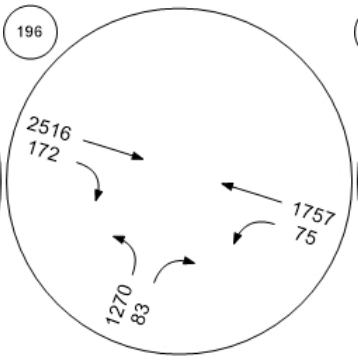
Bayfront Expy/Marsh Rd



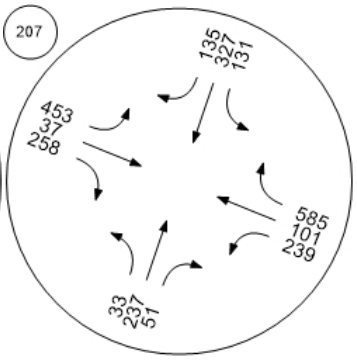
Bayfront Expy/Chilco St



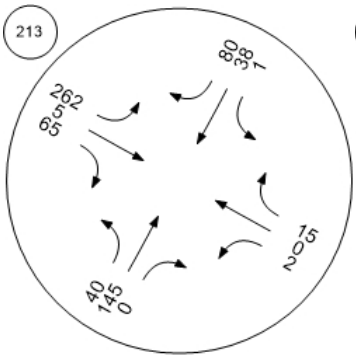
Bayfront Expy/Chrysler Drive



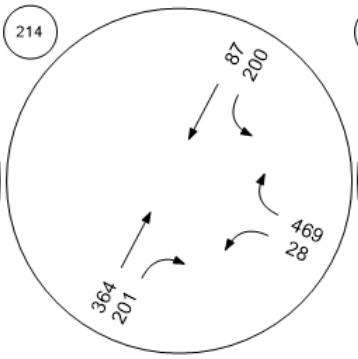
Chilco St/Constitution Dr



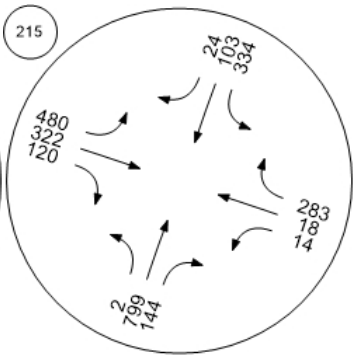
Chrysler Dr/Independence Dr



Chrysler Dr/Jefferson Dr



Chrysler Dr/Constitution Dr



APPENDIX D

HCM WORKSHEETS

Vistro File: \...\Existing Conditions_AM.vistro
Report File: \...\Existing AM.pdf
Scenario 16 Existing AM (2019 vols)
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.838	18.1	B
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.696	18.5	B
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.711	35.3	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.641	19.7	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	0.855	35.0	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Left	0.727	11.4	B
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Thru	0.967	106.0	F
110	Marsh Road and US 101 NB Ramps	Signalized	HCM 6th Edition	NWB Right	0.727	15.8	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.792	56.9	E
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.808	12.7	B
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.621	8.4	A
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	NB Left	0.613	28.3	C
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	39.3	E
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.084	18.6	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Thru	0.846	50.6	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Vistro File: \...\Existing Conditions_PM.vistro
Report File: \...\Existing PM.pdf
Scenario 16 Existing PM (2019 vols)
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.701	17.0	B
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.460	15.3	B
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.682	34.6	C
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.634	18.6	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	0.849	37.9	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Right	1.043	94.1	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Right	1.249	168.1	F
110	Marsh Road/101 NB Ramps	Signalized	HCM 6th Edition	WB Left	0.771	13.3	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.765	36.5	D
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.862	16.0	B
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.779	13.1	B
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	EB Left	0.646	36.2	D
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	16.7	C
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.041	19.0	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	WB Right	0.666	28.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Vistro File: \...\Existing Conditions_AM.vistro
Report File: \...\Near-Term AM.pdf
Scenario 18 Near Term AM (2019 vols)
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.935	22.9	C
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.724	20.0	B
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.768	38.3	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.722	22.7	C
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	0.990	73.8	E
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Left	0.815	12.7	B
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Left	1.229	193.1	F
110	Marsh Road and US 101 NB Ramps	Signalized	HCM 6th Edition	NB Thru	0.999	25.3	C
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.827	59.7	E
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.839	21.9	C
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.690	9.5	A
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	NB Left	0.711	33.8	C
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.012	59.0	F
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.118	23.2	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Thru	1.029	111.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Vistro File: \...\Existing Conditions_PM.vistro
Report File: \...\Near-Term PM.pdf
Scenario 18 Near Term PM (2019 vols)
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.793	17.7	B
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.542	15.1	B
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.772	37.0	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.650	18.4	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	WB Right	0.956	44.2	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Right	1.097	113.1	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Right	1.317	180.9	F
110	Marsh Road/101 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.808	13.3	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.898	37.4	D
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.942	25.3	C
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.863	20.1	C
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	EB Left	0.776	50.0	D
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	17.0	C
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.046	20.1	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Left	0.909	39.8	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Vistro File: \...\2040(c)_AM - 3723 Haven Ave.vistro
Report File: \...\Cumulative AM.pdf

Scenario 20 165 Jefferson - Cum No Proj AM
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	1.046	37.9	D
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.810	32.9	C
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.795	40.0	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	NB Right	0.835	28.6	C
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	1.042	81.2	F
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Left	1.171	101.0	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Thru	1.573	325.6	F
110	Marsh Road and US 101 NB Ramps	Signalized	HCM 6th Edition	NB Thru	1.070	34.9	C
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	1.071	103.1	F
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	WB Left	1.139	61.6	E
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.797	12.5	B
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	SB Right	0.862	85.3	F
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Left	1.504	307.4	F
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.284	48.3	E
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	WB Right	3.817	361.5	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Vistro File: \...\2040(c)_PM - 3723 Haven Ave.vistro
Report File: \...\Cumulative PM.pdf

Scenario 20 165 Jefferson - Cum No Proj PM
6/26/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.927	42.1	D
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.667	22.9	C
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.836	46.1	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.714	19.9	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	WB Right	0.975	53.4	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Right	1.395	215.3	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	SB Thru	2.080	373.8	F
110	Marsh Road/101 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.933	18.0	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.941	37.1	D
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	1.176	67.1	E
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	NB Left	1.018	62.7	E
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	EB Left	1.498	252.2	F
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	21.2	C
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.179	141.8	F
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Left	2.569	242.7	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Report File: \...\7 - Near-Term plus Project AM.pdf
Scenario 19 Near Term Plus Project AM (2019 vols)
9/8/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.938	23.3	C
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.726	20.0	C
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.770	38.3	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.722	22.7	C
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	0.992	74.2	E
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Left	0.815	12.8	B
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Left	1.232	193.4	F
110	Marsh Road and US 101 NB Ramps	Signalized	HCM 6th Edition	NB Thru	1.003	25.7	C
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.834	59.8	E
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.857	23.3	C
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.700	9.7	A
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	NB Left	0.732	36.0	D
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.012	60.1	F
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.129	24.7	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Thru	1.057	120.2	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 213: Chrysler Dr/Independence Dr

Control Type:	All-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name	Chrysler Drive			Chrysler Drive						Independence Drive		
Approach	Northbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Chrysler Drive			Chrysler Drive						Independence Drive		
Base Volume Input [veh/h]	51	29	0	31	134	168	1	0	2	124	2	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	9.10	20.00	100.00	33.30	0.00	10.30	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	5	0	0	0	0	29	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	40	0	31	139	168	1	0	2	153	2	24
Peak Hour Factor	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	14	0	11	48	58	0	0	1	53	1	8
Total Analysis Volume [veh/h]	71	56	0	43	193	233	1	0	3	213	3	33
Pedestrian Volume [ped/h]	70			0			17			137		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	647	718	624	548	672
Degree of Utilization, x	0.20	0.65	0.01	0.39	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.72	4.89	0.02	1.87	0.15
95th-Percentile Queue Length [ft]	18.11	122.17	0.48	46.68	3.87
Approach Delay [s/veh]	9.92	16.96	8.80	12.79	
Approach LOS	A	C	A	B	
Intersection Delay [s/veh]	14.64				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 215: Chrysler Dr/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	Chrysler Drive						Constitution Drive					
Approach	Southbound			Eastbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

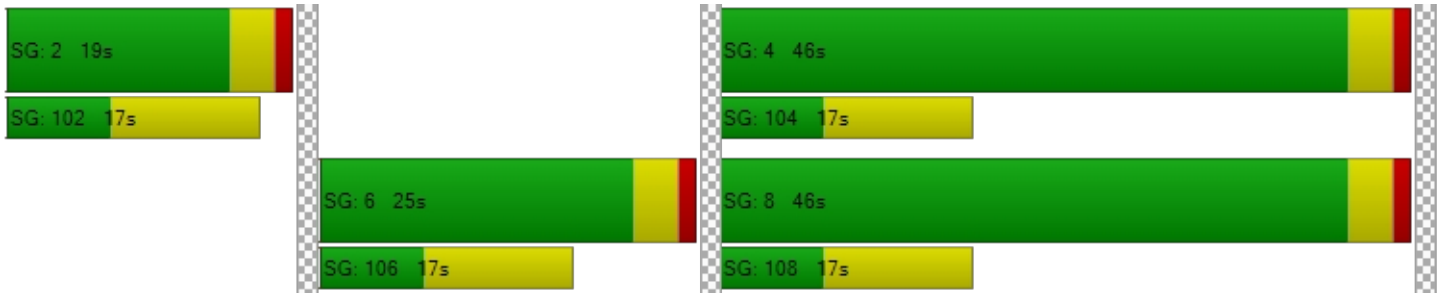
d_M, Delay for Movement [s/veh]	24.24	37.93	37.93	24.07	28.69	35.46	41.80	41.80	41.80	18.04	18.16	18.30
Movement LOS	C	D	D	C	C	D	D	D	D	B	B	B
d_A, Approach Delay [s/veh]	35.88			31.31			41.80			18.17		
Approach LOS	D			C			D			B		
d_I, Intersection Delay [s/veh]	32.12											
Intersection LOS	C											
Intersection V/C	0.750											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.381	2.329	2.139	2.278
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	467	333	933
d_b, Bicycle Delay [s]	12.80	26.45	31.25	12.80
I_b,int, Bicycle LOS Score for Intersection	2.530	2.622	1.939	1.791
Bicycle LOS	B	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Report File: \...\8 - Near-Term plus Project PM.pdf
Scenario 19 Near Term Plus Project PM (2019 vols)
9/7/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.797	17.8	B
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.542	15.1	B
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.773	37.0	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.652	18.4	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	WB Right	0.956	44.6	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Right	1.097	113.3	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Right	1.317	180.9	F
110	Marsh Road/101 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.815	13.5	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.900	37.7	D
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	0.946	26.3	C
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.864	20.4	C
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	SB Thru	0.788	52.7	D
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	17.1	C
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.052	21.9	C
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Left	0.919	40.7	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 213: Chrysler Dr/Independence Dr

Control Type:	All-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

Intersection Setup

Name	Chrysler Drive									Independence Drive		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Chrysler Drive									Independence Drive		
Base Volume Input [veh/h]	37	101	0	1	19	65	2	0	15	244	5	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	3.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	5.70	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	0	0	0	5	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	103	0	1	21	65	2	0	15	249	5	53
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	31	0	0	6	20	1	0	5	76	2	16
Total Analysis Volume [veh/h]	45	126	0	1	26	79	2	0	18	304	6	65
Pedestrian Volume [ped/h]	31			0			34			1		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	693	752	759	617	793
Degree of Utilization, x	0.25	0.14	0.03	0.50	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.97	0.49	0.08	2.82	0.27
95th-Percentile Queue Length [ft]	24.20	12.23	2.03	70.50	6.68
Approach Delay [s/veh]	9.89	8.57	7.87	13.12	
Approach LOS	A	A	A	B	
Intersection Delay [s/veh]	11.43				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 215: Chrysler Dr/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

Intersection Setup

Name				Chrysler Drive						Constitution Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

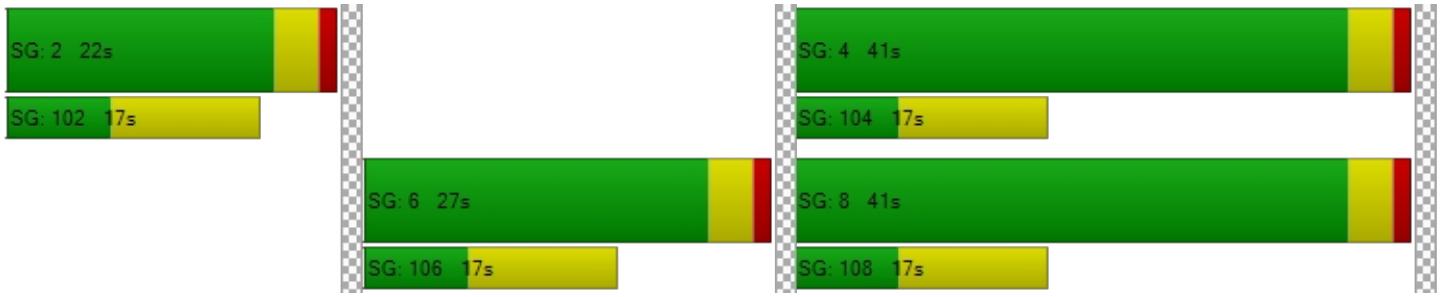
d_M, Delay for Movement [s/veh]	23.50	23.79	24.13	56.33	19.83	19.83	37.17	25.73	22.05	53.66	53.66	53.66
Movement LOS	C	C	C	E	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	23.80			43.75			31.70			53.66		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	33.09											
Intersection LOS	C											
Intersection V/C	0.697											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.172	2.471	2.349	2.307
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	511	400
d_b, Bicycle Delay [s]	15.61	15.61	24.94	28.80
l_b,int, Bicycle LOS Score for Intersection	1.996	2.048	2.969	1.796
Bicycle LOS	A	B	C	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 21 165 Jefferson - Cum Plus Proj AM
9/8/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	1.049	38.6	D
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.811	32.9	C
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.797	40.1	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	NB Right	0.835	28.7	C
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	EB Left	1.044	81.9	F
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Left	1.172	101.2	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	NB Thru	1.575	325.8	F
110	Marsh Road and US 101 NB Ramps	Signalized	HCM 6th Edition	NB Thru	1.074	35.5	D
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	1.078	105.2	F
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	WB Left	1.160	65.0	E
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	WB Left	0.807	13.2	B
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	SB Right	0.882	91.2	F
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Left	1.513	311.3	F
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.312	52.5	F
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	WB Right	3.908	371.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 163: Bayfront Expy/Marsh Rd

Control Type:	Signalized	Delay (sec / veh):	82.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name				Marsh Road			Haven Avenue			Bayfront Expressway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	351.80	351.80	29.51	54.41	54.43	54.46	77.56	78.35	87.95	101.74	29.70	29.70
Movement LOS	F	F	C	D	D	D	E	E	F	F	C	C
d_A, Approach Delay [s/veh]	67.67			54.43			84.23			91.35		
Approach LOS	E			D			F			F		
d_I, Intersection Delay [s/veh]	81.98											
Intersection LOS	F											
Intersection V/C	0.947											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	71.25	71.25	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.017	2.481	0.000
Crosswalk LOS	F	B	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	80	349	393	954
d_b, Bicycle Delay [s]	73.76	54.89	52.34	21.90
l_b,int, Bicycle LOS Score for Intersection	5.155	1.604	2.102	7.051
Bicycle LOS	F	A	B	F

Sequence

Ring 1	-	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 195: Bayfront Expy/Chilco St

Control Type:	Signalized	Delay (sec / veh):	48.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.012

Intersection Setup

Name	Chilco Street		Bayfront Expy		Bayfront Expy	
Approach	Northbound		Westbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	50.00	520.00	100.00	100.00	660.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Movement, Approach, & Intersection Results

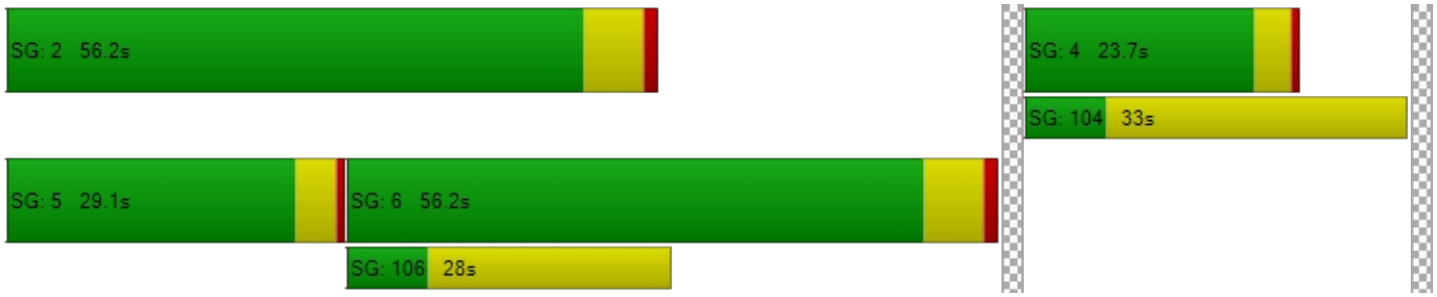
d_M, Delay for Movement [s/veh]	55.77	60.94	304.12	9.66	24.02	35.30
Movement LOS	E	E	F	A	C	D
d_A, Approach Delay [s/veh]	58.58		59.94		26.92	
Approach LOS	E		E		C	
d_I, Intersection Delay [s/veh]	48.11					
Intersection LOS	D					
Intersection V/C	1.012					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.629	3.721	3.815
Crosswalk LOS	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	1111	1111
d_b, Bicycle Delay [s]	27.25	8.90	8.89
l_b,int, Bicycle LOS Score for Intersection	2.454	3.454	2.764
Bicycle LOS	B	C	C

Sequence

Ring 1	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 196: Bayfront Expy/Chrysler Drive

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

Name	Chrysler Drive		Bayfront Expy		Bayfront Expy	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	280.00	100.00	290.00	345.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.56	37.37	12.19	8.30	36.89	7.56
Movement LOS	D	D	B	A	D	A
d_A, Approach Delay [s/veh]	35.88		11.88		9.05	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	12.16					
Intersection LOS	B					
Intersection V/C	0.785					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.287	3.724	3.675
Crosswalk LOS	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	1111	1111
d_b, Bicycle Delay [s]	23.47	8.89	8.89
l_b,int, Bicycle LOS Score for Intersection	2.291	2.700	3.313
Bicycle LOS	B	B	C

Sequence

Ring 1	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 207: Chilco St/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	52.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name	Chilco Street			Chilco Street			Constitution Drive			Constitution Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

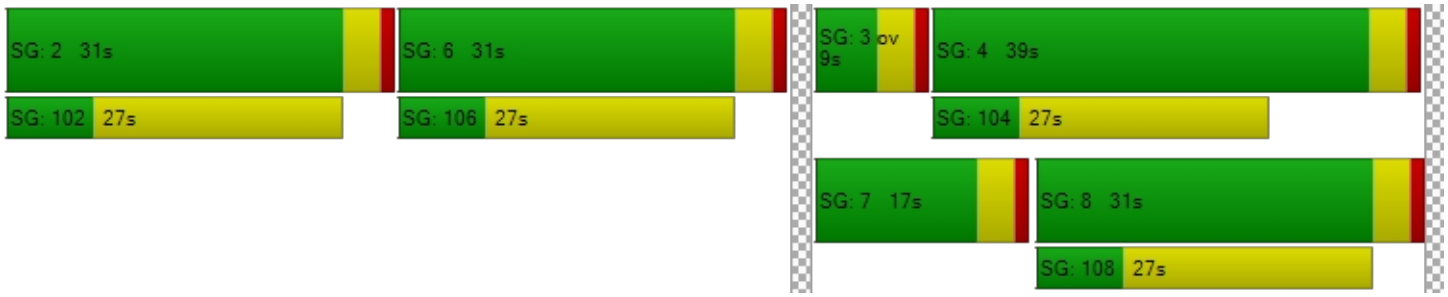
d_M, Delay for Movement [s/veh]	53.53	104.28	104.28	41.39	17.67	52.09	45.38	34.77	15.94	48.14	48.14	51.26
Movement LOS	D	F	F	D	B	D	D	C	B	D	D	D
d_A, Approach Delay [s/veh]	91.59			42.67			35.32			49.96		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	52.76											
Intersection LOS	D											
Intersection V/C	0.779											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.55	44.55	44.55	44.55
l_p,int, Pedestrian LOS Score for Intersection	2.294	2.798	2.399	2.423
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	491	636	491	491
d_b, Bicycle Delay [s]	31.31	25.57	31.31	31.31
l_b,int, Bicycle LOS Score for Intersection	2.464	4.211	1.995	1.820
Bicycle LOS	B	D	A	A

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 213: Chrysler Dr/Independence Dr

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

Intersection Setup

Name	Chrysler Drive			Chrysler Drive						Independence Drive		
Approach	Northbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

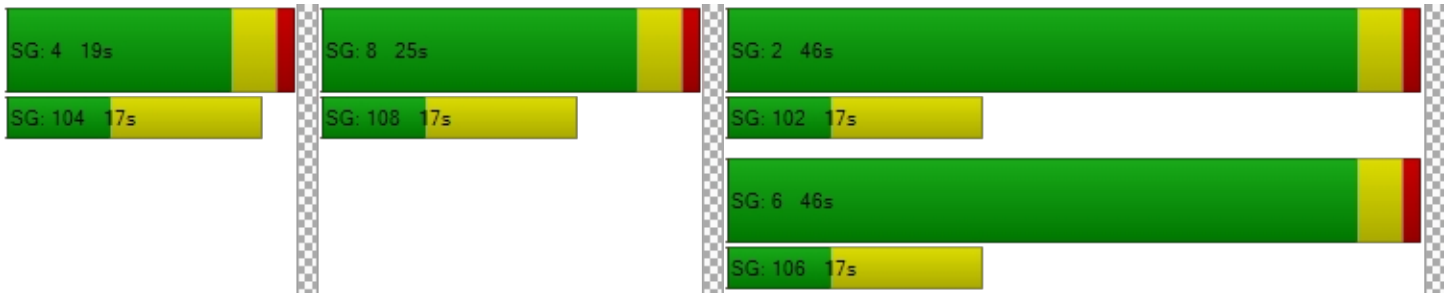
d_M, Delay for Movement [s/veh]	13.58	13.58	13.58	41.15	41.15	41.15	34.19	34.19	34.19	26.89	26.89	22.43
Movement LOS	B	B	B	D	D	D	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.58			41.15			34.19			25.68		
Approach LOS	B			D			C			C		
d_I, Intersection Delay [s/veh]	31.17											
Intersection LOS	C											
Intersection V/C	0.744											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.969	2.190	1.871	2.228
Crosswalk LOS	A	B	A	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	933	333	467
d_b, Bicycle Delay [s]	12.80	12.80	31.25	26.45
I_b,int, Bicycle LOS Score for Intersection	1.867	2.345	1.858	2.167
Bicycle LOS	A	B	A	B

Sequence

Ring 1	4	8	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 214: Chrysler Dr/Jefferson Dr

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.934

Intersection Setup

Name	Chrysler Drive		Chrysler Drive		Jefferson Drive	
Approach	Southbound		Northeastbound		Northwestbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.66	46.66	4.48	4.48	22.99	33.82
Movement LOS	D	D	A	A	C	C
d_A, Approach Delay [s/veh]	46.66		4.48		32.28	
Approach LOS	D		A		C	
d_I, Intersection Delay [s/veh]	35.31					
Intersection LOS	D					
Intersection V/C	0.934					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.61	24.61	24.61
l_p,int, Pedestrian LOS Score for Intersection	2.215	1.984	2.764
Crosswalk LOS	B	A	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	970	970	788
d_b, Bicycle Delay [s]	8.76	8.76	12.12
l_b,int, Bicycle LOS Score for Intersection	2.782	1.975	1.560
Bicycle LOS	C	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 215: Chrysler Dr/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	52.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.916

Intersection Setup

Name	Chrysler Drive			Constitution Drive			Constitution Drive			Chrysler Drive		
Approach	Southbound			Eastbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

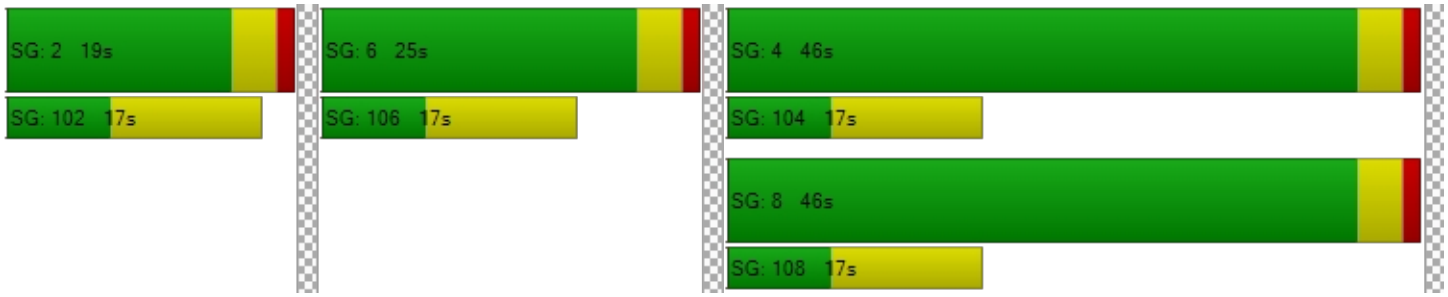
d_M, Delay for Movement [s/veh]	20.77	73.46	73.46	146.14	23.66	44.04	69.35	69.35	22.83	39.94	40.81	42.87
Movement LOS	C	E	E	F	C	D	E	E	C	D	D	D
d_A, Approach Delay [s/veh]	66.01			49.96			47.77			41.29		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	52.47											
Intersection LOS	D											
Intersection V/C	0.916											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.572	2.366	2.216	2.584
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	933	933	333
d_b, Bicycle Delay [s]	26.45	12.80	12.80	31.25
l_b,int, Bicycle LOS Score for Intersection	2.586	2.888	2.200	1.898
Bicycle LOS	B	C	B	A

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 21 165 Jefferson - Cum Plus Proj PM
9/8/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marsh Rd (SR 84)/US 101 SB Offramp	Signalized	HCM 6th Edition	SEB Left	0.931	43.3	D
2	Marsh Rd/Rolison Rd-Scott Dr	Signalized	HCM 6th Edition	NEB Left	0.667	22.9	C
3	Marsh Rd/Florence St-Bohannon Dr	Signalized	HCM 6th Edition	NB Left	0.836	46.1	D
4	Marsh Rd/Bay Rd	Signalized	HCM 6th Edition	SB Left	0.715	20.0	B
5	Middlefield Rd/Marsh Rd	Signalized	HCM 6th Edition	WB Right	0.975	54.0	D
15	Bayfront Expy (SR 84) /University Ave (SR 109)	Signalized	HCM 6th Edition	NWB Right	1.396	215.2	F
16	Bayfront Expy (SR 84)/Willow Rd (SR 114)	Signalized	HCM 6th Edition	SB Thru	2.082	374.5	F
110	Marsh Road/101 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.940	18.7	B
163	Bayfront Expy/Marsh Rd	Signalized	HCM 6th Edition	NB Left	0.943	37.4	D
195	Bayfront Expy/Chilco St	Signalized	HCM 6th Edition	NB Right	1.185	68.6	E
196	Bayfront Expy/Chrysler Drive	Signalized	HCM 6th Edition	NB Left	1.020	63.9	E
207	Chilco St/Constitution Dr	Signalized	HCM 6th Edition	EB Left	1.508	255.6	F
213	Chrysler Dr/Independence Dr	Two-way stop	HCM 6th Edition	SEB Thru	0.011	21.3	C
214	Chrysler Dr/Jefferson Dr	Two-way stop	HCM 6th Edition	NWB Left	0.203	162.2	F
215	Chrysler Dr/Constitution Dr	Signalized	HCM 6th Edition	SB Left	2.633	249.8	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 163: Bayfront Expy/Marsh Rd

Control Type:	Signalized	Delay (sec / veh):	38.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.944

Intersection Setup

Name				Marsh Road			Haven Avenue			Bayfront Expressway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	347.42	347.42	10.23	75.29	75.29	75.29	78.02	84.04	72.77	25.25	11.82	11.82
Movement LOS	F	F	B	E	E	E	E	F	E	C	B	B
d_A, Approach Delay [s/veh]	41.88			75.29			80.79			24.42		
Approach LOS	D			E			F			C		
d_I, Intersection Delay [s/veh]	38.64											
Intersection LOS	D											
Intersection V/C	0.944											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	71.25	71.25	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.008	2.436	0.000
Crosswalk LOS	F	B	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	80	349	393	954
d_b, Bicycle Delay [s]	73.73	54.59	51.68	21.91
l_b,int, Bicycle LOS Score for Intersection	5.602	1.604	2.197	6.485
Bicycle LOS	F	A	B	F

Sequence

Ring 1	-	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 195: Bayfront Expy/Chilco St

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.969

Intersection Setup

Name	Chilco Street		Bayfront Expy		Bayfront Expressway (SR 84)	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	50.00	100.00	660.00	520.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.65	72.46	20.23	11.20	180.19	6.53
Movement LOS	D	E	C	B	F	A
d_A, Approach Delay [s/veh]	65.69		19.51		27.15	
Approach LOS	E		B		C	
d_I, Intersection Delay [s/veh]	30.82					
Intersection LOS	C					
Intersection V/C	0.969					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.592	3.245	3.277
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	1111	1111
d_b, Bicycle Delay [s]	27.29	8.89	8.89
l_b,int, Bicycle LOS Score for Intersection	3.342	3.092	2.481
Bicycle LOS	C	C	B

Sequence

Ring 1	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 196: Bayfront Expy/Chrysler Drive

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.903

Intersection Setup

Name	Chrysler Drive		Bayfront Expy		Bayfront Expy	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	280.00	100.00	290.00	345.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.62	78.66	23.23	12.12	48.59	10.58
Movement LOS	D	E	C	B	D	B
d_A, Approach Delay [s/veh]	55.21		22.52		12.15	
Approach LOS	E		C		B	
d_I, Intersection Delay [s/veh]	26.81					
Intersection LOS	C					
Intersection V/C	0.903					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.462	3.791	3.538
Crosswalk LOS	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	1111	1111
d_b, Bicycle Delay [s]	23.47	8.90	8.89
l_b,int, Bicycle LOS Score for Intersection	3.838	3.068	2.588
Bicycle LOS	D	C	B

Sequence

Ring 1	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 207: Chilco St/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	124.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.161

Intersection Setup

Name	Chilco Street			Chilco Street			Constitution Drive			Constitution Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

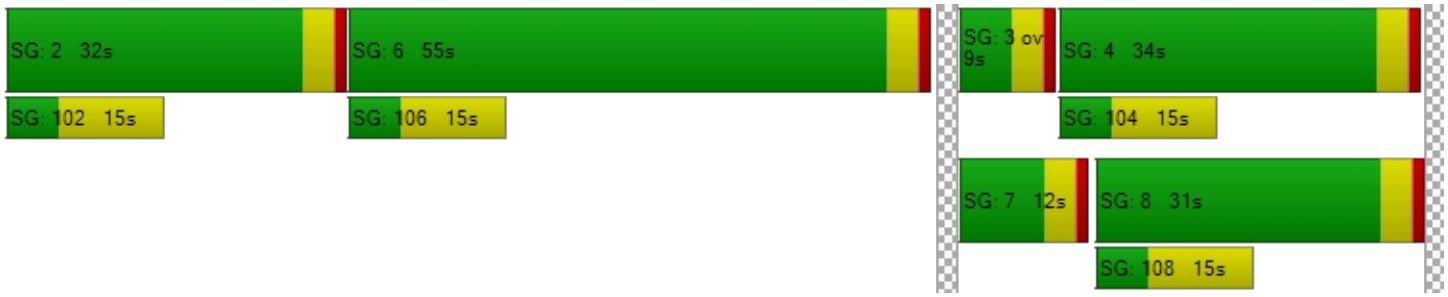
d_M, Delay for Movement [s/veh]	77.08	101.21	101.21	64.91	90.45	47.61	295.71	42.11	17.88	89.81	89.81	122.89
Movement LOS	E	F	F	E	F	D	F	D	B	F	F	F
d_A, Approach Delay [s/veh]	98.70			75.08			187.41			113.67		
Approach LOS	F			E			F			F		
d_I, Intersection Delay [s/veh]	124.28											
Intersection LOS	F											
Intersection V/C	1.161											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	56.31	56.31	56.31
I_p,int, Pedestrian LOS Score for Intersection	2.382	2.817	2.432	2.467
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	462	431	785
d_b, Bicycle Delay [s]	40.80	38.46	40.02	24.00
I_b,int, Bicycle LOS Score for Intersection	2.162	2.672	2.962	3.295
Bicycle LOS	B	B	C	C

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 213: Chrysler Dr/Independence Dr

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.352

Intersection Setup

Name	Chrysler Drive									Independence Drive		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

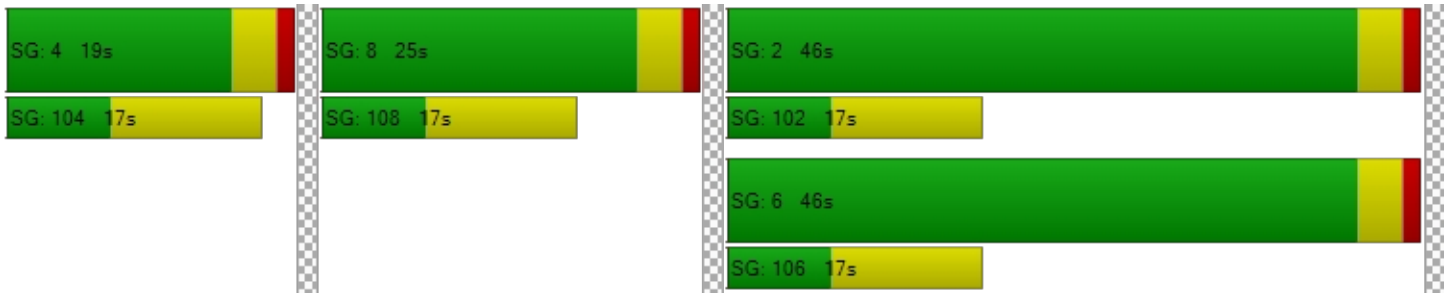
d_M, Delay for Movement [s/veh]	9.85	9.85	9.85	9.16	9.16	9.16	20.97	20.97	20.97	9.61	9.61	6.77
Movement LOS	A	A	A	A	A	A	C	C	C	A	A	A
d_A, Approach Delay [s/veh]	9.85			9.16			20.97			9.05		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	9.60											
Intersection LOS	A											
Intersection V/C	0.352											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	1.886	2.036	1.729	2.189
Crosswalk LOS	A	B	A	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	933	333	467
d_b, Bicycle Delay [s]	12.80	12.80	31.25	26.45
l_b,int, Bicycle LOS Score for Intersection	1.933	1.799	1.593	2.228
Bicycle LOS	A	A	A	B

Sequence

Ring 1	4	8	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 214: Chrysler Dr/Jefferson Dr

Control Type:	Signalized	Delay (sec / veh):	114.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.877

Intersection Setup

Name			Chrysler Drive		Jefferson Drive	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.45	19.45	342.57	342.57	16.37	96.43
Movement LOS	B	B	F	F	B	F
d_A, Approach Delay [s/veh]	19.45		342.57		91.91	
Approach LOS	B		F		F	
d_I, Intersection Delay [s/veh]	114.83					
Intersection LOS	F					
Intersection V/C	1.877					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1093	1093	693
d_b, Bicycle Delay [s]	7.71	7.71	16.01
l_b,int, Bicycle LOS Score for Intersection	2.655	2.116	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 215: Chrysler Dr/Constitution Dr

Control Type:	Signalized	Delay (sec / veh):	122.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.125

Intersection Setup

Name	Chrysler Drive			Chrysler Drive			Constitution Drive			Constitution Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Movement, Approach, & Intersection Results

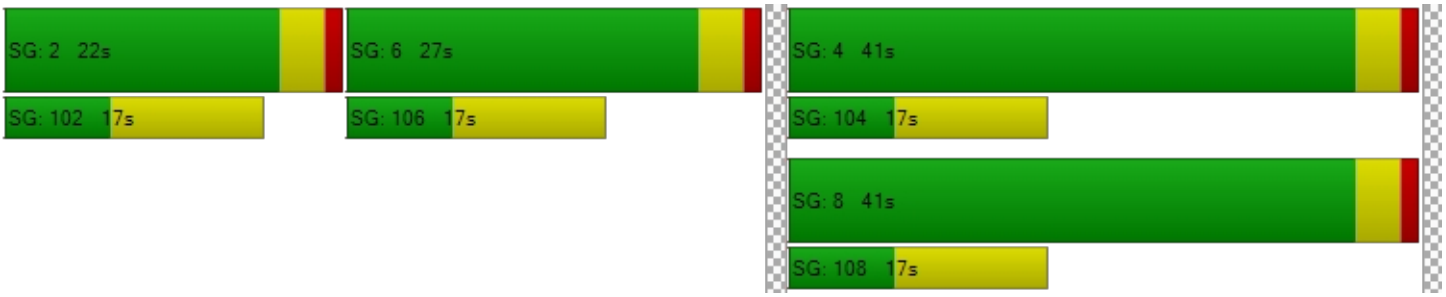
d_M, Delay for Movement [s/veh]	27.16	28.02	29.51	570.92	17.45	17.45	132.87	35.73	28.17	30.12	30.12	86.51
Movement LOS	C	C	C	F	B	B	F	D	C	C	C	F
d_A, Approach Delay [s/veh]	28.25			418.44			85.32			80.78		
Approach LOS	C			F			F			F		
d_I, Intersection Delay [s/veh]	122.48											
Intersection LOS	F											
Intersection V/C	1.125											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.324	2.624	2.369	2.777
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	511	400
d_b, Bicycle Delay [s]	15.61	15.61	24.94	28.80
l_b,int, Bicycle LOS Score for Intersection	2.339	2.320	3.081	2.079
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

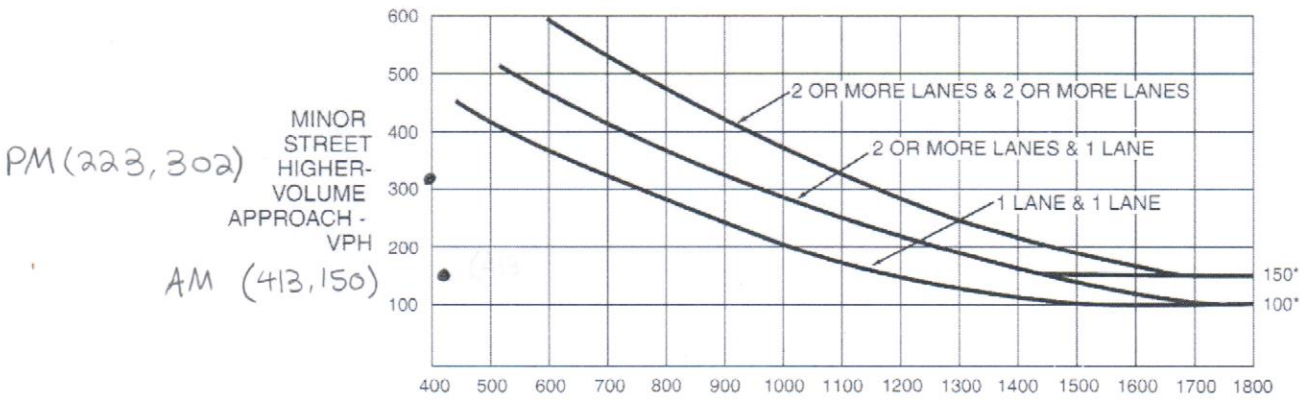


APPENDIX E

CALIFORNIA MUTCD SIGNAL WARRANT WORKSHEETS

Chrysler Dr/Independence Dr. Existing AM/PM

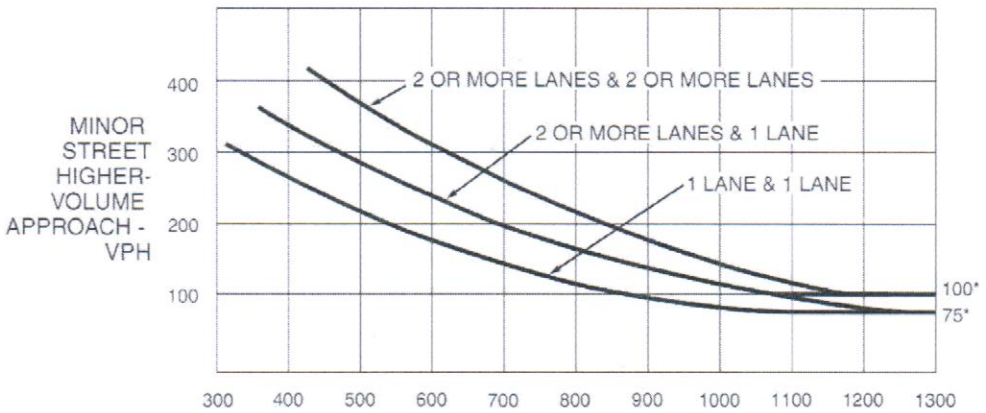
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

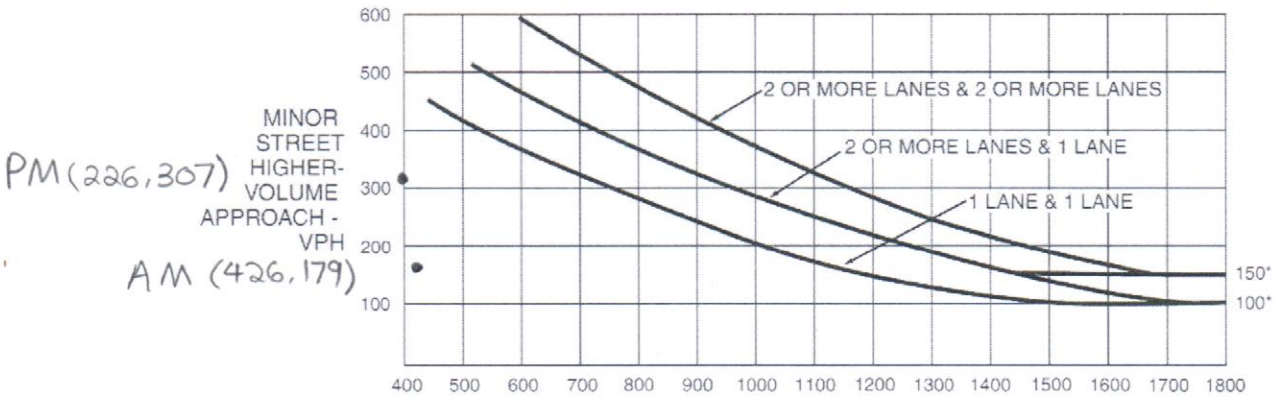
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Chrysler Dr/Independance Dr Near_Term AM/PM

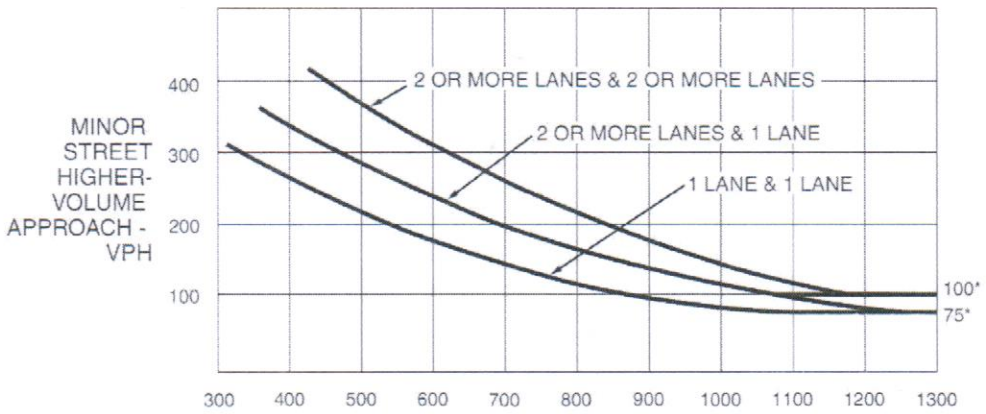
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

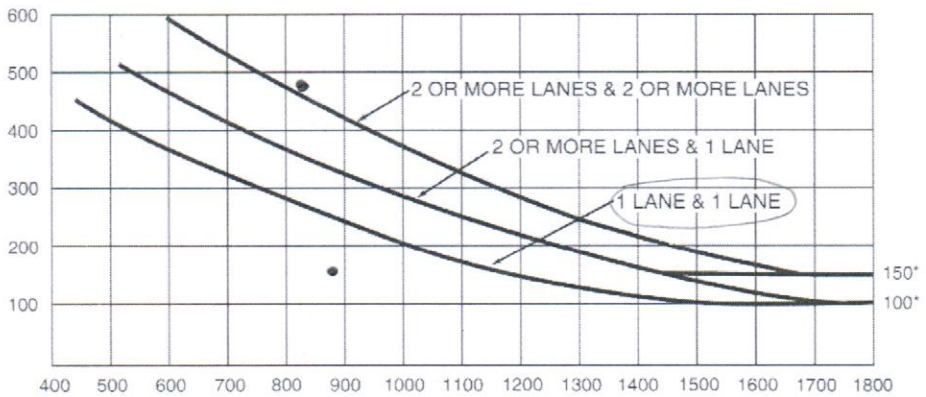
Chrysler Dr / Jefferson Dr

Cumulative AM/PM

Figure 4C-3. Warrant 3, Peak Hour

PM (827, 488)

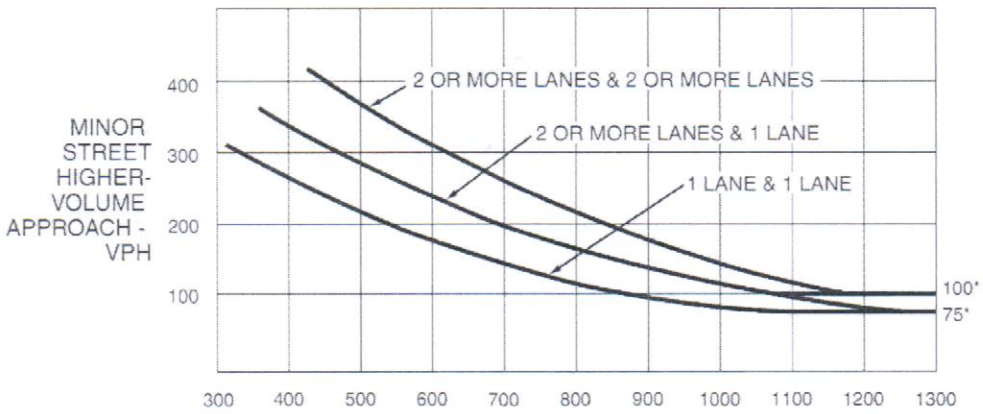
AM (889, 159)



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

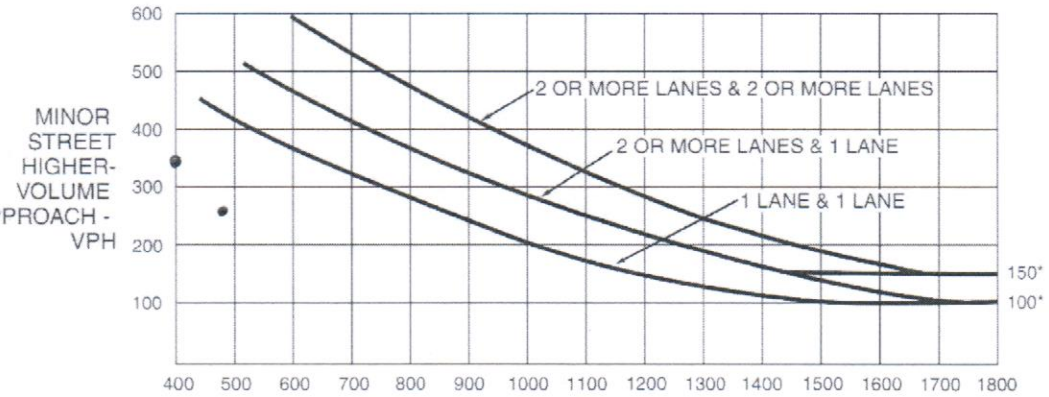


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Chrysler Dr/ Independence Dr Cumulative AM/PM

Figure 4C-3. Warrant 3, Peak Hour

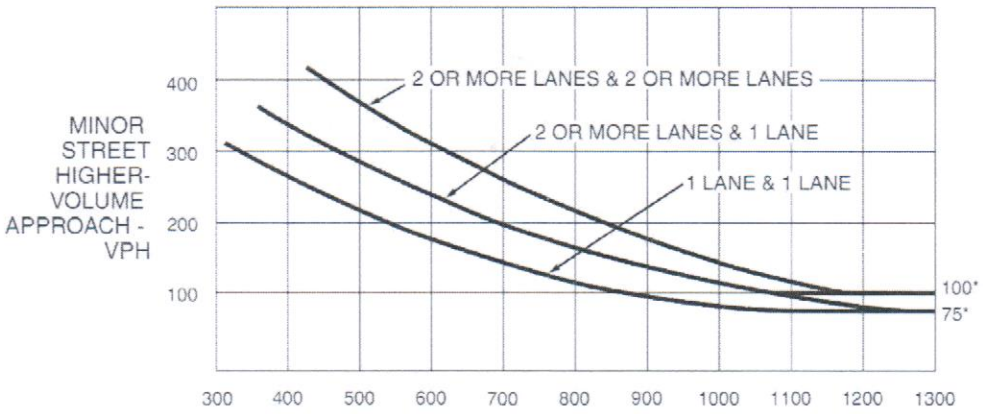
PM (303, 332)
AM(474, 265)



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

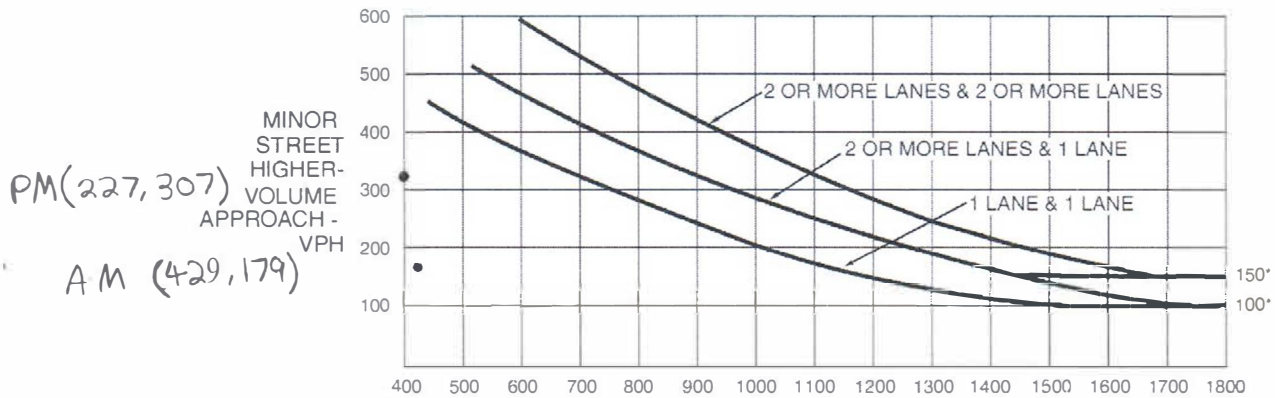
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Chrysler Dr/Independence Dr Near-Term plus Project AM/PM

Figure 4C-3. Warrant 3, Peak Hour



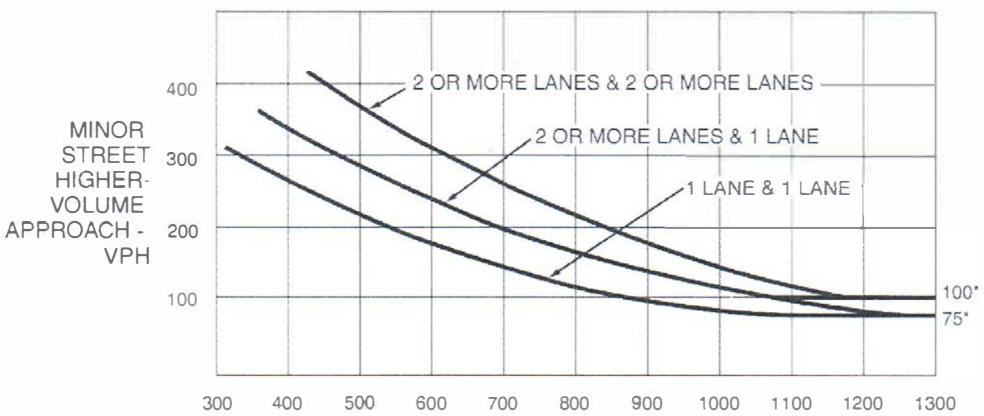
PM(227, 307)

AM (429, 179)

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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



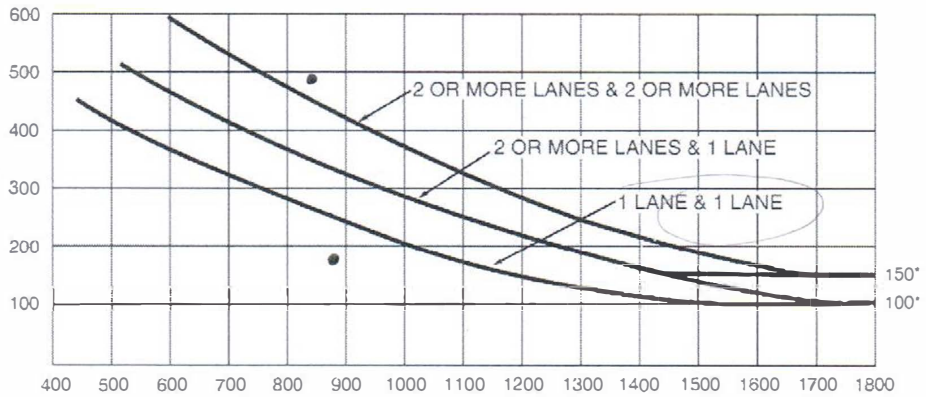
*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Chrysler Dr / Jefferson Dr Cumulative Plus Project AM/PM

Figure 4C-3. Warrant 3, Peak Hour

PM (852, 497)

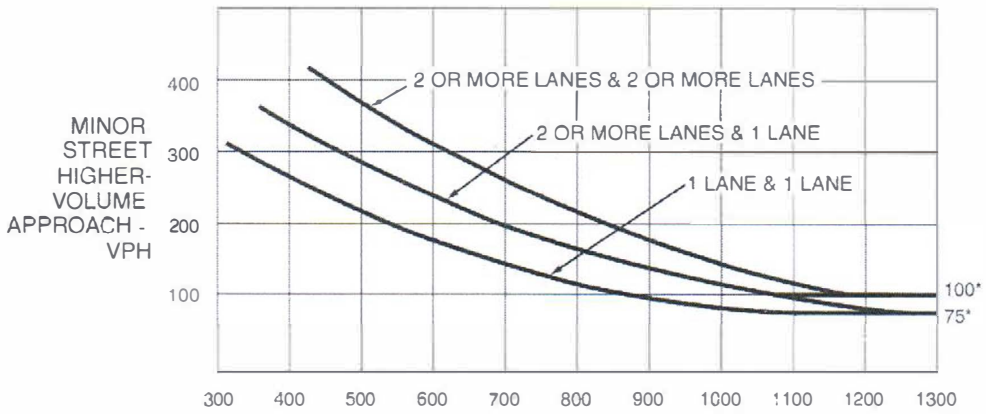
AM (903, 192)



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

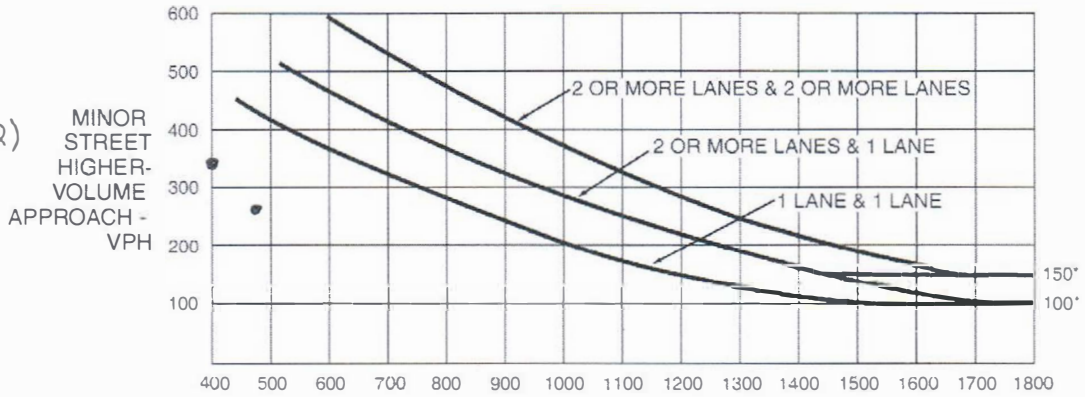


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Chrysler Dr / Independence Dr Cumulative Plus Project AM/PM

PM (304, 332)
AM(477, 265)

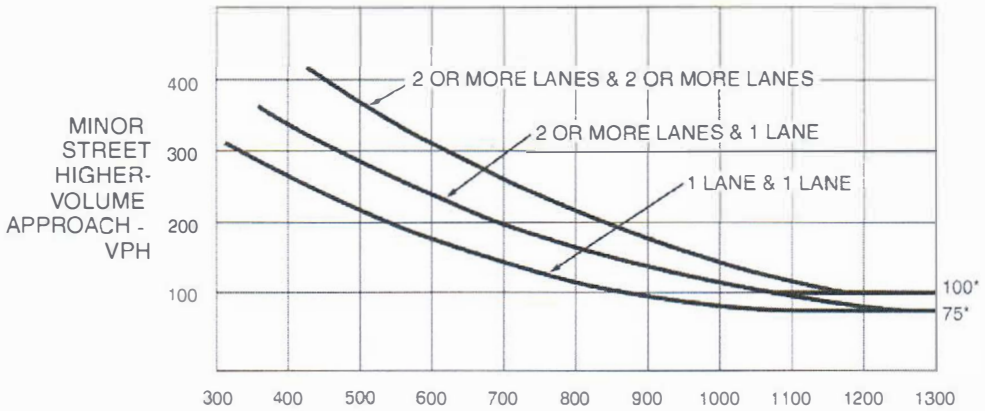
Figure 4C-3. Warrant 3, Peak Hour



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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

APPENDIX F

TRANSPORTATION DEMAND MANAGEMENT PLAN

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Menlo Flats Residential Development in Menlo Park

Transportation Demand Management (TDM) Plan

Prepared for:

Greystar GP II, LLC

June 15, 2020

Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Hexagon Job Number: 20JL05
Phone: 408.971.6100
Document Name: Menlo Flats TDM Plan.docx

Table of Contents

List of Figures

1. Introduction

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage. This Plan has been prepared for the proposed Menlo Flats residential development at 165 Jefferson Drive in Menlo Park, California. In order to propose effective and appropriate TDM measures, this Plan has been developed based on the project's size, location, and land use. This plan has been developed to satisfy Section 16.45.090 of the City of Menlo Park Municipal Code, which requires a TDM plan to be prepared with the goal of achieving at least a 20 percent reduction in PM peak hour trips. Given that the project is expected to add fewer than 100 peak hour trips, a C/CAG trip reduction analysis was not prepared.

Project Description

The project is located at 165 Jefferson Drive in Menlo Park, California (see Figure 1). The project would remove the existing office building that currently occupies the site and would construct multi-family dwelling units in an 8-story building. Vehicular access to the project site would be provided via one full access driveway on Jefferson Drive (see Figure 2).

The ground level of the project would include 3 secured bike storage rooms with spaces for 208 bicycles, and 3 bike racks that can hold 24 bicycles would be provided on the exterior of the building for short-term use. Onsite amenities including a pool, club room, indoor/outdoor roof terrace, bike repair shop, fitness center, and 14,000 to 15,000 square feet of commercial space on the ground floor and 2nd floor. A use for this space has not yet been determined, but could be a mix of retail, office, coworking, and more in order to foster a live/work/play environment.

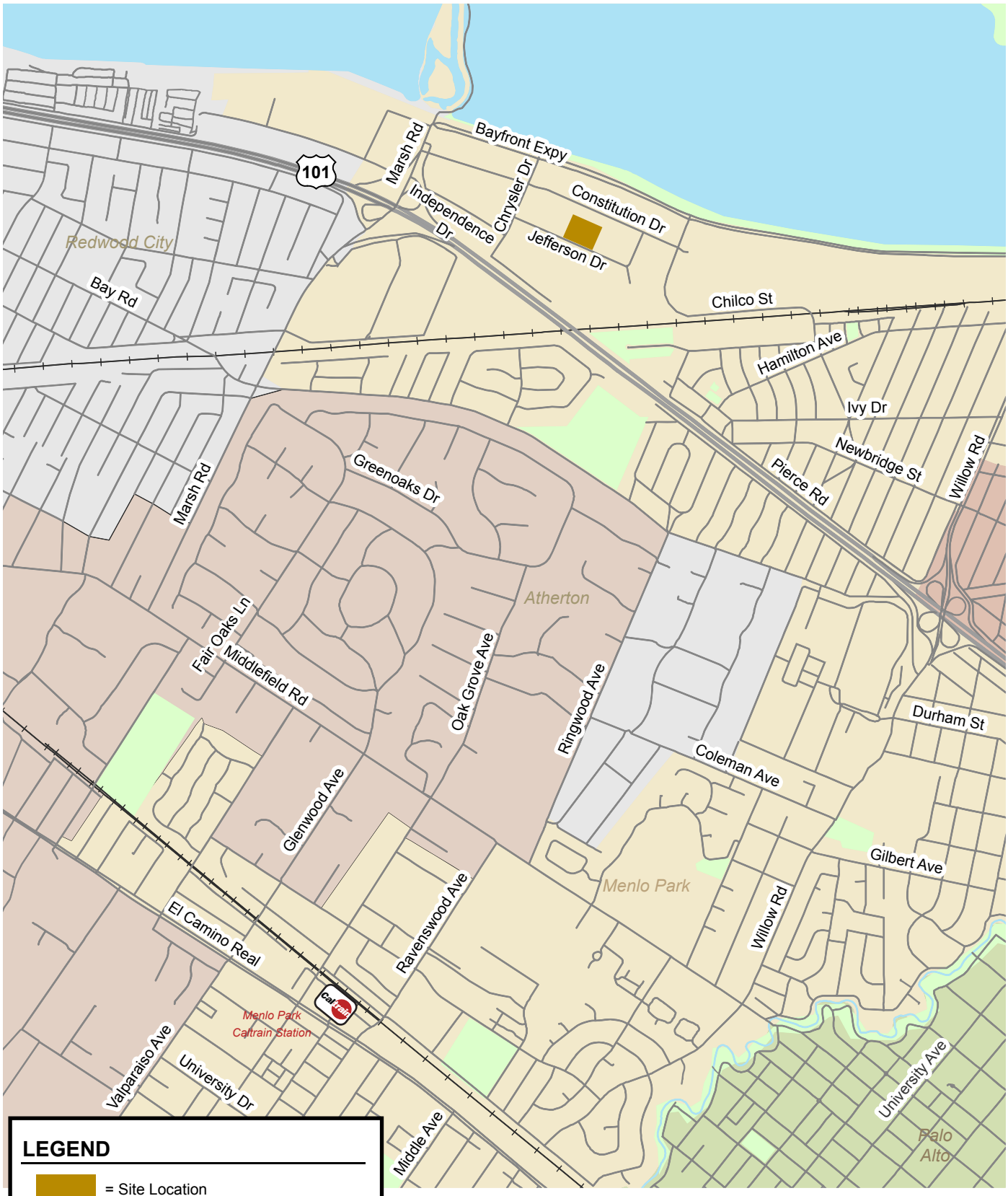


Figure 1
Site Location

NORTH
Not to Scale

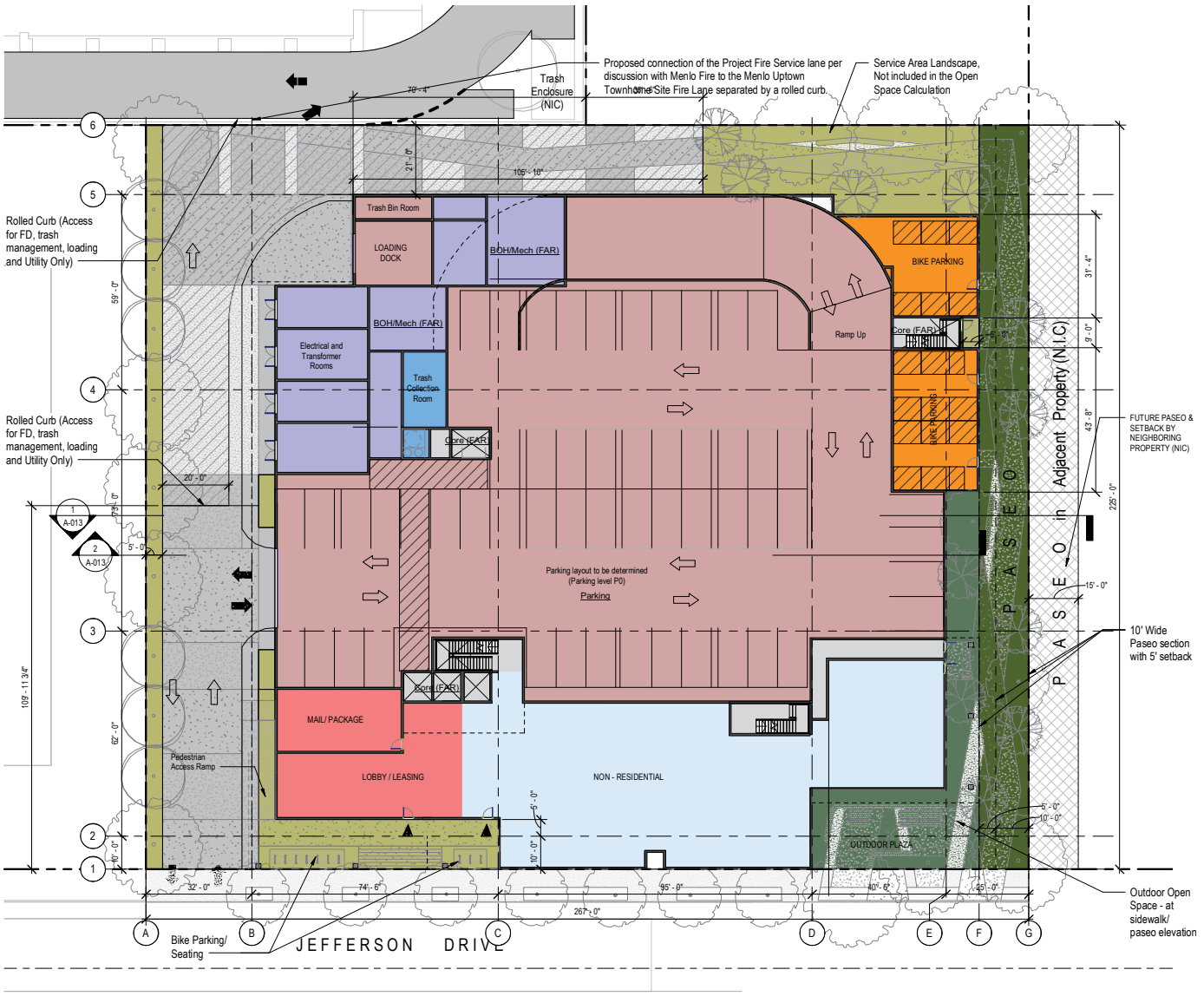


Figure 2
Site Plan

NORTH
Not to Scale

Menlo Park TDM Requirement for R-MU Residential Mixed-Use District

The City of Menlo Park requires that all new projects involving a change of use of 10,000 or more square feet of gross floor area in the Residential Mixed-use (R-MU) zoning district prepare TDM plans that will reduce vehicle trips by 20 percent from standard trip generation rates (Menlo Park Municipal Code Section 16.45.090). This plan has been prepared with the goal of achieving at least a 20 percent reduction in PM peak hour trips.

The trip generation rates published in the Institute of Transportation Engineers' (ITE) manual entitled *Trip Generation, 10th Edition (*2017) for Multifamily High-Rise Housing (Land Use 222) were used for this study. Multifamily High-Rise Housing includes housing developments between 7 to 10 floors. Before TDM reductions, the proposed project is estimated to generate a total of 703 daily trips with 49 trips during the AM peak hour and 57 trips during the PM peak hour.

As shown in Table 1, in order to meet the City's 20 percent reduction requirement, at least 11 PM peak hour trips would need to be eliminated through implementation of the various TDM measures. Stated conversely, the project would be required to generate no more than 46 PM peak hour trips.

Table 1
Trip Generation Estimates for the Menlo Flats Residential Project

		Daily		AM Peak Hour				PM Peak Hour			
		Trip		Trip	Trips			Trip	Trips		
Land Use	Size	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Multifamily High-Rise Housing[1]	158 d.u.	4.45	703	0.31	12	37	49	0.36	35	22	57
20% Required TDM Reduction			(141)		(3)	(7)	(10)		(7)	(4)	(11)
Total Project Trips *(with TDM Trip Reduction)*			**562**		**9**	**30**	**39**		**28**	**18**	**46**

Notes:
[1] Average trip rates per dwelling unit (d.u.) for Multifamily High-Rise Housing (Land Use 222) are used from Institute of Transportation Engineers' *Trip Generation Manual, 10th Edition*, 2017.

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 describes the transportation facilities and services near the apartment and office buildings. Chapter 3 presents the recommended TDM measures for the proposed project. Chapter 4 describes the program for implementing, monitoring, and reporting on the TDM plan.

2. Transportation Facilities and Services

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

Roadway Network

Regional access to the project site is provided via US 101 and State Route 84.

US 101 is an eight-lane freeway that is adjacent to the southern boundary of the project site. It extends north through San Francisco and south through Gilroy. In Menlo Park, US 101 is eight lanes wide, including two high-occupancy vehicle (HOV) lanes, one in each direction. US 101 provides access to the project site via a full-access interchange at Marsh Road.

State Route 84 is known as Bayfront Expressway in the vicinity of the project site. Bayfront Expressway extends from Marsh Road to the Dumbarton Bridge and provides access to the East Bay. Bayfront Expressway is a six-lane divided roadway and is paralleled by a Class I bicycle/pedestrian path.

Local access to the site is provided via Marsh Road, Chrysler Drive, Constitution Drive, Independence Drive, and Jefferson Drive. These roadways are described below and shown in Figure 1 in the previous chapter.

Marsh Road begins at Middlefield Road and extends to Bayfront Expressway. It is a four-lane divided arterial and includes a full interchange at US 101. There are existing sidewalks on both sides of the street on Marsh Road in the project vicinity. However, no bike facilities currently exist on Marsh Road. Access to the project site is provided via its intersection with Independence Drive.

Chrysler Drive is a two-lane local roadway that is perpendicular to Constitution Drive and Jefferson Drive. It extends from Commonwealth Drive to Bayfront Expressway (SR 84). There are sidewalks on both sides of Chrysler Drive except on the north side between Jefferson Drive and Bayfront Expressway. In addition, only a short road section in the eastbound direction between Constitution Drive and Bayfront Expressway has a Class II bike lane. Access to the project site is provided via its intersection with Jefferson Drive.

Constitution Drive is a two-lane local roadway. It begins at Marsh Road and terminates at Chilco Street. Constitution Drive has sidewalks on both sides except on the east side between Chrysler Drive and Chilco Street. There are existing Class II bike lanes on Constitution Drive between Independence Drive and Chilco Street. Access to the project site is provided via its intersection with Jefferson Drive.

Independence Drive is a two-lane local roadway that includes a sharp turn near its intersection with Marsh Road. A multipurpose trail is present on the west side of Independence Drive. There are existing Class III bike routes on Independence Drive. Access to the project site is provided via its intersection with Chrysler Drive.

Jefferson Drive is a two-lane local roadway that begins at Chrysler Drive and continues eastwards until it turns northward to end at Constitution Drive. On-street parking is provided along both sides of the entire street. Jefferson Drive provides direct access to the project site.

Caltrain Commuter Rail

Caltrain provides commuter rail service between San Francisco and San Jose, with limited service to Gilroy during commute hours. The closest Caltrain station to the project site is the Menlo Park Station, located on Merrill Street between Oak Grove Avenue and Ravenswood Avenue, near El Camino Real.

The Menlo Park Station is located 3.4 miles from the project site. This is a 15-20 minute bike ride. Also, the Marsh Road Shuttle (described below) currently offers free shuttle service between the project site and the Menlo Park Caltrain Station with timed connections to trains during the commute peak periods.

Marsh Road Shuttle

Primary access to the project site from the Menlo Park Caltrain station is provided by the Marsh Road Shuttle, which is a free shuttle service with timed connections to many of the AM and PM peak period trains in both the northbound and southbound directions. The shuttle operates in a loop through the Marsh Road business park. The closest stop is at 180 Jefferson Drive which is 530 feet from the project site. Based on the schedule, the shuttle takes 17 to 23 minutes to travel from the Caltrain station to the stop at 180 Jefferson Drive. In the afternoon, because the project site is one of the first stops in the loop, the shuttle takes 32 minutes to travel from the stop to the Caltrain station.

The Marsh Road Shuttle is funded jointly by the City of Menlo Park, the Bay Area Air Quality Management District (BAAQMD), the Peninsula Corridor Joint Powers Board (Caltrain), the San Mateo County Transportation Authority, and local employers. The shuttle is free and open to everyone.

If the project were to achieve a 20 percent trip reduction, estimated maximums of 10 AM and 11 PM peak hour trips would be made by transit or bicycle modes of transportation. It is anticipated that the service provided by the Marsh Road Shuttle would be able to accommodate the additional riders generated by the proposed project.

SamTrans Bus Service

SamTrans Route 270, the Redwood City Loop, provides service to the Marsh Road/Bayfront Expressway office area. A bus stop is located on Haven Avenue near Marsh Road, approximately 0.8 miles from the project site. Route 270 operates in a loop between the Redwood City Caltrain Station, Redwood Plaza/City Hall, Kaiser Hospital, southbound along Broadway and Bay Road, across US 101 to the Marsh Road business park area, northbound along Bayshore Road, back across US 101 on Maple Street, and then returning to the Redwood City Caltrain Station. Route 270 operates with 60-minute headways on weekdays and Saturdays.

HOV Lanes

High-Occupancy Vehicle (HOV) lanes, also known as diamond or carpool lanes, restrict use to vehicles with two or more occupants (carpool, vanpool, and buses), motorcycles, and ILEVs (subcategory of clean-fuel vehicles that have essentially no fuel vapor emissions) during the morning (5:00 to 9:00 AM) and evening (3:00 to 7:00 PM) commute periods. HOV lanes are present on US 101 within the City of Menlo Park.

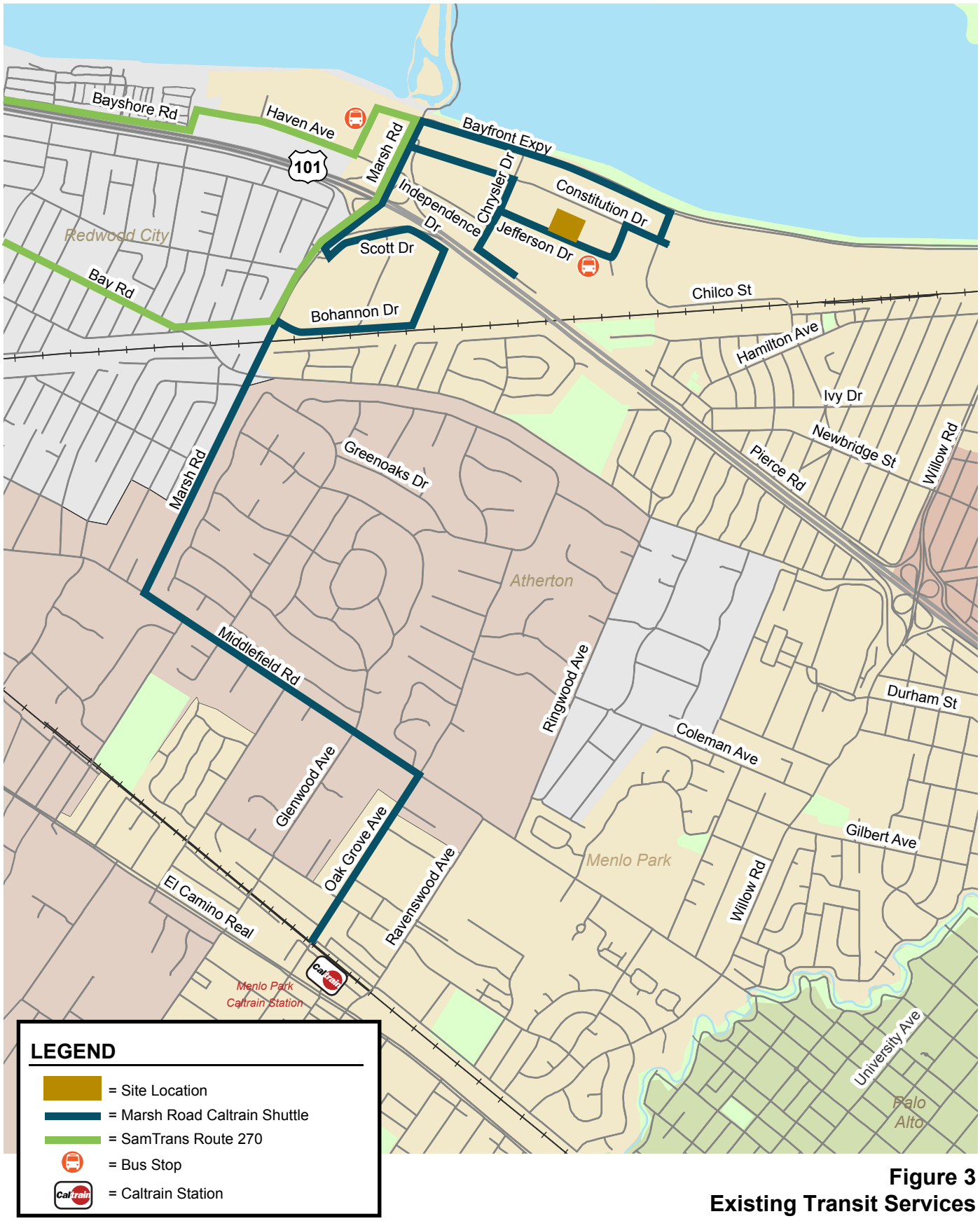


Figure 3
Existing Transit Services

NORTH
Not to Scale

Bicycle Facilities

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

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

Existing and future bicycle facilities near the project site are shown on Figure 4. Currently, there are Class II bike lanes on Constitution Drive, Chilco Street, and northbound Chrysler Drive between Constitution Drive and Bayfront Exprssway. The Chilco Street bike lane is a separated bike path in the northbound direction, between Constitution Drive and north of Terminal Avenue. The bike facilities lead to the Belle Haven neighborhood and a bike/pedestrian overcrossing over US 101 at Ringwood Avenue. On the west side of US 101, a bike lane on Ringwood Avenue, south of Bay Road, provides connections to many other bike lanes throughout the City and to the Menlo Park Caltrain Station. In addition, there is a Class I bike trail in the project vicinity next to Bayfront Expressway that begins in Bayfront Park and extends across the Dumbarton Bridge. There is also a Class III bike route on Independence Drive.

The following improvements to the City's bicycle facilities have been proposed in its Comprehensive Bicycle Development Plan:

- Class II bike lanes are planned for Marsh Road, which would connect to the existing bike path next to Bayfront Expressway. Class II bike lanes are also planned for Constitution Drive between Independence Drive and Chrysler Drive, which would connect to the existing bike lane on Constitution Drive, east of Chrysler Drive. These proposed bike lanes would allow bicyclists to cross US 101 safely and access the bikeway network on the west side of the freeway.
- A Class I Connector Path is planned for Independence Drive, which would connect the planned Class II bike lanes on Marsh Road and the planned Class II bike lanes on Constitution Drive. Because Independence Drive is one-way in the southbound direction off Marsh, a Class I off-street connection would allow bicyclists to travel counter-flow to traffic on this short one-way roadway segment. This bike path would provide bicyclists from the project site with safer access to the proposed bike lanes on Marsh Road.
- A new bicycle and pedestrian bridge over the Atherton Channel is planned to extend the bike lanes and sidewalks on Haven Avenue to Marsh Road, as part of the Haven Avenue Streetscape Project. The Haven Avenue Streetscape Project connects Menlo Park, San Mateo County, and Redwood City residents and employees.

The Marsh Road bike lanes and Independence Drive Connector Path are identified as long-term projects. The Marsh Road bike lanes are also identified as proposed improvements in the San Mateo County Comprehensive Bicycle and Pedestrian Plan. It is not known when these two proposed improvements will be constructed.

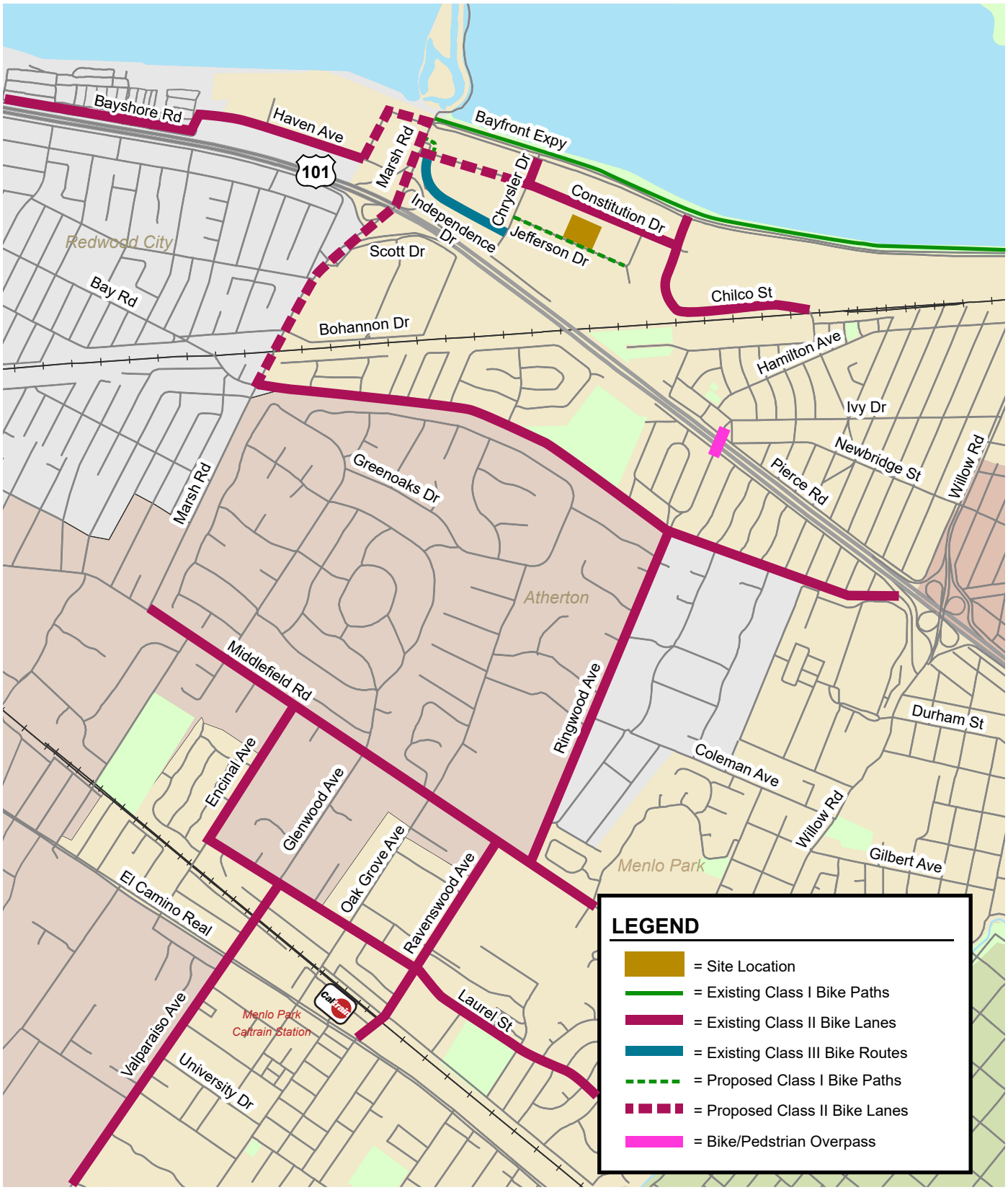


Figure 4
Existing and Proposed Bicycle Facilities

Pedestrian Facilities

A majority of the streets in the project vicinity have sidewalks, except the following street sections:

- North side of Constitution Drive between Chrysler Drive and Chilco Street.
- North side of Jefferson Drive and Independence Drive.
- West side of Chrysler Drive between Bayfront Expressway and Jefferson Drive.
- West side of Chilco Street.

As the adjacent land parcels redevelop, new sidewalks are planned for the street frontages, which will improve pedestrian facilities in the vicinity of the project. The project would help complete the missing sidewalks on Jefferson Drive along the project frontage.

As described in the preceding section on bicycle facilities, the Haven Avenue Streetscape Project also includes pedestrian crossing improvements to the Marsh Road-Haven Avenue-Bayfront Expressway intersection, which will improve the overall pedestrian network in the area east of US 101. The improvements include widened sidewalks, replacement of curb ramps to comply with current ADA standards, realigning the existing crosswalk on the northwest (Haven Avenue) leg of the intersection, and improving the existing median to provide a crossing refuge island.

3. Recommended TDM Measures

This chapter describes Transportation Demand Management (TDM) measures that are applicable to the proposed project.

This plan has been developed to meet the 20 percent trip reduction requirement set forth in Sec.16.45.090 of the Menlo Park municipal code [1] for the residential mixed-use zoning district.

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

Because the project would generate more trips in the PM peak hour than the AM peak hour, the PM peak-hour estimate of trips is used to determine the number of trip credits required. The project would generate 57 PM peak-hour trips, so in order to meet the City's 20 percent reduction requirement, at least 11 PM peak hour trips would need to be eliminated through implementation of the various TDM measures.

TDM Administration and Promotion

Transportation Coordinator

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

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

[1] City of Menlo Park Municipal Code, Section 16.45.090, "Transportation demand management." Adopted December 6, 2016.

matching application to all residents as part of the New Resident Information packets. The application will match residents who live at the project site who may be able to carpool or vanpool together.

Online Transportation Kiosk

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

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

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

Resident Orientation (Welcome) Packet

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

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

Bicycle and Pedestrian Amenities

Bicycle Parking

Providing secure bicycle parking encourages bicycle commuting and reduces daily bicycle trips. A total of 24 short-term bicycle spaces will be provided at convenient and well-lit locations near the entrance of the project site and the outdoor plaza. In addition, a total of 208 long-term bicycle spaces will be provided in a secured bike storage room on the ground level of the project site.

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

Bicycle Resources

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

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

In addition, the apartment building will have its own bicycle repair shop adjacent to the bicycle storage room located at the ground level, providing convenient bicycle maintenance services to residents. This service will encourage bicycle usage thereby reducing vehicle trips generated by the project.

Pedestrian Design Elements

The project will provide enhanced pedestrian facilities on Jefferson Drive and a paseo between the project site and a future paseo by the neighboring property. New sidewalks landscaped with street trees will be provided along the project's frontages.

Onsite, clearly defined walkways and a central pedestrian plaza will be incorporated between the apartment units to enable residents to walk between the buildings to the building's amenities. These walkways also will provide safe, well-lit, accessible, and convenient access to sidewalks on Jefferson Drive, as well as convenient access to the shuttle stop on Jefferson Drive.

Passenger Loading for Rideshare Vehicles

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

Onsite Amenities

Commercial and Fitness Centers

The project will include a commercial center up to 15,000 square feet and a fitness center on the ground and second levels. The commercial center could include a mix of retail, office, and co-working centers. These amenities will encourage residents to stay on site during the workday, reducing the number of trips that are required to be made.

Electric Vehicle Charging Stations

The project will include a total of 176 parking spaces, of which 26 spaces will be equipped with electric vehicle charging stations. While EV charging station parking spaces will not directly reduce any peak-hour trips, the designated Clean Air Vehicle spaces provide a prominent visual message that the project values a reduction in air pollution.

High-Bandwidth Internet Connection

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

Refrigerated Mail Area

The project will include refrigerated mail areas to faciliate the delivery of groceries, which will allow residents to place their orders from home and therefore reduce the number of shopping trips to and from the project site.

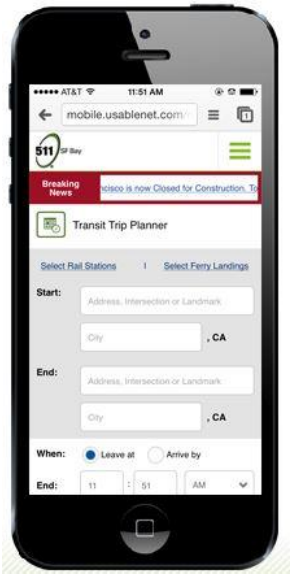
Stockwell Vending Machine

The project will include Stockwell vending machines, which are fully managed by the Stockwell company for deliveries and customer service. Customers would download the app to shop the machine and payment would be electronic through the app. This allows residents to easily shop for smaller household necessities and snacks without having to make a trip to and from the project site.

Carpool and Vanpool Programs

On-Site Ride Matching Assistance

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



511 Ride Matching Assistance

511 RideMatch

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

Scoop

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

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

Carpool/Vanpool Incentives

Scoop Discounts for San Mateo County Carpools

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

The Star Store

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

First Five Rides Free on 511

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

Vanpool Formation Incentive

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

Vanpool Seat Subsidy

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

Vanpool Participant Rebates

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

Unbundling of Onsite Residential Parking

To further encourage non-auto transportation methods and to reduce costs for residents, onsite residential parking will be unbundled from each living unit. This will allow patrons without cars to rent a unit without having to pay for a parking spot. Parking spaces will be added to leases only for residents who desire parking. Unbundling of parking encourages residents to forego a second car or to have no car at all. Carshare would be an additional potential measure, as described below, in the case that the 20% reduction is not achieved.

4. TDM Implementation, Monitoring, and Reporting

This chapter outlines the implementation, monitoring, and reporting of the Menlo Flats Residential Development TDM Plan.

Annual Commute Surveys

The purpose of the TDM Plan is to reduce PM peak-hour vehicle trips by at least 20 percent, thereby lessening parking issues, traffic congestion, and vehicle emissions associated with the proposed project. Regular monitoring will ensure that the implemented TDM measures are effective and achieve that standard. The program should be evaluated annually to assess the actual level of trip reduction achieved at the site and to identify any adjustments to the program necessary to ensure the TDM measures are successful.

Annual commute surveys should be administered by the transportation coordinator to measure the number of residents commuting by alternative modes and whether they are aware of the services and programs that are available to them. Residents who do not respond to the survey will be assumed to be driving alone. In addition to obtaining quantitative data on the mode split, the survey should provide qualitative data regarding resident perceptions of the alternative transportation programs. The survey results will measure the relative effectiveness of individual program components relative to other components and facilitate the design of possible program enhancements. Along with collecting information on mode split, the survey can gather information on use of the bike storage, use of the online kiosk, and walking trips made to nearby retail, restaurant, and entertainment uses. The transportation coordinator should be responsible for administering the survey, compiling the results, and communicating the results to the City.

Annual Driveway Counts

In order to evaluate whether or not the project has met the 20 percent peak-hour trip reduction requirement, annual driveway counts should be conducted. A count of the number of vehicles entering and exiting the project's driveways on a typical weekday during the PM peak period should be conducted annually by an independent third party to determine the number of vehicle trips being generated by the project. The counts should be conducted at the site's driveway on a weekday that is not disclosed in advance. All vehicles entering and exiting the project driveway on Jefferson Drive during the PM peak period (4:00 – 7:00 PM) should be counted, and the peak-hour volume should be identified.

The driveway counts should be used to determine the actual PM peak-hour trip generation of the project. The Transportation Coordinator should provide the results of the driveway counts to the City of Menlo Park, along with a statement as to whether the 20 percent PM peak-hour trip reduction goal was met.

Annual Reporting to City

The ordinance regarding the TDM requirement for the residential mixed-use district states that the required trip reduction will be achieved "over the life of the development, as evidenced by annual reporting provided to the satisfaction of the City's Transportation Manager." The Transportation Coordinator should submit to the City of Menlo Park annual documentation to substantiate implementation of the TDM plan elements, the results of the resident survey, and the results of the driveway counts. If the 20 percent peak-hour trip reduction requirement has not been met, then the report should state what additional measures will be implemented in the coming year in order to achieve the City's requirement.

Additional TDM Measures

If the results of the driveway count indicate that there are more than 46 PM peak-hour trips at the site, then additional TDM measures need to be implemented in order to ensure that the 20 percent trip reduction requirement is met. The following measures are presented as potential supplemental measures. However, if the results of the surveys suggest other measures may be effective, then the measures considered most likely to further reduce single-occupant vehicle trips should be selected for implementation. Additional TDM measures should be implemented until the 20 percent trip reduction requirement has been met, as documented by driveway counts.

Car Sharing

One of the major impediments to foregoing ownership of a permanent car is the need for residents to make longer trips and for use in emergencies. Car sharing programs provide individuals with access to a vehicle whenever they need it, so they do not need to own a car. A carsharing service (e.g., Zipcar or equivalent) could be established at the project site or nearby. Having Zipcars located within the parking garage or nearby would provide quick and easy access to these cars for all residents onsite who use an alternative mode for their commute.

Bike Sharing

Bike sharing is a program that provides a network of self-service bikes for people to use for quick trips, such as the “last mile” between a transit stop and the user’s workplace or for errands. Some bike sharing programs, such as the Ford GoBike program, supply bikes at docks or stations, and users must pick up and return their bikes to those docks. Other programs, such as LimeBike, allow users to locate a bike from a mobile app and do not use docks or stations. The user pays for the use of the bike by paying on a per trip, per day, or annual membership basis. There are no bike sharing companies operating in the project vicinity at this time. Currently, the closest bike sharing program is located in the Menlo Business Park located approximately 2 miles east of the project site.

It is also important to note that the presence of bike sharing services in other Bay Area communities can help support alternative mode use by Menlo Park residents. For example, a project resident could take transit to San Francisco, San Mateo, Mountain View, or San Jose, where bike sharing services currently operate, and then use a shared bike to go the “last mile” to their destination.

APPENDIX G

NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL OUTPUTS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Menlo Flats	**Organization:**	
Project Location:		**Performed By:**	
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				39	34	5
Retail				0		
Restaurant				162	83	79
Cinema/Entertainment				0		
Residential				57	14	43
Hotel				0		
All Other Land Uses[2]				0		
				258	131	127

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	3	0	0	0
Retail	0		0	0	0	0
Restaurant	5	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	9	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	258	131	127
Internal Capture Percentage	15%	15%	15%
External Vehicle-Trips[5]	220	112	108
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	18%	60%
Retail	N/A	N/A
Restaurant	14%	8%
Cinema/Entertainment	N/A	N/A
Residential	7%	23%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Menlo Flats	**Organization:**	
Project Location:		**Performed By:**	
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				17	3	14
Retail				0		
Restaurant				58	29	29
Cinema/Entertainment				0		
Residential				70	43	27
Hotel				0		
All Other Land Uses[2]				0		
				145	75	70

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		0	0	0	0
Restaurant	1	0		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	4	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	145	75	70
Internal Capture Percentage	17%	16%	17%
External Vehicle-Trips[5]	121	63	58
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	67%	7%
Retail	N/A	N/A
Restaurant	17%	21%
Cinema/Entertainment	N/A	N/A
Residential	12%	19%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

APPENDIX E

AIR QUALITY/GREENHOUSE GAS EMISSIONS DATA

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Menlo Flats - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	176.00	Space	0.00	70,400.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Apartments Mid Rise	158.00	Dwelling Unit	0.90	154,730.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Construction is expected to begin March 2022 and end summer 2024. Phasing based on assumptions provided by Project Applicant. Architectural Coating and Paving phases are default duration.

Trips and VMT - For soil import haul trips, assuming 25 cubic yards of material per load based on information from project applicant.

Demolition - Approximately 24,311 building square footage to be demolished.

Grading - A total of 3,500 cubic yards of soils would be imported.

Vehicle Trips - Based on trip generation prepared for the project (619 net new average daily trips).

Menlo Flats - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - The project would exceed Title 24 by 20 percent, install solar panels, and meet LEED Gold standards. Also assuming installation of high efficiency lighting and energy effiicent appliances.

Water Mitigation - Assuming the installation of low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 50 hours per year for testing and emergency use.

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	2.00	23.00
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00
tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	21.56	1.38
tblGrading	MaterialImported	0.00	3,500.00
tblLandUse	LandUseSquareFeet	158,000.00	154,730.00
tblLandUse	LotAcreage	1.58	0.00
tblLandUse	LotAcreage	4.16	0.90
tblLandUse	LotAcreage	0.34	0.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	402.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.14

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	111.00	2,000.00
tblTripsAndVMT	HaulingTripNumber	438.00	280.00
tblVehicleTrips	ST_TR	4.91	2.37
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	42.04	16.33
tblVehicleTrips	SU_TR	4.09	2.37
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	20.43	16.33
tblVehicleTrips	WD_TR	5.44	2.37
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	44.32	16.33
tblWoodstoves	NumberCatalytic	3.16	0.00
tblWoodstoves	NumberNoncatalytic	3.16	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2535	2.2705	1.8844	4.8400e-003	0.3959	0.0928	0.4887	0.1777	0.0875	0.2652	0.0000	433.1174	433.1174	0.0634	0.0203	440.7409
2023	0.2550	1.7546	2.1535	5.1200e-003	0.1903	0.0689	0.2591	0.0513	0.0665	0.1178	0.0000	449.7266	449.7266	0.0455	0.0164	455.7439
2024	1.3057	0.8692	1.1129	2.6300e-003	0.0969	0.0320	0.1289	0.0261	0.0308	0.0569	0.0000	231.1251	231.1251	0.0242	8.0000e-003	234.1140
Maximum	**1.3057**	**2.2705**	**2.1535**	**5.1200e-003**	**0.3959**	**0.0928**	**0.4887**	**0.1777**	**0.0875**	**0.2652**	**0.0000**	**449.7266**	**449.7266**	**0.0634**	**0.0203**	**455.7439**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1424	2.7329	2.0944	4.8400e-003	0.2454	0.0883	0.3337	0.0981	0.0881	0.1862	0.0000	433.1171	433.1171	0.0634	0.0203	440.7406
2023	0.1661	2.4851	2.2663	5.1200e-003	0.1903	0.0971	0.2874	0.0513	0.0970	0.1483	0.0000	449.7263	449.7263	0.0455	0.0164	455.7436
2024	1.2673	1.3115	1.1806	2.6300e-003	0.0969	0.0511	0.1479	0.0261	0.0510	0.0771	0.0000	231.1250	231.1250	0.0242	8.0000e-003	234.1139
Maximum	**1.2673**	**2.7329**	**2.2663**	**5.1200e-003**	**0.2454**	**0.0971**	**0.3337**	**0.0981**	**0.0970**	**0.1862**	**0.0000**	**449.7263**	**449.7263**	**0.0634**	**0.0203**	**455.7436**

Menlo Flats - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.14**	**-33.41**	**-7.58**	**0.00**	**22.04**	**-22.10**	**12.29**	**31.19**	**-27.77**	**6.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-15-2022**	**6-14-2022**	0.9553	1.0332
2	**6-15-2022**	**9-14-2022**	0.8792	0.9953
3	**9-15-2022**	**12-14-2022**	0.5504	0.6809
4	**12-15-2022**	**3-14-2023**	0.5084	0.6614
5	**3-15-2023**	**6-14-2023**	0.5068	0.6690
6	**6-15-2023**	**9-14-2023**	0.5059	0.6681
7	**9-15-2023**	**12-14-2023**	0.5045	0.6649
8	**12-15-2023**	**3-14-2024**	0.4839	0.6642
9	**3-15-2024**	**6-14-2024**	0.5084	0.7201
10	**6-15-2024**	**9-14-2024**	1.0927	1.1257
		Highest	1.0927	1.1257

Menlo Flats - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Energy	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	158.4992	158.4992	0.0150	3.0100e-003	159.7712
Mobile	0.2431	0.2609	2.1606	4.2900e-003	0.4578	3.2400e-003	0.4610	0.1223	3.0100e-003	0.1253	0.0000	402.6272	402.6272	0.0283	0.0202	409.3605
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	17.9586	0.0000	17.9586	1.0613	0.0000	44.4917
Water						0.0000	0.0000		0.0000	0.0000	3.6184	8.2175	11.8359	0.3730	8.9400e-003	23.8233
Total	**1.0884**	**0.3854**	**3.4061**	**4.8400e-003**	**0.4578**	**0.0174**	**0.4752**	**0.1223**	**0.0172**	**0.1395**	**21.5770**	**578.9177**	**600.4947**	**1.4805**	**0.0322**	**647.0936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Energy	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	112.0167	112.0167	8.9400e-003	2.1100e-003	112.8703
Mobile	0.2313	0.2387	1.9803	3.8000e-003	0.4038	2.9100e-003	0.4067	0.1079	2.7100e-003	0.1106	0.0000	356.8633	356.8633	0.0265	0.0186	363.0517
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	4.4897	0.0000	4.4897	0.2653	0.0000	11.1229
Water						0.0000	0.0000		0.0000	0.0000	2.8947	7.0754	9.9702	0.2985	7.1600e-003	19.5651
Total	**1.0756**	**0.3541**	**3.2217**	**4.2900e-003**	**0.4038**	**0.0164**	**0.4201**	**0.1079**	**0.0162**	**0.1240**	**7.3844**	**485.5292**	**492.9136**	**0.6021**	**0.0278**	**516.2568**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.17**	**8.10**	**5.41**	**11.36**	**11.80**	**6.03**	**11.59**	**11.81**	**5.94**	**11.08**	**65.78**	**16.13**	**17.92**	**59.33**	**13.52**	**20.22**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	5/13/2022	5	44	
2	Rough Grading	Grading	5/15/2022	6/29/2022	5	33	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Site Preparation	Site Preparation	5/16/2022	6/15/2022	5	23	
4	Fine Grading	Grading	6/15/2022	7/29/2022	5	33	
5	Building Construction	Building Construction	6/29/2022	6/28/2024	5	523	
6	Paving	Paving	6/3/2024	6/14/2024	5	10	
7	Architectural Coating	Architectural Coating	6/17/2024	6/28/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.38

Acres of Grading (Grading Phase): 1.38

Acres of Paving: 0

Residential Indoor: 313,328; Residential Outdoor: 104,443; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,224 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	4	10.00	0.00	280.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	157.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	1.8100e-003	0.0000	1.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3657	0.3071	5.3000e-004		0.0184	0.0184		0.0172	0.0172	0.0000	46.3709	46.3709	0.0118	0.0000	46.6663
Total	**0.0372**	**0.3657**	**0.3071**	**5.3000e-004**	**0.0120**	**0.0184**	**0.0304**	**1.8100e-003**	**0.0172**	**0.0190**	**0.0000**	**46.3709**	**46.3709**	**0.0118**	**0.0000**	**46.6663**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1722	0.0366	6.3000e-004	0.0169	1.5400e-003	0.0185	4.6500e-003	1.4800e-003	6.1300e-003	0.0000	62.6843	62.6843	2.0700e-003	9.9300e-003	65.6946
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.7000e-004	6.8400e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.8176	1.8176	6.0000e-005	5.0000e-005	1.8346
Total	**5.4500e-003**	**0.1727**	**0.0435**	**6.5000e-004**	**0.0192**	**1.5500e-003**	**0.0207**	**5.2500e-003**	**1.4900e-003**	**6.7400e-003**	**0.0000**	**64.5019**	**64.5019**	**2.1300e-003**	**9.9800e-003**	**67.5292**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3800e-003	0.0000	5.3800e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.4665	0.3391	5.3000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	46.3709	46.3709	0.0118	0.0000	46.6663
Total	**0.0195**	**0.4665**	**0.3391**	**5.3000e-004**	**5.3800e-003**	**0.0158**	**0.0212**	**8.2000e-004**	**0.0158**	**0.0166**	**0.0000**	**46.3709**	**46.3709**	**0.0118**	**0.0000**	**46.6663**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1722	0.0366	6.3000e-004	0.0169	1.5400e-003	0.0185	4.6500e-003	1.4800e-003	6.1300e-003	0.0000	62.6843	62.6843	2.0700e-003	9.9300e-003	65.6946
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.7000e-004	6.8400e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.8176	1.8176	6.0000e-005	5.0000e-005	1.8346
Total	**5.4500e-003**	**0.1727**	**0.0435**	**6.5000e-004**	**0.0192**	**1.5500e-003**	**0.0207**	**5.2500e-003**	**1.4900e-003**	**6.7400e-003**	**0.0000**	**64.5019**	**64.5019**	**2.1300e-003**	**9.9800e-003**	**67.5292**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1003	0.0000	0.1003	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0254	0.2802	0.1521	3.4000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	29.8695	29.8695	9.6600e-003	0.0000	30.1110
Total	**0.0254**	**0.2802**	**0.1521**	**3.4000e-004**	**0.1003**	**0.0123**	**0.1125**	**0.0547**	**0.0113**	**0.0660**	**0.0000**	**29.8695**	**29.8695**	**9.6600e-003**	**0.0000**	**30.1110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0241	5.1300e-003	9.0000e-005	2.3700e-003	2.2000e-004	2.5800e-003	6.5000e-004	2.1000e-004	8.6000e-004	0.0000	8.7758	8.7758	2.9000e-004	1.3900e-003	9.1973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**1.1000e-003**	**0.0244**	**9.0800e-003**	**1.0000e-004**	**3.6700e-003**	**2.3000e-004**	**3.8900e-003**	**1.0000e-003**	**2.2000e-004**	**1.2100e-003**	**0.0000**	**9.8244**	**9.8244**	**3.2000e-004**	**1.4200e-003**	**10.2557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0451	0.0000	0.0451	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003	0.0000	29.8694	29.8694	9.6600e-003	0.0000	30.1110
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0451**	**8.0000e-003**	**0.0531**	**0.0246**	**8.0000e-003**	**0.0326**	**0.0000**	**29.8694**	**29.8694**	**9.6600e-003**	**0.0000**	**30.1110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0241	5.1300e-003	9.0000e-005	2.3700e-003	2.2000e-004	2.5800e-003	6.5000e-004	2.1000e-004	8.6000e-004	0.0000	8.7758	8.7758	2.9000e-004	1.3900e-003	9.1973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**1.1000e-003**	**0.0244**	**9.0800e-003**	**1.0000e-004**	**3.6700e-003**	**2.3000e-004**	**3.8900e-003**	**1.0000e-003**	**2.2000e-004**	**1.2100e-003**	**0.0000**	**9.8244**	**9.8244**	**3.2000e-004**	**1.4200e-003**	**10.2557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0613	0.0000	0.0613	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0151	0.1682	0.0816	2.0000e-004		7.1600e-003	7.1600e-003		6.5900e-003	6.5900e-003	0.0000	17.3826	17.3826	5.6200e-003	0.0000	17.5231
Total	**0.0151**	**0.1682**	**0.0816**	**2.0000e-004**	**0.0613**	**7.1600e-003**	**0.0685**	**0.0334**	**6.5900e-003**	**0.0400**	**0.0000**	**17.3826**	**17.3826**	**5.6200e-003**	**0.0000**	**17.5231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.2000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5847	0.5847	2.0000e-005	2.0000e-005	0.5902
Total	**2.5000e-004**	**1.8000e-004**	**2.2000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5847**	**0.5847**	**2.0000e-005**	**2.0000e-005**	**0.5902**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0276	0.0000	0.0276	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6400e-003	0.1719	0.1130	2.0000e-004		4.3100e-003	4.3100e-003		4.3100e-003	4.3100e-003	0.0000	17.3826	17.3826	5.6200e-003	0.0000	17.5231
Total	**5.6400e-003**	**0.1719**	**0.1130**	**2.0000e-004**	**0.0276**	**4.3100e-003**	**0.0319**	**0.0150**	**4.3100e-003**	**0.0193**	**0.0000**	**17.3826**	**17.3826**	**5.6200e-003**	**0.0000**	**17.5231**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.2000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5847	0.5847	2.0000e-005	2.0000e-005	0.5902
Total	**2.5000e-004**	**1.8000e-004**	**2.2000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5847**	**0.5847**	**2.0000e-005**	**2.0000e-005**	**0.5902**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1001	0.0000	0.1001	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0254	0.2802	0.1521	3.4000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	29.8695	29.8695	9.6600e-003	0.0000	30.1110
Total	**0.0254**	**0.2802**	**0.1521**	**3.4000e-004**	**0.1001**	**0.0123**	**0.1124**	**0.0547**	**0.0113**	**0.0660**	**0.0000**	**29.8695**	**29.8695**	**9.6600e-003**	**0.0000**	**30.1110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**4.5000e-004**	**3.3000e-004**	**3.9500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0486**	**1.0486**	**3.0000e-005**	**3.0000e-005**	**1.0584**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0450	0.0000	0.0450	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003	0.0000	29.8694	29.8694	9.6600e-003	0.0000	30.1110
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0450**	**8.0000e-003**	**0.0530**	**0.0246**	**8.0000e-003**	**0.0326**	**0.0000**	**29.8694**	**29.8694**	**9.6600e-003**	**0.0000**	**30.1110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**4.5000e-004**	**3.3000e-004**	**3.9500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0486**	**1.0486**	**3.0000e-005**	**3.0000e-005**	**1.0584**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1096	0.8315	0.8463	1.4700e-003		0.0392	0.0392		0.0378	0.0378	0.0000	120.7487	120.7487	0.0210	0.0000	121.2744
Total	**0.1096**	**0.8315**	**0.8463**	**1.4700e-003**		**0.0392**	**0.0392**		**0.0378**	**0.0378**	**0.0000**	**120.7487**	**120.7487**	**0.0210**	**0.0000**	**121.2744**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8400e-003	0.1263	0.0368	4.8000e-004	0.0148	1.3000e-003	0.0161	4.2900e-003	1.2400e-003	5.5300e-003	0.0000	46.5659	46.5659	1.0100e-003	6.9000e-003	48.6488
Worker	0.0287	0.0207	0.2497	7.2000e-004	0.0825	4.5000e-004	0.0830	0.0220	4.1000e-004	0.0224	0.0000	66.3509	66.3509	2.0600e-003	1.9100e-003	66.9728
Total	**0.0335**	**0.1470**	**0.2865**	**1.2000e-003**	**0.0973**	**1.7500e-003**	**0.0991**	**0.0262**	**1.6500e-003**	**0.0279**	**0.0000**	**112.9168**	**112.9168**	**3.0700e-003**	**8.8100e-003**	**115.6216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0558	1.1524	0.8963	1.4700e-003		0.0486	0.0486		0.0486	0.0486	0.0000	120.7485	120.7485	0.0210	0.0000	121.2743
Total	**0.0558**	**1.1524**	**0.8963**	**1.4700e-003**		**0.0486**	**0.0486**		**0.0486**	**0.0486**	**0.0000**	**120.7485**	**120.7485**	**0.0210**	**0.0000**	**121.2743**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8400e-003	0.1263	0.0368	4.8000e-004	0.0148	1.3000e-003	0.0161	4.2900e-003	1.2400e-003	5.5300e-003	0.0000	46.5659	46.5659	1.0100e-003	6.9000e-003	48.6488
Worker	0.0287	0.0207	0.2497	7.2000e-004	0.0825	4.5000e-004	0.0830	0.0220	4.1000e-004	0.0224	0.0000	66.3509	66.3509	2.0600e-003	1.9100e-003	66.9728
Total	**0.0335**	**0.1470**	**0.2865**	**1.2000e-003**	**0.0973**	**1.7500e-003**	**0.0991**	**0.0262**	**1.6500e-003**	**0.0279**	**0.0000**	**112.9168**	**112.9168**	**3.0700e-003**	**8.8100e-003**	**115.6216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1980	1.5224	1.6394	2.8700e-003		0.0669	0.0669		0.0646	0.0646	0.0000	236.0789	236.0789	0.0401	0.0000	237.0811
Total	**0.1980**	**1.5224**	**1.6394**	**2.8700e-003**		**0.0669**	**0.0669**		**0.0646**	**0.0646**	**0.0000**	**236.0789**	**236.0789**	**0.0401**	**0.0000**	**237.0811**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1965	0.0615	9.0000e-004	0.0290	1.1500e-003	0.0302	8.3900e-003	1.1000e-003	9.4900e-003	0.0000	87.2488	87.2488	1.7800e-003	0.0129	91.1395
Worker	0.0522	0.0358	0.4526	1.3600e-003	0.1613	8.3000e-004	0.1621	0.0429	7.7000e-004	0.0437	0.0000	126.3989	126.3989	3.6400e-003	3.4700e-003	127.5233
Total	**0.0569**	**0.2323**	**0.5141**	**2.2600e-003**	**0.1903**	**1.9800e-003**	**0.1923**	**0.0513**	**1.8700e-003**	**0.0532**	**0.0000**	**213.6477**	**213.6477**	**5.4200e-003**	**0.0164**	**218.6628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1091	2.2528	1.7522	2.8700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808
Total	**0.1091**	**2.2528**	**1.7522**	**2.8700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**236.0786**	**236.0786**	**0.0401**	**0.0000**	**237.0808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1965	0.0615	9.0000e-004	0.0290	1.1500e-003	0.0302	8.3900e-003	1.1000e-003	9.4900e-003	0.0000	87.2488	87.2488	1.7800e-003	0.0129	91.1395
Worker	0.0522	0.0358	0.4526	1.3600e-003	0.1613	8.3000e-004	0.1621	0.0429	7.7000e-004	0.0437	0.0000	126.3989	126.3989	3.6400e-003	3.4700e-003	127.5233
Total	**0.0569**	**0.2323**	**0.5141**	**2.2600e-003**	**0.1903**	**1.9800e-003**	**0.1923**	**0.0513**	**1.8700e-003**	**0.0532**	**0.0000**	**213.6477**	**213.6477**	**5.4200e-003**	**0.0164**	**218.6628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0923	0.7192	0.8136	1.4300e-003		0.0293	0.0293		0.0283	0.0283	0.0000	118.0473	118.0473	0.0197	0.0000	118.5388
Total	**0.0923**	**0.7192**	**0.8136**	**1.4300e-003**		**0.0293**	**0.0293**		**0.0283**	**0.0283**	**0.0000**	**118.0473**	**118.0473**	**0.0197**	**0.0000**	**118.5388**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0983	0.0301	4.4000e-004	0.0145	5.8000e-004	0.0151	4.1900e-003	5.5000e-004	4.7500e-003	0.0000	42.9446	42.9446	8.8000e-004	6.3500e-003	44.8596
Worker	0.0244	0.0160	0.2114	6.6000e-004	0.0806	4.0000e-004	0.0810	0.0215	3.6000e-004	0.0218	0.0000	61.6407	61.6407	1.6500e-003	1.6200e-003	62.1634
Total	**0.0267**	**0.1143**	**0.2415**	**1.1000e-003**	**0.0951**	**9.8000e-004**	**0.0961**	**0.0256**	**9.1000e-004**	**0.0266**	**0.0000**	**104.5853**	**104.5853**	**2.5300e-003**	**7.9700e-003**	**107.0230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0546	1.1264	0.8761	1.4300e-003		0.0476	0.0476		0.0476	0.0476	0.0000	118.0472	118.0472	0.0197	0.0000	118.5387
Total	**0.0546**	**1.1264**	**0.8761**	**1.4300e-003**		**0.0476**	**0.0476**		**0.0476**	**0.0476**	**0.0000**	**118.0472**	**118.0472**	**0.0197**	**0.0000**	**118.5387**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0983	0.0301	4.4000e-004	0.0145	5.8000e-004	0.0151	4.1900e-003	5.5000e-004	4.7500e-003	0.0000	42.9446	42.9446	8.8000e-004	6.3500e-003	44.8596
Worker	0.0244	0.0160	0.2114	6.6000e-004	0.0806	4.0000e-004	0.0810	0.0215	3.6000e-004	0.0218	0.0000	61.6407	61.6407	1.6500e-003	1.6200e-003	62.1634
Total	**0.0267**	**0.1143**	**0.2415**	**1.1000e-003**	**0.0951**	**9.8000e-004**	**0.0961**	**0.0256**	**9.1000e-004**	**0.0266**	**0.0000**	**104.5853**	**104.5853**	**2.5300e-003**	**7.9700e-003**	**107.0230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0900e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3926	0.3926	1.0000e-005	1.0000e-005	0.3960
Total	**1.6000e-004**	**1.0000e-004**	**1.3500e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3926**	**0.3926**	**1.0000e-005**	**1.0000e-005**	**0.3960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0587	0.0493	7.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7500e-003**	**0.0587**	**0.0493**	**7.0000e-005**		**2.0600e-003**	**2.0600e-003**		**2.0600e-003**	**2.0600e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3926	0.3926	1.0000e-005	1.0000e-005	0.3960
Total	**1.6000e-004**	**1.0000e-004**	**1.3500e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3926**	**0.3926**	**1.0000e-005**	**1.0000e-005**	**0.3960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**1.1830**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2100e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9362	0.9362	3.0000e-005	2.0000e-005	0.9442
Total	**3.7000e-004**	**2.4000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9362**	**0.9362**	**3.0000e-005**	**2.0000e-005**	**0.9442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**1.1827**	**0.0118**	**9.1600e-003**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2100e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9362	0.9362	3.0000e-005	2.0000e-005	0.9442
Total	**3.7000e-004**	**2.4000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9362**	**0.9362**	**3.0000e-005**	**2.0000e-005**	**0.9442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2313	0.2387	1.9803	3.8000e-003	0.4038	2.9100e-003	0.4067	0.1079	2.7100e-003	0.1106	0.0000	356.8633	356.8633	0.0265	0.0186	363.0517
Unmitigated	0.2431	0.2609	2.1606	4.2900e-003	0.4578	3.2400e-003	0.4610	0.1223	3.0100e-003	0.1253	0.0000	402.6272	402.6272	0.0283	0.0202	409.3605

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	374.46	374.46	374.46	864,856	762,803
City Park	0.00	0.00	0.00		
Strip Mall	244.95	244.95	244.95	377,231	332,718
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	619.41	619.41	619.41	1,242,087	1,095,520

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
City Park	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Strip Mall	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Unenclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

Menlo Flats - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47.6252	47.6252	7.7000e-003	9.3000e-004	48.0961
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.6621	83.6621	0.0135	1.6400e-003	84.4893
NaturalGas Mitigated	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	64.3915	64.3915	1.2300e-003	1.1800e-003	64.7741
NaturalGas Unmitigated	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	74.8372	74.8372	1.4300e-003	1.3700e-003	75.2819

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.334e+006	7.1900e-003	0.0615	0.0262	3.9000e-004		4.9700e-003	4.9700e-003		4.9700e-003	4.9700e-003	0.0000	71.1871	71.1871	1.3600e-003	1.3100e-003	71.6101
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	68400	3.7000e-004	3.3500e-003	2.8200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.6501	3.6501	7.0000e-005	7.0000e-005	3.6718
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.5600e-003**	**0.0648**	**0.0290**	**4.1000e-004**		**5.2200e-003**	**5.2200e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**74.8372**	**74.8372**	**1.4300e-003**	**1.3800e-003**	**75.2819**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.14983e+006	6.2000e-003	0.0530	0.0226	3.4000e-004		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003	0.0000	61.3593	61.3593	1.1800e-003	1.1200e-003	61.7240
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	56820	3.1000e-004	2.7900e-003	2.3400e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0321	3.0321	6.0000e-005	6.0000e-005	3.0502
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.5100e-003**	**0.0558**	**0.0249**	**3.6000e-004**		**4.4900e-003**	**4.4900e-003**		**4.4900e-003**	**4.4900e-003**	**0.0000**	**64.3915**	**64.3915**	**1.2400e-003**	**1.1800e-003**	**64.7741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	614046	56.8139	9.1900e-003	1.1100e-003	57.3757
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	153600	14.2117	2.3000e-003	2.8000e-004	14.3522
Unenclosed Parking with Elevator	136576	12.6365	2.0400e-003	2.5000e-004	12.7615
Total		**83.6621**	**0.0135**	**1.6400e-003**	**84.4893**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	405234	37.4938	6.0700e-003	7.4000e-004	37.8645
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	74160	6.8616	1.1100e-003	1.3000e-004	6.9294
Unenclosed Parking with Elevator	35340.8	3.2699	5.3000e-004	6.0000e-005	3.3022
Total		**47.6252**	**7.7100e-003**	**9.3000e-004**	**48.0961**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Unmitigated	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8213**	**0.0135**	**1.1744**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8500e-003**	**0.0000**	**1.9660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8213**	**0.0135**	**1.1744**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8500e-003**	**0.0000**	**1.9660**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.9702	0.2985	7.1600e-003	19.5651
Unmitigated	11.8359	0.3730	8.9400e-003	23.8233

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.2943 / 6.48991	10.5214	0.3366	8.0600e-003	21.3395
City Park	0 / 0.571911	0.1852	3.0000e-005	0.0000	0.1870
Strip Mall	1.11109 / 0.680989	1.1293	0.0363	8.7000e-004	2.2968
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**11.8359**	**0.3730**	**8.9300e-003**	**23.8233**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.23547 / 6.48991	8.8374	0.2694	6.4600e-003	17.4961
City Park	0 / 0.571911	0.1852	3.0000e-005	0.0000	0.1870
Strip Mall	0.88887 / 0.680989	0.9475	0.0291	7.0000e-004	1.8820
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9702**	**0.2985**	**7.1600e-003**	**19.5651**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.4897	0.2653	0.0000	11.1229
Unmitigated	17.9586	1.0613	0.0000	44.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	72.68	14.7534	0.8719	0.0000	36.5509
City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**17.9586**	**1.0613**	**0.0000**	**44.4917**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	18.17	3.6884	0.2180	0.0000	9.1377
City Park	0.01	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Strip Mall	3.9375	0.7993	0.0472	0.0000	1.9802
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.4897**	**0.2653**	**0.0000**	**11.1229**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.14	50	402	0.73	Diesel

Boilers

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Total	**0.0165**	**0.0461**	**0.0421**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**7.6540**	**7.6540**	**1.0700e-003**	**0.0000**	**7.6809**

11.0 Vegetation

Menlo Flats - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	176.00	Space	0.00	70,400.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Apartments Mid Rise	158.00	Dwelling Unit	0.90	154,730.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Construction is expected to begin March 2022 and end summer 2024. Phasing based on assumptions provided by Project Applicant. Architectural Coating and Paving phases are default duration.

Trips and VMT - For soil import haul trips, assuming 25 cubic yards of material per load based on information from project applicant.

Demolition - Approximately 24,311 building square footage to be demolished.

Grading - A total of 3,500 cubic yards of soils would be imported.

Vehicle Trips - Based on trip generation prepared for the project (619 net new average daily trips).

Menlo Flats - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - The project would exceed Title 24 by 20 percent, install solar panels, and meet LEED Gold standards. Also assuming installation of high efficiency lighting and energy effiicent appliances.

Water Mitigation - Assuming the installation of low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 50 hours per year for testing and emergency use.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	200.00	523.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	2.00	23.00
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00
tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	21.56	1.38
tblGrading	MaterialImported	0.00	3,500.00
tblLandUse	LandUseSquareFeet	158,000.00	154,730.00
tblLandUse	LotAcreage	1.58	0.00
tblLandUse	LotAcreage	4.16	0.90
tblLandUse	LotAcreage	0.34	0.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	402.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.14

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	111.00	2,000.00
tblTripsAndVMT	HaulingTripNumber	438.00	280.00
tblVehicleTrips	ST_TR	4.91	2.37
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	42.04	16.33
tblVehicleTrips	SU_TR	4.09	2.37
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	20.43	16.33
tblVehicleTrips	WD_TR	5.44	2.37
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	44.32	16.33
tblWoodstoves	NumberCatalytic	3.16	0.00
tblWoodstoves	NumberNoncatalytic	3.16	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.3575	50.0526	36.5959	0.0889	17.8562	2.1214	19.9776	9.6369	1.9729	11.5890	0.0000	8,674.5340	8,674.5340	1.8547	0.4998	8,788.9078
2023	1.9849	13.4126	16.8299	0.0401	1.5200	0.5297	2.0497	0.4084	0.5112	0.9195	0.0000	3,885.4417	3,885.4417	0.3839	0.1365	3,935.7013
2024	238.5331	18.6194	25.5858	0.0541	1.7747	0.7471	2.3739	0.4759	0.7088	1.1455	0.0000	5,235.9202	5,235.9202	0.7881	0.1379	5,295.8491
Maximum	**238.5331**	**50.0526**	**36.5959**	**0.0889**	**17.8562**	**2.1214**	**19.9776**	**9.6369**	**1.9729**	**11.5890**	**0.0000**	**8,674.5340**	**8,674.5340**	**1.8547**	**0.4998**	**8,788.9078**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7200	57.0926	43.1978	0.0889	8.2434	1.7418	9.6025	4.3925	1.7398	5.7509	0.0000	8,674.5340	8,674.5340	1.8547	0.4998	8,788.9077
2023	1.3011	19.0316	17.6974	0.0401	1.5200	0.7467	2.2667	0.4084	0.7458	1.1542	0.0000	3,885.4417	3,885.4417	0.3839	0.1365	3,935.7013
2024	237.8857	30.7660	27.5732	0.0541	1.7747	1.1583	2.7851	0.4759	1.1574	1.5941	0.0000	5,235.9201	5,235.9201	0.7881	0.1379	5,295.8491
Maximum	**237.8857**	**57.0926**	**43.1978**	**0.0889**	**8.2434**	**1.7418**	**9.6025**	**4.3925**	**1.7398**	**5.7509**	**0.0000**	**8,674.5340**	**8,674.5340**	**1.8547**	**0.4998**	**8,788.9077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.61**	**-30.22**	**-11.97**	**0.00**	**45.45**	**-7.32**	**39.94**	**49.85**	**-14.10**	**37.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Energy	0.0414	0.3552	0.1588	2.2600e-003		0.0286	0.0286		0.0286	0.0286		452.0211	452.0211	8.6600e-003	8.2900e-003	454.7073
Mobile	1.4980	1.3178	11.7269	0.0249	2.6143	0.0178	2.6321	0.6963	0.0166	0.7129		2,569.5072	2,569.5072	0.1591	0.1160	2,608.0650
Stationary	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**6.3314**	**2.0814**	**25.1704**	**0.0282**	**2.6143**	**0.1323**	**2.7466**	**0.6963**	**0.1311**	**0.8274**	**0.0000**	**3,092.2893**	**3,092.2893**	**0.1971**	**0.1243**	**3,134.2646**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Energy	0.0357	0.3056	0.1364	1.9400e-003		0.0246	0.0246		0.0246	0.0246		388.9284	388.9284	7.4500e-003	7.1300e-003	391.2396
Mobile	1.4349	1.2056	10.6679	0.0220	2.3058	0.0160	2.3218	0.6141	0.0149	0.6290		2,276.7147	2,276.7147	0.1480	0.1063	2,312.0961
Stationary	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**6.2624**	**1.9196**	**24.0890**	**0.0251**	**2.3058**	**0.1265**	**2.4323**	**0.6141**	**0.1254**	**0.7395**	**0.0000**	**2,736.4042**	**2,736.4042**	**0.1847**	**0.1134**	**2,774.8282**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.09**	**7.77**	**4.30**	**11.15**	**11.80**	**4.40**	**11.44**	**11.80**	**4.35**	**10.62**	**0.00**	**11.51**	**11.51**	**6.25**	**8.76**	**11.47**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	5/13/2022	5	44	
2	Rough Grading	Grading	5/15/2022	6/29/2022	5	33	
3	Site Preparation	Site Preparation	5/16/2022	6/15/2022	5	23	
4	Fine Grading	Grading	6/15/2022	7/29/2022	5	33	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Building Construction	Building Construction	6/29/2022	6/28/2024	5	523	
6	Paving	Paving	6/3/2024	6/14/2024	5	10	
7	Architectural Coating	Architectural Coating	6/17/2024	6/28/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.38

Acres of Grading (Grading Phase): 1.38

Acres of Paving: 0

Residential Indoor: 313,328; Residential Outdoor: 104,443; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,224 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	4	10.00	0.00	280.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	157.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5439	0.0000	0.5439	0.0824	0.0000	0.0824			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.5439**	**0.8379**	**1.3818**	**0.0824**	**0.7829**	**0.8652**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2141	7.5461	1.6540	0.0289	0.7950	0.0702	0.8651	0.2179	0.0671	0.2850		3,140.3728	3,140.3728	0.1036	0.4974	3,291.1818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0378	0.0228	0.3361	9.6000e-004	0.1068	5.6000e-004	0.1074	0.0283	5.1000e-004	0.0288		97.2482	97.2482	2.6500e-003	2.4200e-003	98.0371
Total	**0.2519**	**7.5689**	**1.9900**	**0.0298**	**0.9017**	**0.0707**	**0.9725**	**0.2462**	**0.0676**	**0.3139**		**3,237.6210**	**3,237.6210**	**0.1062**	**0.4998**	**3,389.2189**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2448	0.0000	0.2448	0.0371	0.0000	0.0371			0.0000			0.0000
Off-Road	0.8857	21.2053	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**0.8857**	**21.2053**	**15.4154**	**0.0241**	**0.2448**	**0.7182**	**0.9629**	**0.0371**	**0.7182**	**0.7552**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2141	7.5461	1.6540	0.0289	0.7950	0.0702	0.8651	0.2179	0.0671	0.2850		3,140.3728	3,140.3728	0.1036	0.4974	3,291.1818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0378	0.0228	0.3361	9.6000e-004	0.1068	5.6000e-004	0.1074	0.0283	5.1000e-004	0.0288		97.2482	97.2482	2.6500e-003	2.4200e-003	98.0371
Total	**0.2519**	**7.5689**	**1.9900**	**0.0298**	**0.9017**	**0.0707**	**0.9725**	**0.2462**	**0.0676**	**0.3139**		**3,237.6210**	**3,237.6210**	**0.1062**	**0.4998**	**3,389.2189**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0784	0.0000	6.0784	3.3168	0.0000	3.3168			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.0784**	**0.7423**	**6.8207**	**3.3168**	**0.6829**	**3.9997**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0400	1.4086	0.3087	5.3800e-003	0.1484	0.0131	0.1615	0.0407	0.0125	0.0532		586.2029	586.2029	0.0193	0.0928	614.3539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0291	0.0175	0.2585	7.4000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		74.8063	74.8063	2.0400e-003	1.8700e-003	75.4131
Total	**0.0691**	**1.4262**	**0.5673**	**6.1200e-003**	**0.2305**	**0.0135**	**0.2441**	**0.0625**	**0.0129**	**0.0754**		**661.0092**	**661.0092**	**0.0214**	**0.0947**	**689.7671**

Menlo Flats - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7353	0.0000	2.7353	1.4926	0.0000	1.4926			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**0.6262**	**18.1050**	**12.1450**	**0.0206**	**2.7353**	**0.4850**	**3.2203**	**1.4926**	**0.4850**	**1.9776**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0400	1.4086	0.3087	5.3800e-003	0.1484	0.0131	0.1615	0.0407	0.0125	0.0532		586.2029	586.2029	0.0193	0.0928	614.3539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0291	0.0175	0.2585	7.4000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		74.8063	74.8063	2.0400e-003	1.8700e-003	75.4131
Total	**0.0691**	**1.4262**	**0.5673**	**6.1200e-003**	**0.2305**	**0.0135**	**0.2441**	**0.0625**	**0.0129**	**0.0754**		**661.0092**	**661.0092**	**0.0214**	**0.0947**	**689.7671**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3330	0.0000	5.3330	2.9033	0.0000	2.9033			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.3330**	**0.6225**	**5.9555**	**2.9033**	**0.5727**	**3.4760**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0233	0.0140	0.2068	5.9000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.2000e-004	0.0178		59.8450	59.8450	1.6300e-003	1.4900e-003	60.3305
Total	**0.0233**	**0.0140**	**0.2068**	**5.9000e-004**	**0.0657**	**3.4000e-004**	**0.0661**	**0.0174**	**3.2000e-004**	**0.0178**		**59.8450**	**59.8450**	**1.6300e-003**	**1.4900e-003**	**60.3305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3998	0.0000	2.3998	1.3065	0.0000	1.3065			0.0000			0.0000
Off-Road	0.4908	14.9460	9.8221	0.0172		0.3747	0.3747		0.3747	0.3747	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**0.4908**	**14.9460**	**9.8221**	**0.0172**	**2.3998**	**0.3747**	**2.7745**	**1.3065**	**0.3747**	**1.6812**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0233	0.0140	0.2068	5.9000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.2000e-004	0.0178		59.8450	59.8450	1.6300e-003	1.4900e-003	60.3305
Total	**0.0233**	**0.0140**	**0.2068**	**5.9000e-004**	**0.0657**	**3.4000e-004**	**0.0661**	**0.0174**	**3.2000e-004**	**0.0178**		**59.8450**	**59.8450**	**1.6300e-003**	**1.4900e-003**	**60.3305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0664	0.0000	6.0664	3.3150	0.0000	3.3150			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.0664**	**0.7423**	**6.8087**	**3.3150**	**0.6829**	**3.9979**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0291	0.0175	0.2585	7.4000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		74.8063	74.8063	2.0400e-003	1.8700e-003	75.4131
Total	**0.0291**	**0.0175**	**0.2585**	**7.4000e-004**	**0.0822**	**4.3000e-004**	**0.0826**	**0.0218**	**4.0000e-004**	**0.0222**		**74.8063**	**74.8063**	**2.0400e-003**	**1.8700e-003**	**75.4131**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7299	0.0000	2.7299	1.4918	0.0000	1.4918			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**0.6262**	**18.1050**	**12.1450**	**0.0206**	**2.7299**	**0.4850**	**3.2149**	**1.4918**	**0.4850**	**1.9768**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0291	0.0175	0.2585	7.4000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		74.8063	74.8063	2.0400e-003	1.8700e-003	75.4131
Total	**0.0291**	**0.0175**	**0.2585**	**7.4000e-004**	**0.0822**	**4.3000e-004**	**0.0826**	**0.0218**	**4.0000e-004**	**0.0222**		**74.8063**	**74.8063**	**2.0400e-003**	**1.8700e-003**	**75.4131**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0734	1.8341	0.5448	7.2000e-003	0.2303	0.0195	0.2498	0.0663	0.0187	0.0850		771.7519	771.7519	0.0168	0.1144	806.2493
Worker	0.4567	0.2754	4.0587	0.0115	1.2897	6.7400e-003	1.2965	0.3421	6.2100e-003	0.3483		1,174.4589	1,174.4589	0.0320	0.0293	1,183.9864
Total	**0.5301**	**2.1095**	**4.6035**	**0.0187**	**1.5200**	**0.0263**	**1.5463**	**0.4084**	**0.0249**	**0.4333**		**1,946.2107**	**1,946.2107**	**0.0488**	**0.1436**	**1,990.2356**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0734	1.8341	0.5448	7.2000e-003	0.2303	0.0195	0.2498	0.0663	0.0187	0.0850		771.7519	771.7519	0.0168	0.1144	806.2493
Worker	0.4567	0.2754	4.0587	0.0115	1.2897	6.7400e-003	1.2965	0.3421	6.2100e-003	0.3483		1,174.4589	1,174.4589	0.0320	0.0293	1,183.9864
Total	**0.5301**	**2.1095**	**4.6035**	**0.0187**	**1.5200**	**0.0263**	**1.5463**	**0.4084**	**0.0249**	**0.4333**		**1,946.2107**	**1,946.2107**	**0.0488**	**0.1436**	**1,990.2356**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0370	1.4583	0.4657	6.8900e-003	0.2303	8.8300e-003	0.2391	0.0663	8.4400e-003	0.0747		739.3675	739.3675	0.0151	0.1093	772.3177
Worker	0.4247	0.2439	3.7531	0.0112	1.2897	6.4000e-003	1.2961	0.3421	5.8900e-003	0.3480		1,144.2866	1,144.2866	0.0289	0.0272	1,153.0979
Total	**0.4617**	**1.7022**	**4.2188**	**0.0181**	**1.5200**	**0.0152**	**1.5352**	**0.4084**	**0.0143**	**0.4227**		**1,883.6540**	**1,883.6540**	**0.0440**	**0.1365**	**1,925.4156**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0370	1.4583	0.4657	6.8900e-003	0.2303	8.8300e-003	0.2391	0.0663	8.4400e-003	0.0747		739.3675	739.3675	0.0151	0.1093	772.3177
Worker	0.4247	0.2439	3.7531	0.0112	1.2897	6.4000e-003	1.2961	0.3421	5.8900e-003	0.3480		1,144.2866	1,144.2866	0.0289	0.0272	1,153.0979
Total	**0.4617**	**1.7022**	**4.2188**	**0.0181**	**1.5200**	**0.0152**	**1.5352**	**0.4084**	**0.0143**	**0.4227**		**1,883.6540**	**1,883.6540**	**0.0440**	**0.1365**	**1,925.4156**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0360	1.4590	0.4558	6.7800e-003	0.2303	8.9000e-003	0.2392	0.0663	8.5200e-003	0.0748		727.8360	727.8360	0.0150	0.1076	760.2721
Worker	0.3967	0.2178	3.4980	0.0108	1.2897	6.0900e-003	1.2958	0.3421	5.6100e-003	0.3477		1,115.8950	1,115.8950	0.0261	0.0253	1,124.0886
Total	**0.4327**	**1.6768**	**3.9538**	**0.0176**	**1.5200**	**0.0150**	**1.5350**	**0.4084**	**0.0141**	**0.4225**		**1,843.7310**	**1,843.7310**	**0.0411**	**0.1329**	**1,884.3607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0360	1.4590	0.4558	6.7800e-003	0.2303	8.9000e-003	0.2392	0.0663	8.5200e-003	0.0748		727.8360	727.8360	0.0150	0.1076	760.2721
Worker	0.3967	0.2178	3.4980	0.0108	1.2897	6.0900e-003	1.2958	0.3421	5.6100e-003	0.3477		1,115.8950	1,115.8950	0.0261	0.0253	1,124.0886
Total	**0.4327**	**1.6768**	**3.9538**	**0.0176**	**1.5200**	**0.0150**	**1.5350**	**0.4084**	**0.0141**	**0.4225**		**1,843.7310**	**1,843.7310**	**0.0411**	**0.1329**	**1,884.3607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6180**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0329	0.0180	0.2896	9.0000e-004	0.1068	5.0000e-004	0.1073	0.0283	4.6000e-004	0.0288		92.3990	92.3990	2.1600e-003	2.1000e-003	93.0774
Total	**0.0329**	**0.0180**	**0.2896**	**9.0000e-004**	**0.1068**	**5.0000e-004**	**0.1073**	**0.0283**	**4.6000e-004**	**0.0288**		**92.3990**	**92.3990**	**2.1600e-003**	**2.1000e-003**	**93.0774**

Menlo Flats - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5500	11.7418	9.8512	0.0136		0.4113	0.4113		0.4113	0.4113	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5500**	**11.7418**	**9.8512**	**0.0136**		**0.4113**	**0.4113**		**0.4113**	**0.4113**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0329	0.0180	0.2896	9.0000e-004	0.1068	5.0000e-004	0.1073	0.0283	4.6000e-004	0.0288		92.3990	92.3990	2.1600e-003	2.1000e-003	93.0774
Total	**0.0329**	**0.0180**	**0.2896**	**9.0000e-004**	**0.1068**	**5.0000e-004**	**0.1073**	**0.0283**	**4.6000e-004**	**0.0288**		**92.3990**	**92.3990**	**2.1600e-003**	**2.1000e-003**	**93.0774**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.6021**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0783	0.0430	0.6907	2.1400e-003	0.2547	1.2000e-003	0.2559	0.0676	1.1100e-003	0.0687		220.3360	220.3360	5.1500e-003	5.0000e-003	221.9538
Total	**0.0783**	**0.0430**	**0.6907**	**2.1400e-003**	**0.2547**	**1.2000e-003**	**0.2559**	**0.0676**	**1.1100e-003**	**0.0687**		**220.3360**	**220.3360**	**5.1500e-003**	**5.0000e-003**	**221.9538**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5353**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0783	0.0430	0.6907	2.1400e-003	0.2547	1.2000e-003	0.2559	0.0676	1.1100e-003	0.0687		220.3360	220.3360	5.1500e-003	5.0000e-003	221.9538
Total	**0.0783**	**0.0430**	**0.6907**	**2.1400e-003**	**0.2547**	**1.2000e-003**	**0.2559**	**0.0676**	**1.1100e-003**	**0.0687**		**220.3360**	**220.3360**	**5.1500e-003**	**5.0000e-003**	**221.9538**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4349	1.2056	10.6679	0.0220	2.3058	0.0160	2.3218	0.6141	0.0149	0.6290		2,276.7147	2,276.7147	0.1480	0.1063	2,312.0961
Unmitigated	1.4980	1.3178	11.7269	0.0249	2.6143	0.0178	2.6321	0.6963	0.0166	0.7129		2,569.5072	2,569.5072	0.1591	0.1160	2,608.0650

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	374.46	374.46	374.46	864,856	762,803
City Park	0.00	0.00	0.00		
Strip Mall	244.95	244.95	244.95	377,231	332,718
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	619.41	619.41	619.41	1,242,087	1,095,520

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
City Park	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Strip Mall	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Unenclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0357	0.3056	0.1364	1.9400e-003		0.0246	0.0246		0.0246	0.0246		388.9284	388.9284	7.4500e-003	7.1300e-003	391.2396
NaturalGas Unmitigated	0.0414	0.3552	0.1588	2.2600e-003		0.0286	0.0286		0.0286	0.0286		452.0211	452.0211	8.6600e-003	8.2900e-003	454.7073

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3654.78	0.0394	0.3368	0.1433	2.1500e-003		0.0272	0.0272		0.0272	0.0272		429.9744	429.9744	8.2400e-003	7.8800e-003	432.5295
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	187.397	2.0200e-003	0.0184	0.0154	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003		22.0467	22.0467	4.2000e-004	4.0000e-004	22.1778
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0414**	**0.3552**	**0.1588**	**2.2600e-003**		**0.0286**	**0.0286**		**0.0286**	**0.0286**		**452.0211**	**452.0211**	**8.6600e-003**	**8.2800e-003**	**454.7073**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.15022	0.0340	0.2903	0.1235	1.8500e-003		0.0235	0.0235		0.0235	0.0235		370.6142	370.6142	7.1000e-003	6.7900e-003	372.8166
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.155671	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3143	18.3143	3.5000e-004	3.4000e-004	18.4231
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0357**	**0.3056**	**0.1364**	**1.9400e-003**		**0.0246**	**0.0246**		**0.0246**	**0.0246**		**388.9284**	**388.9284**	**7.4500e-003**	**7.1300e-003**	**391.2397**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Unmitigated	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3936	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723		23.5132	23.5132	0.0226		24.0789
Total	**4.6995**	**0.1503**	**13.0492**	**6.9000e-004**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**23.5132**	**23.5132**	**0.0226**	**0.0000**	**24.0789**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3936	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723		23.5132	23.5132	0.0226		24.0789
Total	**4.6995**	**0.1503**	**13.0492**	**6.9000e-004**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**23.5132**	**23.5132**	**0.0226**	**0.0000**	**24.0789**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.14	50	402	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**0.0924**	**0.2581**	**0.2355**	**4.4000e-004**		**0.0136**	**0.0136**		**0.0136**	**0.0136**		**47.2479**	**47.2479**	**6.6200e-003**		**47.4135**

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	176.00	Space	0.00	70,400.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Apartments Mid Rise	158.00	Dwelling Unit	0.90	154,730.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Construction is expected to begin March 2022 and end summer 2024. Phasing based on assumptions provided by Project Applicant. Architectural Coating and Paving phases are default duration.

Trips and VMT - For soil import haul trips, assuming 25 cubic yards of material per load based on information from project applicant.

Demolition - Approximately 24,311 building square footage to be demolished.

Grading - A total of 3,500 cubic yards of soils would be imported.

Vehicle Trips - Based on trip generation prepared for the project (619 net new average daily trips).

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - The project would exceed Title 24 by 20 percent, install solar panels, and meet LEED Gold standards. Also assuming installation of high efficiency lighting and energy effiicent appliances.

Water Mitigation - Assuming the installation of low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 50 hours per year for testing and emergency use.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	200.00	523.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	2.00	23.00
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00
tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	21.56	1.38
tblGrading	MaterialImported	0.00	3,500.00
tblLandUse	LandUseSquareFeet	158,000.00	154,730.00
tblLandUse	LotAcreage	1.58	0.00
tblLandUse	LotAcreage	4.16	0.90
tblLandUse	LotAcreage	0.34	0.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	402.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.14

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	111.00	2,000.00
tblTripsAndVMT	HaulingTripNumber	438.00	280.00
tblVehicleTrips	ST_TR	4.91	2.37
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	42.04	16.33
tblVehicleTrips	SU_TR	4.09	2.37
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	20.43	16.33
tblVehicleTrips	WD_TR	5.44	2.37
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	44.32	16.33
tblWoodstoves	NumberCatalytic	3.16	0.00
tblWoodstoves	NumberNoncatalytic	3.16	0.00

2.0 Emissions Summary

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.3669	50.2741	36.4086	0.0879	17.8562	2.1214	19.9776	9.6369	1.9729	11.5890	0.0000	8,580.9482	8,580.9482	1.8554	0.5004	8,696.9930
2023	1.9945	13.5545	16.6872	0.0394	1.5200	0.5298	2.0497	0.4084	0.5112	0.9196	0.0000	3,805.3901	3,805.3901	0.3878	0.1408	3,857.0510
2024	238.5459	18.7593	25.4545	0.0533	1.7747	0.7472	2.3740	0.4759	0.7088	1.1455	0.0000	5,151.5201	5,151.5201	0.7920	0.1427	5,212.8551
Maximum	**238.5459**	**50.2741**	**36.4086**	**0.0879**	**17.8562**	**2.1214**	**19.9776**	**9.6369**	**1.9729**	**11.5890**	**0.0000**	**8,580.9482**	**8,580.9482**	**1.8554**	**0.5004**	**8,696.9930**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.7294	57.3432	43.0105	0.0879	8.2434	1.7419	9.6025	4.3925	1.7398	5.7509	0.0000	8,580.9482	8,580.9482	1.8554	0.5004	8,696.9930
2023	1.3107	19.1735	17.5548	0.0394	1.5200	0.7468	2.2668	0.4084	0.7459	1.1543	0.0000	3,805.3901	3,805.3901	0.3878	0.1408	3,857.0510
2024	237.8985	30.9059	27.4418	0.0533	1.7747	1.1584	2.7852	0.4759	1.1575	1.5942	0.0000	5,151.5201	5,151.5201	0.7920	0.1427	5,212.8551
Maximum	**237.8985**	**57.3432**	**43.0105**	**0.0879**	**8.2434**	**1.7419**	**9.6025**	**4.3925**	**1.7398**	**5.7509**	**0.0000**	**8,580.9482**	**8,580.9482**	**1.8554**	**0.5004**	**8,696.9930**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.61**	**-30.07**	**-12.04**	**0.00**	**45.45**	**-7.32**	**39.94**	**49.85**	**-14.10**	**37.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Energy	0.0414	0.3552	0.1588	2.2600e-003		0.0286	0.0286		0.0286	0.0286		452.0211	452.0211	8.6600e-003	8.2900e-003	454.7073
Mobile	1.3357	1.5178	12.7166	0.0235	2.6143	0.0178	2.6321	0.6963	0.0166	0.7129		2,427.3865	2,427.3865	0.1824	0.1275	2,469.9367
Stationary	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**6.1690**	**2.2814**	**26.1601**	**0.0269**	**2.6143**	**0.1323**	**2.7466**	**0.6963**	**0.1311**	**0.8274**	**0.0000**	**2,950.1686**	**2,950.1686**	**0.2203**	**0.1358**	**2,996.1363**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Energy	0.0357	0.3056	0.1364	1.9400e-003		0.0246	0.0246		0.0246	0.0246		388.9284	388.9284	7.4500e-003	7.1300e-003	391.2396
Mobile	1.2693	1.3894	11.6942	0.0208	2.3058	0.0160	2.3218	0.6141	0.0149	0.6290		2,151.6910	2,151.6910	0.1711	0.1170	2,190.8321
Stationary	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**6.0968**	**2.1034**	**25.1153**	**0.0239**	**2.3058**	**0.1265**	**2.4323**	**0.6141**	**0.1254**	**0.7395**	**0.0000**	**2,611.3804**	**2,611.3804**	**0.2078**	**0.1241**	**2,653.5641**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.17**	**7.80**	**3.99**	**11.13**	**11.80**	**4.40**	**11.44**	**11.80**	**4.35**	**10.62**	**0.00**	**11.48**	**11.48**	**5.66**	**8.58**	**11.43**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	5/13/2022	5	44	
2	Rough Grading	Grading	5/15/2022	6/29/2022	5	33	
3	Site Preparation	Site Preparation	5/16/2022	6/15/2022	5	23	
4	Fine Grading	Grading	6/15/2022	7/29/2022	5	33	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Building Construction	Building Construction	6/29/2022	6/28/2024	5	523	
6	Paving	Paving	6/3/2024	6/14/2024	5	10	
7	Architectural Coating	Architectural Coating	6/17/2024	6/28/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.38

Acres of Grading (Grading Phase): 1.38

Acres of Paving: 0

Residential Indoor: 313,328; Residential Outdoor: 104,443; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,224 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	4	10.00	0.00	280.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	157.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5439	0.0000	0.5439	0.0824	0.0000	0.0824			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.5439**	**0.8379**	**1.3818**	**0.0824**	**0.7829**	**0.8652**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2092	7.9622	1.6805	0.0289	0.7950	0.0703	0.8652	0.2179	0.0672	0.2851		3,141.3937	3,141.3937	0.1033	0.4976	3,292.2526
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0386	0.0282	0.3206	8.9000e-004	0.1068	5.6000e-004	0.1074	0.0283	5.1000e-004	0.0288		90.3377	90.3377	3.0000e-003	2.7900e-003	91.2450
Total	**0.2478**	**7.9904**	**2.0011**	**0.0297**	**0.9017**	**0.0708**	**0.9726**	**0.2462**	**0.0677**	**0.3140**		**3,231.7314**	**3,231.7314**	**0.1063**	**0.5004**	**3,383.4976**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2448	0.0000	0.2448	0.0371	0.0000	0.0371			0.0000			0.0000
Off-Road	0.8857	21.2053	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**0.8857**	**21.2053**	**15.4154**	**0.0241**	**0.2448**	**0.7182**	**0.9629**	**0.0371**	**0.7182**	**0.7552**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2092	7.9622	1.6805	0.0289	0.7950	0.0703	0.8652	0.2179	0.0672	0.2851		3,141.3937	3,141.3937	0.1033	0.4976	3,292.2526
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0386	0.0282	0.3206	8.9000e-004	0.1068	5.6000e-004	0.1074	0.0283	5.1000e-004	0.0288		90.3377	90.3377	3.0000e-003	2.7900e-003	91.2450
Total	**0.2478**	**7.9904**	**2.0011**	**0.0297**	**0.9017**	**0.0708**	**0.9726**	**0.2462**	**0.0677**	**0.3140**		**3,231.7314**	**3,231.7314**	**0.1063**	**0.5004**	**3,383.4976**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0784	0.0000	6.0784	3.3168	0.0000	3.3168			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.0784**	**0.7423**	**6.8207**	**3.3168**	**0.6829**	**3.9997**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0391	1.4863	0.3137	5.3900e-003	0.1484	0.0131	0.1615	0.0407	0.0126	0.0532		586.3935	586.3935	0.0193	0.0929	614.5538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0297	0.0217	0.2466	6.8000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		69.4905	69.4905	2.3100e-003	2.1500e-003	70.1885
Total	**0.0688**	**1.5079**	**0.5603**	**6.0700e-003**	**0.2305**	**0.0135**	**0.2441**	**0.0625**	**0.0130**	**0.0754**		**655.8840**	**655.8840**	**0.0216**	**0.0950**	**684.7423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7353	0.0000	2.7353	1.4926	0.0000	1.4926			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**0.6262**	**18.1050**	**12.1450**	**0.0206**	**2.7353**	**0.4850**	**3.2203**	**1.4926**	**0.4850**	**1.9776**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0391	1.4863	0.3137	5.3900e-003	0.1484	0.0131	0.1615	0.0407	0.0126	0.0532		586.3935	586.3935	0.0193	0.0929	614.5538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0297	0.0217	0.2466	6.8000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		69.4905	69.4905	2.3100e-003	2.1500e-003	70.1885
Total	**0.0688**	**1.5079**	**0.5603**	**6.0700e-003**	**0.2305**	**0.0135**	**0.2441**	**0.0625**	**0.0130**	**0.0754**		**655.8840**	**655.8840**	**0.0216**	**0.0950**	**684.7423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3330	0.0000	5.3330	2.9033	0.0000	2.9033			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.3330**	**0.6225**	**5.9555**	**2.9033**	**0.5727**	**3.4760**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0173	0.1973	5.5000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.2000e-004	0.0178		55.5924	55.5924	1.8500e-003	1.7200e-003	56.1508
Total	**0.0238**	**0.0173**	**0.1973**	**5.5000e-004**	**0.0657**	**3.4000e-004**	**0.0661**	**0.0174**	**3.2000e-004**	**0.0178**		**55.5924**	**55.5924**	**1.8500e-003**	**1.7200e-003**	**56.1508**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3998	0.0000	2.3998	1.3065	0.0000	1.3065			0.0000			0.0000
Off-Road	0.4908	14.9460	9.8221	0.0172		0.3747	0.3747		0.3747	0.3747	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**0.4908**	**14.9460**	**9.8221**	**0.0172**	**2.3998**	**0.3747**	**2.7745**	**1.3065**	**0.3747**	**1.6812**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0173	0.1973	5.5000e-004	0.0657	3.4000e-004	0.0661	0.0174	3.2000e-004	0.0178		55.5924	55.5924	1.8500e-003	1.7200e-003	56.1508
Total	**0.0238**	**0.0173**	**0.1973**	**5.5000e-004**	**0.0657**	**3.4000e-004**	**0.0661**	**0.0174**	**3.2000e-004**	**0.0178**		**55.5924**	**55.5924**	**1.8500e-003**	**1.7200e-003**	**56.1508**

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0664	0.0000	6.0664	3.3150	0.0000	3.3150			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.0664**	**0.7423**	**6.8087**	**3.3150**	**0.6829**	**3.9979**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0297	0.0217	0.2466	6.8000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		69.4905	69.4905	2.3100e-003	2.1500e-003	70.1885
Total	**0.0297**	**0.0217**	**0.2466**	**6.8000e-004**	**0.0822**	**4.3000e-004**	**0.0826**	**0.0218**	**4.0000e-004**	**0.0222**		**69.4905**	**69.4905**	**2.3100e-003**	**2.1500e-003**	**70.1885**

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7299	0.0000	2.7299	1.4918	0.0000	1.4918			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**0.6262**	**18.1050**	**12.1450**	**0.0206**	**2.7299**	**0.4850**	**3.2149**	**1.4918**	**0.4850**	**1.9768**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0297	0.0217	0.2466	6.8000e-004	0.0822	4.3000e-004	0.0826	0.0218	4.0000e-004	0.0222		69.4905	69.4905	2.3100e-003	2.1500e-003	70.1885
Total	**0.0297**	**0.0217**	**0.2466**	**6.8000e-004**	**0.0822**	**4.3000e-004**	**0.0826**	**0.0218**	**4.0000e-004**	**0.0222**		**69.4905**	**69.4905**	**2.3100e-003**	**2.1500e-003**	**70.1885**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0726	1.9343	0.5638	7.2000e-003	0.2303	0.0196	0.2499	0.0663	0.0187	0.0850		772.0645	772.0645	0.0167	0.1145	806.6117
Worker	0.4666	0.3399	3.8713	0.0107	1.2897	6.7400e-003	1.2965	0.3421	6.2100e-003	0.3483		1,091.0015	1,091.0015	0.0362	0.0337	1,101.9587
Total	**0.5391**	**2.2743**	**4.4350**	**0.0179**	**1.5200**	**0.0263**	**1.5463**	**0.4084**	**0.0250**	**0.4333**		**1,863.0659**	**1,863.0659**	**0.0530**	**0.1483**	**1,908.5703**

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0726	1.9343	0.5638	7.2000e-003	0.2303	0.0196	0.2499	0.0663	0.0187	0.0850		772.0645	772.0645	0.0167	0.1145	806.6117
Worker	0.4666	0.3399	3.8713	0.0107	1.2897	6.7400e-003	1.2965	0.3421	6.2100e-003	0.3483		1,091.0015	1,091.0015	0.0362	0.0337	1,101.9587
Total	**0.5391**	**2.2743**	**4.4350**	**0.0179**	**1.5200**	**0.0263**	**1.5463**	**0.4084**	**0.0250**	**0.4333**		**1,863.0659**	**1,863.0659**	**0.0530**	**0.1483**	**1,908.5703**

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0357	1.5431	0.4816	6.9000e-003	0.2303	8.8700e-003	0.2391	0.0663	8.4800e-003	0.0748		740.4251	740.4251	0.0150	0.1096	773.4558
Worker	0.4355	0.3010	3.5946	0.0104	1.2897	6.4000e-003	1.2961	0.3421	5.8900e-003	0.3480		1,063.1774	1,063.1774	0.0328	0.0313	1,073.3095
Total	**0.4713**	**1.8441**	**4.0762**	**0.0173**	**1.5200**	**0.0153**	**1.5353**	**0.4084**	**0.0144**	**0.4228**		**1,803.6024**	**1,803.6024**	**0.0478**	**0.1408**	**1,846.7653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0357	1.5431	0.4816	6.9000e-003	0.2303	8.8700e-003	0.2391	0.0663	8.4800e-003	0.0748		740.4251	740.4251	0.0150	0.1096	773.4558
Worker	0.4355	0.3010	3.5946	0.0104	1.2897	6.4000e-003	1.2961	0.3421	5.8900e-003	0.3480		1,063.1774	1,063.1774	0.0328	0.0313	1,073.3095
Total	**0.4713**	**1.8441**	**4.0762**	**0.0173**	**1.5200**	**0.0153**	**1.5353**	**0.4084**	**0.0144**	**0.4228**		**1,803.6024**	**1,803.6024**	**0.0478**	**0.1408**	**1,846.7653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0347	1.5438	0.4716	6.7900e-003	0.2303	8.9400e-003	0.2392	0.0663	8.5500e-003	0.0748		728.9014	728.9014	0.0150	0.1079	761.4153
Worker	0.4085	0.2687	3.3621	0.0101	1.2897	6.0900e-003	1.2958	0.3421	5.6100e-003	0.3477		1,036.9650	1,036.9650	0.0298	0.0291	1,046.3855
Total	**0.4431**	**1.8125**	**3.8336**	**0.0168**	**1.5200**	**0.0150**	**1.5350**	**0.4084**	**0.0142**	**0.4225**		**1,765.8665**	**1,765.8665**	**0.0447**	**0.1370**	**1,807.8007**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8395	17.3294	13.4786	0.0221		0.7315	0.7315		0.7315	0.7315	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**0.8395**	**17.3294**	**13.4786**	**0.0221**		**0.7315**	**0.7315**		**0.7315**	**0.7315**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0347	1.5438	0.4716	6.7900e-003	0.2303	8.9400e-003	0.2392	0.0663	8.5500e-003	0.0748		728.9014	728.9014	0.0150	0.1079	761.4153
Worker	0.4085	0.2687	3.3621	0.0101	1.2897	6.0900e-003	1.2958	0.3421	5.6100e-003	0.3477		1,036.9650	1,036.9650	0.0298	0.0291	1,046.3855
Total	**0.4431**	**1.8125**	**3.8336**	**0.0168**	**1.5200**	**0.0150**	**1.5350**	**0.4084**	**0.0142**	**0.4225**		**1,765.8665**	**1,765.8665**	**0.0447**	**0.1370**	**1,807.8007**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6180**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0338	0.0223	0.2784	8.3000e-004	0.1068	5.0000e-004	0.1073	0.0283	4.6000e-004	0.0288		85.8634	85.8634	2.4600e-003	2.4100e-003	86.6434
Total	**0.0338**	**0.0223**	**0.2784**	**8.3000e-004**	**0.1068**	**5.0000e-004**	**0.1073**	**0.0283**	**4.6000e-004**	**0.0288**		**85.8634**	**85.8634**	**2.4600e-003**	**2.4100e-003**	**86.6434**

Menlo Flats - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5500	11.7418	9.8512	0.0136		0.4113	0.4113		0.4113	0.4113	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5500**	**11.7418**	**9.8512**	**0.0136**		**0.4113**	**0.4113**		**0.4113**	**0.4113**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0338	0.0223	0.2784	8.3000e-004	0.1068	5.0000e-004	0.1073	0.0283	4.6000e-004	0.0288		85.8634	85.8634	2.4600e-003	2.4100e-003	86.6434
Total	**0.0338**	**0.0223**	**0.2784**	**8.3000e-004**	**0.1068**	**5.0000e-004**	**0.1073**	**0.0283**	**4.6000e-004**	**0.0288**		**85.8634**	**85.8634**	**2.4600e-003**	**2.4100e-003**	**86.6434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.6021**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0807	0.0531	0.6639	1.9800e-003	0.2547	1.2000e-003	0.2559	0.0676	1.1100e-003	0.0687		204.7511	204.7511	5.8800e-003	5.7500e-003	206.6112
Total	**0.0807**	**0.0531**	**0.6639**	**1.9800e-003**	**0.2547**	**1.2000e-003**	**0.2559**	**0.0676**	**1.1100e-003**	**0.0687**		**204.7511**	**204.7511**	**5.8800e-003**	**5.7500e-003**	**206.6112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5353**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0807	0.0531	0.6639	1.9800e-003	0.2547	1.2000e-003	0.2559	0.0676	1.1100e-003	0.0687		204.7511	204.7511	5.8800e-003	5.7500e-003	206.6112
Total	**0.0807**	**0.0531**	**0.6639**	**1.9800e-003**	**0.2547**	**1.2000e-003**	**0.2559**	**0.0676**	**1.1100e-003**	**0.0687**		**204.7511**	**204.7511**	**5.8800e-003**	**5.7500e-003**	**206.6112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2693	1.3894	11.6942	0.0208	2.3058	0.0160	2.3218	0.6141	0.0149	0.6290		2,151.6910	2,151.6910	0.1711	0.1170	2,190.8321
Unmitigated	1.3357	1.5178	12.7166	0.0235	2.6143	0.0178	2.6321	0.6963	0.0166	0.7129		2,427.3865	2,427.3865	0.1824	0.1275	2,469.9367

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	374.46	374.46	374.46	864,856	762,803
City Park	0.00	0.00	0.00		
Strip Mall	244.95	244.95	244.95	377,231	332,718
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	619.41	619.41	619.41	1,242,087	1,095,520

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
City Park	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Strip Mall	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Unenclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0357	0.3056	0.1364	1.9400e-003		0.0246	0.0246		0.0246	0.0246		388.9284	388.9284	7.4500e-003	7.1300e-003	391.2396
NaturalGas Unmitigated	0.0414	0.3552	0.1588	2.2600e-003		0.0286	0.0286		0.0286	0.0286		452.0211	452.0211	8.6600e-003	8.2900e-003	454.7073

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3654.78	0.0394	0.3368	0.1433	2.1500e-003		0.0272	0.0272		0.0272	0.0272		429.9744	429.9744	8.2400e-003	7.8800e-003	432.5295
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	187.397	2.0200e-003	0.0184	0.0154	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003		22.0467	22.0467	4.2000e-004	4.0000e-004	22.1778
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0414**	**0.3552**	**0.1588**	**2.2600e-003**		**0.0286**	**0.0286**		**0.0286**	**0.0286**		**452.0211**	**452.0211**	**8.6600e-003**	**8.2800e-003**	**454.7073**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.15022	0.0340	0.2903	0.1235	1.8500e-003		0.0235	0.0235		0.0235	0.0235		370.6142	370.6142	7.1000e-003	6.7900e-003	372.8166
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.155671	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3143	18.3143	3.5000e-004	3.4000e-004	18.4231
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0357**	**0.3056**	**0.1364**	**1.9400e-003**		**0.0246**	**0.0246**		**0.0246**	**0.0246**		**388.9284**	**388.9284**	**7.4500e-003**	**7.1300e-003**	**391.2397**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789
Unmitigated	4.6995	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723	0.0000	23.5132	23.5132	0.0226	0.0000	24.0789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3936	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723		23.5132	23.5132	0.0226		24.0789
Total	**4.6995**	**0.1503**	**13.0492**	**6.9000e-004**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**23.5132**	**23.5132**	**0.0226**	**0.0000**	**24.0789**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3936	0.1503	13.0492	6.9000e-004		0.0723	0.0723		0.0723	0.0723		23.5132	23.5132	0.0226		24.0789
Total	**4.6995**	**0.1503**	**13.0492**	**6.9000e-004**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**23.5132**	**23.5132**	**0.0226**	**0.0000**	**24.0789**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.14	50	402	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	0.0924	0.2581	0.2355	4.4000e-004		0.0136	0.0136		0.0136	0.0136		47.2479	47.2479	6.6200e-003		47.4135
Total	**0.0924**	**0.2581**	**0.2355**	**4.4000e-004**		**0.0136**	**0.0136**		**0.0136**	**0.0136**		**47.2479**	**47.2479**	**6.6200e-003**		**47.4135**

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats - Mitigated

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	176.00	Space	0.00	70,400.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Apartments Mid Rise	158.00	Dwelling Unit	0.90	154,730.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Construction is expected to begin March 2022 and end summer 2024. Phasing based on assumptions provided by Project Applicant. Architectural Coating and Paving phases are default duration.

Trips and VMT - For soil import haul trips, assuming 25 cubic yards of material per load based on information from project applicant.

Demolition - Approximately 24,311 building square footage to be demolished.

Grading - A total of 3,500 cubic yards of soils would be imported.

Vehicle Trips - Based on trip generation prepared for the project (619 net new average daily trips).

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment and level 3 diesel particulate filters mitigatoin.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - The project would exceed Title 24 by 20 percent, install solar panels, and meet LEED Gold standards. Also assuming installation of high efficiency lighting and energy effiicent appliances.

Water Mitigation - Assuming the installation of low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 50 hours per year for testing and emergency use.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	200.00	523.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	2.00	23.00
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	21.56	1.38
tblGrading	MaterialImported	0.00	3,500.00
tblLandUse	LandUseSquareFeet	158,000.00	154,730.00
tblLandUse	LotAcreage	1.58	0.00
tblLandUse	LotAcreage	4.16	0.90
tblLandUse	LotAcreage	0.34	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	402.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.14
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	111.00	2,000.00
tblTripsAndVMT	HaulingTripNumber	438.00	280.00
tblVehicleTrips	ST_TR	4.91	2.37
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	42.04	16.33
tblVehicleTrips	SU_TR	4.09	2.37
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	20.43	16.33
tblVehicleTrips	WD_TR	5.44	2.37
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	44.32	16.33
tblWoodstoves	NumberCatalytic	3.16	0.00
tblWoodstoves	NumberNoncatalytic	3.16	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2535	2.2705	1.8844	4.8400e-003	0.3959	0.0928	0.4887	0.1777	0.0875	0.2652	0.0000	433.1174	433.1174	0.0634	0.0203	440.7409
2023	0.2550	1.7546	2.1535	5.1200e-003	0.1903	0.0689	0.2591	0.0513	0.0665	0.1178	0.0000	449.7266	449.7266	0.0455	0.0164	455.7439
2024	1.3057	0.8692	1.1129	2.6300e-003	0.0969	0.0320	0.1289	0.0261	0.0308	0.0569	0.0000	231.1251	231.1251	0.0242	8.0000e-003	234.1140
Maximum	**1.3057**	**2.2705**	**2.1535**	**5.1200e-003**	**0.3959**	**0.0928**	**0.4887**	**0.1777**	**0.0875**	**0.2652**	**0.0000**	**449.7266**	**449.7266**	**0.0634**	**0.0203**	**455.7439**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1424	2.7329	2.0944	4.8400e-003	0.2454	0.0163	0.2616	0.0981	0.0161	0.1142	0.0000	433.1171	433.1171	0.0634	0.0203	440.7406
2023	0.1661	2.4851	2.2663	5.1200e-003	0.1903	0.0163	0.2065	0.0513	0.0161	0.0674	0.0000	449.7263	449.7263	0.0455	0.0164	455.7436
2024	1.2673	1.3115	1.1806	2.6300e-003	0.0969	8.5000e-003	0.1054	0.0261	8.4400e-003	0.0346	0.0000	231.1250	231.1250	0.0242	8.0000e-003	234.1139
Maximum	**1.2673**	**2.7329**	**2.2663**	**5.1200e-003**	**0.2454**	**0.0163**	**0.2616**	**0.0981**	**0.0161**	**0.1142**	**0.0000**	**449.7263**	**449.7263**	**0.0634**	**0.0203**	**455.7436**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.14**	**-33.41**	**-7.58**	**0.00**	**22.04**	**78.83**	**34.58**	**31.19**	**78.00**	**50.86**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-15-2022**	**6-14-2022**	0.9553	1.0332
2	**6-15-2022**	**9-14-2022**	0.8792	0.9953
3	**9-15-2022**	**12-14-2022**	0.5504	0.6809
4	**12-15-2022**	**3-14-2023**	0.5084	0.6614
5	**3-15-2023**	**6-14-2023**	0.5068	0.6690
6	**6-15-2023**	**9-14-2023**	0.5059	0.6681
7	**9-15-2023**	**12-14-2023**	0.5045	0.6649
8	**12-15-2023**	**3-14-2024**	0.4839	0.6642
9	**3-15-2024**	**6-14-2024**	0.5084	0.7201
10	**6-15-2024**	**9-14-2024**	1.0927	1.1257
		Highest	1.0927	1.1257

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Energy	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	158.4992	158.4992	0.0150	3.0100e-003	159.7712
Mobile	0.2431	0.2609	2.1606	4.2900e-003	0.4578	3.2400e-003	0.4610	0.1223	3.0100e-003	0.1253	0.0000	402.6272	402.6272	0.0283	0.0202	409.3605
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	17.9586	0.0000	17.9586	1.0613	0.0000	44.4917
Water						0.0000	0.0000		0.0000	0.0000	3.6184	8.2175	11.8359	0.3730	8.9400e-003	23.8233
Total	**1.0884**	**0.3854**	**3.4061**	**4.8400e-003**	**0.4578**	**0.0174**	**0.4752**	**0.1223**	**0.0172**	**0.1395**	**21.5770**	**578.9177**	**600.4947**	**1.4805**	**0.0322**	**647.0936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Energy	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	112.0167	112.0167	8.9400e-003	2.1100e-003	112.8703
Mobile	0.2313	0.2387	1.9803	3.8000e-003	0.4038	2.9100e-003	0.4067	0.1079	2.7100e-003	0.1106	0.0000	356.8633	356.8633	0.0265	0.0186	363.0517
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	4.4897	0.0000	4.4897	0.2653	0.0000	11.1229
Water						0.0000	0.0000		0.0000	0.0000	2.8947	7.0754	9.9702	0.2985	7.1600e-003	19.5651
Total	**1.0756**	**0.3541**	**3.2217**	**4.2900e-003**	**0.4038**	**0.0164**	**0.4201**	**0.1079**	**0.0162**	**0.1240**	**7.3844**	**485.5292**	**492.9136**	**0.6021**	**0.0278**	**516.2568**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.17**	**8.10**	**5.41**	**11.36**	**11.80**	**6.03**	**11.59**	**11.81**	**5.94**	**11.08**	**65.78**	**16.13**	**17.92**	**59.33**	**13.52**	**20.22**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	5/13/2022	5	44	
2	Rough Grading	Grading	5/15/2022	6/29/2022	5	33	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Site Preparation	Site Preparation	5/16/2022	6/15/2022	5	23	
4	Fine Grading	Grading	6/15/2022	7/29/2022	5	33	
5	Building Construction	Building Construction	6/29/2022	6/28/2024	5	523	
6	Paving	Paving	6/3/2024	6/14/2024	5	10	
7	Architectural Coating	Architectural Coating	6/17/2024	6/28/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.38

Acres of Grading (Grading Phase): 1.38

Acres of Paving: 0

Residential Indoor: 313,328; Residential Outdoor: 104,443; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,224 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	2,000.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	4	10.00	0.00	280.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	157.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	1.8100e-003	0.0000	1.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3657	0.3071	5.3000e-004		0.0184	0.0184		0.0172	0.0172	0.0000	46.3709	46.3709	0.0118	0.0000	46.6663
Total	**0.0372**	**0.3657**	**0.3071**	**5.3000e-004**	**0.0120**	**0.0184**	**0.0304**	**1.8100e-003**	**0.0172**	**0.0190**	**0.0000**	**46.3709**	**46.3709**	**0.0118**	**0.0000**	**46.6663**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1722	0.0366	6.3000e-004	0.0169	1.5400e-003	0.0185	4.6500e-003	1.4800e-003	6.1300e-003	0.0000	62.6843	62.6843	2.0700e-003	9.9300e-003	65.6946
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.7000e-004	6.8400e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.8176	1.8176	6.0000e-005	5.0000e-005	1.8346
Total	**5.4500e-003**	**0.1727**	**0.0435**	**6.5000e-004**	**0.0192**	**1.5500e-003**	**0.0207**	**5.2500e-003**	**1.4900e-003**	**6.7400e-003**	**0.0000**	**64.5019**	**64.5019**	**2.1300e-003**	**9.9800e-003**	**67.5292**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3800e-003	0.0000	5.3800e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.4665	0.3391	5.3000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003	0.0000	46.3709	46.3709	0.0118	0.0000	46.6663
Total	**0.0195**	**0.4665**	**0.3391**	**5.3000e-004**	**5.3800e-003**	**2.3700e-003**	**7.7500e-003**	**8.2000e-004**	**2.3700e-003**	**3.1900e-003**	**0.0000**	**46.3709**	**46.3709**	**0.0118**	**0.0000**	**46.6663**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6600e-003	0.1722	0.0366	6.3000e-004	0.0169	1.5400e-003	0.0185	4.6500e-003	1.4800e-003	6.1300e-003	0.0000	62.6843	62.6843	2.0700e-003	9.9300e-003	65.6946
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.7000e-004	6.8400e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.8176	1.8176	6.0000e-005	5.0000e-005	1.8346
Total	**5.4500e-003**	**0.1727**	**0.0435**	**6.5000e-004**	**0.0192**	**1.5500e-003**	**0.0207**	**5.2500e-003**	**1.4900e-003**	**6.7400e-003**	**0.0000**	**64.5019**	**64.5019**	**2.1300e-003**	**9.9800e-003**	**67.5292**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1003	0.0000	0.1003	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0254	0.2802	0.1521	3.4000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	29.8695	29.8695	9.6600e-003	0.0000	30.1110
Total	**0.0254**	**0.2802**	**0.1521**	**3.4000e-004**	**0.1003**	**0.0123**	**0.1125**	**0.0547**	**0.0113**	**0.0660**	**0.0000**	**29.8695**	**29.8695**	**9.6600e-003**	**0.0000**	**30.1110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0241	5.1300e-003	9.0000e-005	2.3700e-003	2.2000e-004	2.5800e-003	6.5000e-004	2.1000e-004	8.6000e-004	0.0000	8.7758	8.7758	2.9000e-004	1.3900e-003	9.1973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**1.1000e-003**	**0.0244**	**9.0800e-003**	**1.0000e-004**	**3.6700e-003**	**2.3000e-004**	**3.8900e-003**	**1.0000e-003**	**2.2000e-004**	**1.2100e-003**	**0.0000**	**9.8244**	**9.8244**	**3.2000e-004**	**1.4200e-003**	**10.2557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Rough Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0451	0.0000	0.0451	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	29.8694	29.8694	9.6600e-003	0.0000	30.1110
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0451**	**1.2000e-003**	**0.0463**	**0.0246**	**1.2000e-003**	**0.0258**	**0.0000**	**29.8694**	**29.8694**	**9.6600e-003**	**0.0000**	**30.1110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0241	5.1300e-003	9.0000e-005	2.3700e-003	2.2000e-004	2.5800e-003	6.5000e-004	2.1000e-004	8.6000e-004	0.0000	8.7758	8.7758	2.9000e-004	1.3900e-003	9.1973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**1.1000e-003**	**0.0244**	**9.0800e-003**	**1.0000e-004**	**3.6700e-003**	**2.3000e-004**	**3.8900e-003**	**1.0000e-003**	**2.2000e-004**	**1.2100e-003**	**0.0000**	**9.8244**	**9.8244**	**3.2000e-004**	**1.4200e-003**	**10.2557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0613	0.0000	0.0613	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0151	0.1682	0.0816	2.0000e-004		7.1600e-003	7.1600e-003		6.5900e-003	6.5900e-003	0.0000	17.3826	17.3826	5.6200e-003	0.0000	17.5231
Total	**0.0151**	**0.1682**	**0.0816**	**2.0000e-004**	**0.0613**	**7.1600e-003**	**0.0685**	**0.0334**	**6.5900e-003**	**0.0400**	**0.0000**	**17.3826**	**17.3826**	**5.6200e-003**	**0.0000**	**17.5231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.2000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5847	0.5847	2.0000e-005	2.0000e-005	0.5902
Total	**2.5000e-004**	**1.8000e-004**	**2.2000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5847**	**0.5847**	**2.0000e-005**	**2.0000e-005**	**0.5902**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0276	0.0000	0.0276	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6400e-003	0.1719	0.1130	2.0000e-004		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	17.3826	17.3826	5.6200e-003	0.0000	17.5231
Total	**5.6400e-003**	**0.1719**	**0.1130**	**2.0000e-004**	**0.0276**	**6.5000e-004**	**0.0283**	**0.0150**	**6.5000e-004**	**0.0157**	**0.0000**	**17.3826**	**17.3826**	**5.6200e-003**	**0.0000**	**17.5231**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.8000e-004	2.2000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5847	0.5847	2.0000e-005	2.0000e-005	0.5902
Total	**2.5000e-004**	**1.8000e-004**	**2.2000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5847**	**0.5847**	**2.0000e-005**	**2.0000e-005**	**0.5902**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1001	0.0000	0.1001	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0254	0.2802	0.1521	3.4000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	29.8695	29.8695	9.6600e-003	0.0000	30.1110
Total	**0.0254**	**0.2802**	**0.1521**	**3.4000e-004**	**0.1001**	**0.0123**	**0.1124**	**0.0547**	**0.0113**	**0.0660**	**0.0000**	**29.8695**	**29.8695**	**9.6600e-003**	**0.0000**	**30.1110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**4.5000e-004**	**3.3000e-004**	**3.9500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0486**	**1.0486**	**3.0000e-005**	**3.0000e-005**	**1.0584**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0450	0.0000	0.0450	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	29.8694	29.8694	9.6600e-003	0.0000	30.1110
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0450**	**1.2000e-003**	**0.0462**	**0.0246**	**1.2000e-003**	**0.0258**	**0.0000**	**29.8694**	**29.8694**	**9.6600e-003**	**0.0000**	**30.1110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.9500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0486	1.0486	3.0000e-005	3.0000e-005	1.0584
Total	**4.5000e-004**	**3.3000e-004**	**3.9500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0486**	**1.0486**	**3.0000e-005**	**3.0000e-005**	**1.0584**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1096	0.8315	0.8463	1.4700e-003		0.0392	0.0392		0.0378	0.0378	0.0000	120.7487	120.7487	0.0210	0.0000	121.2744
Total	**0.1096**	**0.8315**	**0.8463**	**1.4700e-003**		**0.0392**	**0.0392**		**0.0378**	**0.0378**	**0.0000**	**120.7487**	**120.7487**	**0.0210**	**0.0000**	**121.2744**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8400e-003	0.1263	0.0368	4.8000e-004	0.0148	1.3000e-003	0.0161	4.2900e-003	1.2400e-003	5.5300e-003	0.0000	46.5659	46.5659	1.0100e-003	6.9000e-003	48.6488
Worker	0.0287	0.0207	0.2497	7.2000e-004	0.0825	4.5000e-004	0.0830	0.0220	4.1000e-004	0.0224	0.0000	66.3509	66.3509	2.0600e-003	1.9100e-003	66.9728
Total	**0.0335**	**0.1470**	**0.2865**	**1.2000e-003**	**0.0973**	**1.7500e-003**	**0.0991**	**0.0262**	**1.6500e-003**	**0.0279**	**0.0000**	**112.9168**	**112.9168**	**3.0700e-003**	**8.8100e-003**	**115.6216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0558	1.1524	0.8963	1.4700e-003		7.3000e-003	7.3000e-003		7.3000e-003	7.3000e-003	0.0000	120.7485	120.7485	0.0210	0.0000	121.2743
Total	**0.0558**	**1.1524**	**0.8963**	**1.4700e-003**		**7.3000e-003**	**7.3000e-003**		**7.3000e-003**	**7.3000e-003**	**0.0000**	**120.7485**	**120.7485**	**0.0210**	**0.0000**	**121.2743**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.8400e-003	0.1263	0.0368	4.8000e-004	0.0148	1.3000e-003	0.0161	4.2900e-003	1.2400e-003	5.5300e-003	0.0000	46.5659	46.5659	1.0100e-003	6.9000e-003	48.6488
Worker	0.0287	0.0207	0.2497	7.2000e-004	0.0825	4.5000e-004	0.0830	0.0220	4.1000e-004	0.0224	0.0000	66.3509	66.3509	2.0600e-003	1.9100e-003	66.9728
Total	**0.0335**	**0.1470**	**0.2865**	**1.2000e-003**	**0.0973**	**1.7500e-003**	**0.0991**	**0.0262**	**1.6500e-003**	**0.0279**	**0.0000**	**112.9168**	**112.9168**	**3.0700e-003**	**8.8100e-003**	**115.6216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1980	1.5224	1.6394	2.8700e-003		0.0669	0.0669		0.0646	0.0646	0.0000	236.0789	236.0789	0.0401	0.0000	237.0811
Total	**0.1980**	**1.5224**	**1.6394**	**2.8700e-003**		**0.0669**	**0.0669**		**0.0646**	**0.0646**	**0.0000**	**236.0789**	**236.0789**	**0.0401**	**0.0000**	**237.0811**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1965	0.0615	9.0000e-004	0.0290	1.1500e-003	0.0302	8.3900e-003	1.1000e-003	9.4900e-003	0.0000	87.2488	87.2488	1.7800e-003	0.0129	91.1395
Worker	0.0522	0.0358	0.4526	1.3600e-003	0.1613	8.3000e-004	0.1621	0.0429	7.7000e-004	0.0437	0.0000	126.3989	126.3989	3.6400e-003	3.4700e-003	127.5233
Total	**0.0569**	**0.2323**	**0.5141**	**2.2600e-003**	**0.1903**	**1.9800e-003**	**0.1923**	**0.0513**	**1.8700e-003**	**0.0532**	**0.0000**	**213.6477**	**213.6477**	**5.4200e-003**	**0.0164**	**218.6628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1091	2.2528	1.7522	2.8700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808
Total	**0.1091**	**2.2528**	**1.7522**	**2.8700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**236.0786**	**236.0786**	**0.0401**	**0.0000**	**237.0808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7100e-003	0.1965	0.0615	9.0000e-004	0.0290	1.1500e-003	0.0302	8.3900e-003	1.1000e-003	9.4900e-003	0.0000	87.2488	87.2488	1.7800e-003	0.0129	91.1395
Worker	0.0522	0.0358	0.4526	1.3600e-003	0.1613	8.3000e-004	0.1621	0.0429	7.7000e-004	0.0437	0.0000	126.3989	126.3989	3.6400e-003	3.4700e-003	127.5233
Total	**0.0569**	**0.2323**	**0.5141**	**2.2600e-003**	**0.1903**	**1.9800e-003**	**0.1923**	**0.0513**	**1.8700e-003**	**0.0532**	**0.0000**	**213.6477**	**213.6477**	**5.4200e-003**	**0.0164**	**218.6628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0923	0.7192	0.8136	1.4300e-003		0.0293	0.0293		0.0283	0.0283	0.0000	118.0473	118.0473	0.0197	0.0000	118.5388
Total	**0.0923**	**0.7192**	**0.8136**	**1.4300e-003**		**0.0293**	**0.0293**		**0.0283**	**0.0283**	**0.0000**	**118.0473**	**118.0473**	**0.0197**	**0.0000**	**118.5388**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0983	0.0301	4.4000e-004	0.0145	5.8000e-004	0.0151	4.1900e-003	5.5000e-004	4.7500e-003	0.0000	42.9446	42.9446	8.8000e-004	6.3500e-003	44.8596
Worker	0.0244	0.0160	0.2114	6.6000e-004	0.0806	4.0000e-004	0.0810	0.0215	3.6000e-004	0.0218	0.0000	61.6407	61.6407	1.6500e-003	1.6200e-003	62.1634
Total	**0.0267**	**0.1143**	**0.2415**	**1.1000e-003**	**0.0951**	**9.8000e-004**	**0.0961**	**0.0256**	**9.1000e-004**	**0.0266**	**0.0000**	**104.5853**	**104.5853**	**2.5300e-003**	**7.9700e-003**	**107.0230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0546	1.1264	0.8761	1.4300e-003		7.1300e-003	7.1300e-003		7.1300e-003	7.1300e-003	0.0000	118.0472	118.0472	0.0197	0.0000	118.5387
Total	**0.0546**	**1.1264**	**0.8761**	**1.4300e-003**		**7.1300e-003**	**7.1300e-003**		**7.1300e-003**	**7.1300e-003**	**0.0000**	**118.0472**	**118.0472**	**0.0197**	**0.0000**	**118.5387**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0983	0.0301	4.4000e-004	0.0145	5.8000e-004	0.0151	4.1900e-003	5.5000e-004	4.7500e-003	0.0000	42.9446	42.9446	8.8000e-004	6.3500e-003	44.8596
Worker	0.0244	0.0160	0.2114	6.6000e-004	0.0806	4.0000e-004	0.0810	0.0215	3.6000e-004	0.0218	0.0000	61.6407	61.6407	1.6500e-003	1.6200e-003	62.1634
Total	**0.0267**	**0.1143**	**0.2415**	**1.1000e-003**	**0.0951**	**9.8000e-004**	**0.0961**	**0.0256**	**9.1000e-004**	**0.0266**	**0.0000**	**104.5853**	**104.5853**	**2.5300e-003**	**7.9700e-003**	**107.0230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0900e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3926	0.3926	1.0000e-005	1.0000e-005	0.3960
Total	**1.6000e-004**	**1.0000e-004**	**1.3500e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3926**	**0.3926**	**1.0000e-005**	**1.0000e-005**	**0.3960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0587	0.0493	7.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7500e-003**	**0.0587**	**0.0493**	**7.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.3500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3926	0.3926	1.0000e-005	1.0000e-005	0.3960
Total	**1.6000e-004**	**1.0000e-004**	**1.3500e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3926**	**0.3926**	**1.0000e-005**	**1.0000e-005**	**0.3960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**1.1830**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2100e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9362	0.9362	3.0000e-005	2.0000e-005	0.9442
Total	**3.7000e-004**	**2.4000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9362**	**0.9362**	**3.0000e-005**	**2.0000e-005**	**0.9442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**1.1827**	**0.0118**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2100e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9362	0.9362	3.0000e-005	2.0000e-005	0.9442
Total	**3.7000e-004**	**2.4000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9362**	**0.9362**	**3.0000e-005**	**2.0000e-005**	**0.9442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2313	0.2387	1.9803	3.8000e-003	0.4038	2.9100e-003	0.4067	0.1079	2.7100e-003	0.1106	0.0000	356.8633	356.8633	0.0265	0.0186	363.0517
Unmitigated	0.2431	0.2609	2.1606	4.2900e-003	0.4578	3.2400e-003	0.4610	0.1223	3.0100e-003	0.1253	0.0000	402.6272	402.6272	0.0283	0.0202	409.3605

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	374.46	374.46	374.46	864,856	762,803
City Park	0.00	0.00	0.00		
Strip Mall	244.95	244.95	244.95	377,231	332,718
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	619.41	619.41	619.41	1,242,087	1,095,520

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
City Park	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Strip Mall	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Unenclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

Menlo Flats - Mitigated - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47.6252	47.6252	7.7000e-003	9.3000e-004	48.0961
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.6621	83.6621	0.0135	1.6400e-003	84.4893
NaturalGas Mitigated	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	64.3915	64.3915	1.2300e-003	1.1800e-003	64.7741
NaturalGas Unmitigated	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	74.8372	74.8372	1.4300e-003	1.3700e-003	75.2819

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.334e+006	7.1900e-003	0.0615	0.0262	3.9000e-004		4.9700e-003	4.9700e-003		4.9700e-003	4.9700e-003	0.0000	71.1871	71.1871	1.3600e-003	1.3100e-003	71.6101
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	68400	3.7000e-004	3.3500e-003	2.8200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.6501	3.6501	7.0000e-005	7.0000e-005	3.6718
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.5600e-003**	**0.0648**	**0.0290**	**4.1000e-004**		**5.2200e-003**	**5.2200e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**74.8372**	**74.8372**	**1.4300e-003**	**1.3800e-003**	**75.2819**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.14983e+006	6.2000e-003	0.0530	0.0226	3.4000e-004		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003	0.0000	61.3593	61.3593	1.1800e-003	1.1200e-003	61.7240
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	56820	3.1000e-004	2.7900e-003	2.3400e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0321	3.0321	6.0000e-005	6.0000e-005	3.0502
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.5100e-003**	**0.0558**	**0.0249**	**3.6000e-004**		**4.4900e-003**	**4.4900e-003**		**4.4900e-003**	**4.4900e-003**	**0.0000**	**64.3915**	**64.3915**	**1.2400e-003**	**1.1800e-003**	**64.7741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	614046	56.8139	9.1900e-003	1.1100e-003	57.3757
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	153600	14.2117	2.3000e-003	2.8000e-004	14.3522
Unenclosed Parking with Elevator	136576	12.6365	2.0400e-003	2.5000e-004	12.7615
Total		**83.6621**	**0.0135**	**1.6400e-003**	**84.4893**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	405234	37.4938	6.0700e-003	7.4000e-004	37.8645
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	74160	6.8616	1.1100e-003	1.3000e-004	6.9294
Unenclosed Parking with Elevator	35340.8	3.2699	5.3000e-004	6.0000e-005	3.3022
Total		**47.6252**	**7.7100e-003**	**9.3000e-004**	**48.0961**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Unmitigated	0.8213	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8213**	**0.0135**	**1.1744**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8500e-003**	**0.0000**	**1.9660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0354	0.0135	1.1744	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8500e-003	0.0000	1.9660
Total	**0.8213**	**0.0135**	**1.1744**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8500e-003**	**0.0000**	**1.9660**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.9702	0.2985	7.1600e-003	19.5651
Unmitigated	11.8359	0.3730	8.9400e-003	23.8233

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.2943 / 6.48991	10.5214	0.3366	8.0600e-003	21.3395
City Park	0 / 0.571911	0.1852	3.0000e-005	0.0000	0.1870
Strip Mall	1.11109 / 0.680989	1.1293	0.0363	8.7000e-004	2.2968
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**11.8359**	**0.3730**	**8.9300e-003**	**23.8233**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.23547 / 6.48991	8.8374	0.2694	6.4600e-003	17.4961
City Park	0 / 0.571911	0.1852	3.0000e-005	0.0000	0.1870
Strip Mall	0.88887 / 0.680989	0.9475	0.0291	7.0000e-004	1.8820
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9702**	**0.2985**	**7.1600e-003**	**19.5651**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.4897	0.2653	0.0000	11.1229
Unmitigated	17.9586	1.0613	0.0000	44.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	72.68	14.7534	0.8719	0.0000	36.5509
City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**17.9586**	**1.0613**	**0.0000**	**44.4917**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	18.17	3.6884	0.2180	0.0000	9.1377
City Park	0.01	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Strip Mall	3.9375	0.7993	0.0472	0.0000	1.9802
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.4897**	**0.2653**	**0.0000**	**11.1229**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.14	50	402	0.73	Diesel

Boilers

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Total	**0.0165**	**0.0461**	**0.0421**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**7.6540**	**7.6540**	**1.0700e-003**	**0.0000**	**7.6809**

11.0 Vegetation

Menlo Flats - 2030 Analysis - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Menlo Flats - 2030 Analysis

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	176.00	Space	0.00	70,400.00	0
City Park	0.48	Acre	0.48	20,908.80	0
Apartments Mid Rise	158.00	Dwelling Unit	0.90	154,730.00	452
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	81.59	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on PG&E default and assuming a Renewables Portfolio Standard (RPS) of 60% by 2030.

Land Use - The proposed project would include a 253,702-gross-square-foot, eight-story mixed-use building with approximately 158 dwelling units and 15,000 square feet of commercial space, and open space, circulation and parking, and infrastructure improvements.

Construction Phase - Operational analysis only.

Trips and VMT - For soil import haul trips, assuming 25 cubic yards of material per load based on information from project applicant.

Demolition - Approximately 24,311 building square footage to be demolished.

Grading - A total of 3,500 cubic yards of soils would be imported.

Vehicle Trips - Based on trip generation prepared for the project (619 net new average daily trips).

Woodstoves - Assuming no hearth as the proposed project would not increase the demand for natural gas as the City's REACH codes would require the buildings to be all electric.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - Assuming compliance with BAAQMD Basic Construction Mitigation Measures and tier 2 construction equipment.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - The project would exceed Title 24 by 20 percent, install solar panels, and meet LEED Gold standards. Also assuming installation of high efficiency lighting and energy effiicent appliances.

Water Mitigation - Assuming the installation of low-flow appliances.

Waste Mitigation - Consistent with the CalRecycle Waste Diversion and Recycling Mandate which will reduce solid waste production by 75 percent.

Stationary Sources - Emergency Generators and Fire Pumps - Assuming the emergency generator would run 50 hours per year for testing and emergency use.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	200.00	522.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	4.00	33.00
tblConstructionPhase	NumDays	2.00	23.00
tblFireplaces	NumberGas	23.70	0.00
tblFireplaces	NumberNoFireplace	6.32	158.00
tblFireplaces	NumberWood	26.86	0.00
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	33.00	1.38
tblGrading	AcresOfGrading	21.56	1.38
tblGrading	MaterialImported	0.00	3,500.00
tblLandUse	LandUseSquareFeet	158,000.00	154,730.00
tblLandUse	LotAcreage	1.58	0.00
tblLandUse	LotAcreage	4.16	0.90
tblLandUse	LotAcreage	0.34	0.00
tblProjectCharacteristics	CO2IntensityFactor	203.98	81.59
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	402.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.14
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	438.00	140.00
tblVehicleTrips	ST_TR	4.91	2.37
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	42.04	16.33
tblVehicleTrips	SU_TR	4.09	2.37
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	20.43	16.33
tblVehicleTrips	WD_TR	5.44	2.37
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	44.32	16.33
tblWoodstoves	NumberCatalytic	3.16	0.00
tblWoodstoves	NumberNoncatalytic	3.16	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1914	1.6291	1.6871	3.9800e-003	0.3780	0.0602	0.4382	0.1727	0.0567	0.2294	0.0000	351.8198	351.8198	0.0586	8.4500e-003	355.8024
2029	0.2142	1.5705	2.0097	4.8200e-003	0.1910	0.0529	0.2440	0.0515	0.0510	0.1025	0.0000	426.4061	426.4061	0.0426	0.0140	431.6490
2030	1.2764	0.5936	1.0259	2.5900e-003	0.0962	9.9900e-003	0.1061	0.0259	9.9500e-003	0.0359	0.0000	227.4455	227.4455	7.8700e-003	6.8000e-003	229.6694
Maximum	**1.2764**	**1.6291**	**2.0097**	**4.8200e-003**	**0.3780**	**0.0602**	**0.4382**	**0.1727**	**0.0567**	**0.2294**	**0.0000**	**426.4061**	**426.4061**	**0.0586**	**0.0140**	**431.6490**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1248	2.5057	1.9609	3.9800e-003	0.2275	0.0855	0.3129	0.0932	0.0854	0.1786	0.0000	351.8195	351.8195	0.0586	8.4500e-003	355.8021
2029	0.1509	2.4731	2.1453	4.8200e-003	0.1910	0.0972	0.2882	0.0515	0.0971	0.1486	0.0000	426.4058	426.4058	0.0426	0.0140	431.6487
2030	1.2594	1.2919	1.1163	2.5900e-003	0.0962	0.0506	0.1467	0.0259	0.0505	0.0764	0.0000	227.4454	227.4454	7.8700e-003	6.8000e-003	229.6693
Maximum	**1.2594**	**2.5057**	**2.1453**	**4.8200e-003**	**0.2275**	**0.0972**	**0.3129**	**0.0932**	**0.0971**	**0.1786**	**0.0000**	**426.4058**	**426.4058**	**0.0586**	**0.0140**	**431.6487**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.73**	**-65.32**	**-10.58**	**0.00**	**22.63**	**-89.45**	**5.13**	**31.80**	**-98.03**	**-9.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-14-2028**	**6-13-2028**	0.5898	0.8538
2	**6-14-2028**	**9-13-2028**	0.6850	0.9765
3	**9-14-2028**	**12-13-2028**	0.4476	0.6566
4	**12-14-2028**	**3-13-2029**	0.4422	0.6489
5	**3-14-2029**	**6-13-2029**	0.4483	0.6597
6	**6-14-2029**	**9-13-2029**	0.4475	0.6588
7	**9-14-2029**	**12-13-2029**	0.4460	0.6551
8	**12-14-2029**	**3-13-2030**	0.3518	0.6478
9	**3-14-2030**	**6-13-2030**	0.3539	0.7070
10	**6-14-2030**	**9-13-2030**	1.0775	1.1430
		Highest	1.0775	1.1430

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8210	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656
Energy	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	108.3012	108.3012	0.0150	3.0100e-003	109.5732
Mobile	0.1945	0.2021	1.7965	3.6500e-003	0.4579	2.4700e-003	0.4604	0.1224	2.3000e-003	0.1247	0.0000	356.2299	356.2299	0.0227	0.0169	361.8362
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	17.9586	0.0000	17.9586	1.0613	0.0000	44.4917
Water						0.0000	0.0000		0.0000	0.0000	3.6184	3.2869	6.9053	0.3730	8.9400e-003	18.8928
Total	**1.0395**	**0.3266**	**3.0394**	**4.2000e-003**	**0.4579**	**0.0166**	**0.4745**	**0.1224**	**0.0165**	**0.1388**	**21.5770**	**477.3918**	**498.9688**	**1.4748**	**0.0289**	**544.4403**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8210	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656
Energy	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	83.4411	83.4411	8.9400e-003	2.1100e-003	84.2947
Mobile	0.1841	0.1851	1.6473	3.2400e-003	0.4039	2.2200e-003	0.4061	0.1079	2.0700e-003	0.1100	0.0000	315.7297	315.7297	0.0210	0.0155	320.8703
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	4.4897	0.0000	4.4897	0.2653	0.0000	11.1229
Water						0.0000	0.0000		0.0000	0.0000	2.8947	2.8301	5.7248	0.2985	7.1600e-003	15.3198
Total	**1.0281**	**0.3005**	**2.8860**	**3.7300e-003**	**0.4039**	**0.0157**	**0.4195**	**0.1079**	**0.0155**	**0.1234**	**7.3844**	**411.5747**	**418.9591**	**0.5967**	**0.0248**	**441.2541**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.10**	**7.97**	**5.05**	**11.19**	**11.80**	**5.83**	**11.59**	**11.80**	**5.77**	**11.09**	**65.78**	**13.79**	**16.04**	**59.54**	**14.21**	**18.95**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/14/2028	5/12/2028	5	44	
2	Site Preparation	Site Preparation	5/15/2028	6/14/2028	5	23	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Rough Grading	Grading	5/15/2028	6/28/2028	5	33	
4	Fine Grading	Grading	6/15/2028	7/31/2028	5	33	
5	Building Construction	Building Construction	6/29/2028	6/29/2030	5	522	
6	Paving	Paving	6/3/2030	6/14/2030	5	10	
7	Architectural Coating	Architectural Coating	6/17/2030	6/28/2030	5	10	

Acres of Grading (Site Preparation Phase): 1.38

Acres of Grading (Grading Phase): 1.38

Acres of Paving: 0

Residential Indoor: 313,328; Residential Outdoor: 104,443; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 4,224 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	111.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	4	10.00	0.00	140.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	157.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	1.8100e-003	0.0000	1.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0295	0.2839	0.2933	5.3000e-004		0.0120	0.0120		0.0112	0.0112	0.0000	46.4183	46.4183	0.0117	0.0000	46.7110
Total	**0.0295**	**0.2839**	**0.2933**	**5.3000e-004**	**0.0120**	**0.0120**	**0.0240**	**1.8100e-003**	**0.0112**	**0.0130**	**0.0000**	**46.4183**	**46.4183**	**0.0117**	**0.0000**	**46.7110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	7.2700e-003	1.7900e-003	3.0000e-005	9.4000e-004	6.0000e-005	1.0000e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	2.9943	2.9943	1.1000e-004	4.7000e-004	3.1385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.1000e-004	4.7900e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.5823	1.5823	3.0000e-005	4.0000e-005	1.5940
Total	**6.6000e-004**	**7.5800e-003**	**6.5800e-003**	**5.0000e-005**	**3.2000e-003**	**7.0000e-005**	**3.2700e-003**	**8.6000e-004**	**7.0000e-005**	**9.3000e-004**	**0.0000**	**4.5766**	**4.5766**	**1.4000e-004**	**5.1000e-004**	**4.7325**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3800e-003	0.0000	5.3800e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.4665	0.3391	5.3000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	46.4183	46.4183	0.0117	0.0000	46.7110
Total	**0.0195**	**0.4665**	**0.3391**	**5.3000e-004**	**5.3800e-003**	**0.0158**	**0.0212**	**8.2000e-004**	**0.0158**	**0.0166**	**0.0000**	**46.4183**	**46.4183**	**0.0117**	**0.0000**	**46.7110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	7.2700e-003	1.7900e-003	3.0000e-005	9.4000e-004	6.0000e-005	1.0000e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	2.9943	2.9943	1.1000e-004	4.7000e-004	3.1385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.1000e-004	4.7900e-003	2.0000e-005	2.2600e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.5823	1.5823	3.0000e-005	4.0000e-005	1.5940
Total	**6.6000e-004**	**7.5800e-003**	**6.5800e-003**	**5.0000e-005**	**3.2000e-003**	**7.0000e-005**	**3.2700e-003**	**8.6000e-004**	**7.0000e-005**	**9.3000e-004**	**0.0000**	**4.5766**	**4.5766**	**1.4000e-004**	**5.1000e-004**	**4.7325**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0613	0.0000	0.0613	0.0334	0.0000	0.0334	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1218	0.0741	2.0000e-004		4.8200e-003	4.8200e-003		4.4400e-003	4.4400e-003	0.0000	17.3796	17.3796	5.6200e-003	0.0000	17.5201
Total	**0.0116**	**0.1218**	**0.0741**	**2.0000e-004**	**0.0613**	**4.8200e-003**	**0.0662**	**0.0334**	**4.4400e-003**	**0.0378**	**0.0000**	**17.3796**	**17.3796**	**5.6200e-003**	**0.0000**	**17.5201**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.0000e-004	1.5400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5090	0.5090	1.0000e-005	1.0000e-005	0.5128
Total	**1.8000e-004**	**1.0000e-004**	**1.5400e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5090**	**0.5090**	**1.0000e-005**	**1.0000e-005**	**0.5128**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0276	0.0000	0.0276	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6400e-003	0.1719	0.1130	2.0000e-004		4.3100e-003	4.3100e-003		4.3100e-003	4.3100e-003	0.0000	17.3795	17.3795	5.6200e-003	0.0000	17.5201
Total	**5.6400e-003**	**0.1719**	**0.1130**	**2.0000e-004**	**0.0276**	**4.3100e-003**	**0.0319**	**0.0150**	**4.3100e-003**	**0.0193**	**0.0000**	**17.3795**	**17.3795**	**5.6200e-003**	**0.0000**	**17.5201**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.0000e-004	1.5400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5090	0.5090	1.0000e-005	1.0000e-005	0.5128
Total	**1.8000e-004**	**1.0000e-004**	**1.5400e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5090**	**0.5090**	**1.0000e-005**	**1.0000e-005**	**0.5128**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Rough Grading - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1003	0.0000	0.1003	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.2050	0.1402	3.4000e-004		8.1800e-003	8.1800e-003		7.5300e-003	7.5300e-003	0.0000	29.8742	29.8742	9.6600e-003	0.0000	30.1157
Total	**0.0196**	**0.2050**	**0.1402**	**3.4000e-004**	**0.1003**	**8.1800e-003**	**0.1085**	**0.0547**	**7.5300e-003**	**0.0623**	**0.0000**	**29.8742**	**29.8742**	**9.6600e-003**	**0.0000**	**30.1157**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	9.1700e-003	2.2600e-003	4.0000e-005	1.1800e-003	8.0000e-005	1.2600e-003	3.3000e-004	7.0000e-005	4.0000e-004	0.0000	3.7766	3.7766	1.4000e-004	6.0000e-004	3.9585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7600e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.9129	0.9129	2.0000e-005	2.0000e-005	0.9196
Total	**4.6000e-004**	**9.3500e-003**	**5.0200e-003**	**5.0000e-005**	**2.4800e-003**	**9.0000e-005**	**2.5700e-003**	**6.8000e-004**	**7.0000e-005**	**7.5000e-004**	**0.0000**	**4.6895**	**4.6895**	**1.6000e-004**	**6.2000e-004**	**4.8781**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Rough Grading - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0451	0.0000	0.0451	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003	0.0000	29.8742	29.8742	9.6600e-003	0.0000	30.1157
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0451**	**8.0000e-003**	**0.0531**	**0.0246**	**8.0000e-003**	**0.0326**	**0.0000**	**29.8742**	**29.8742**	**9.6600e-003**	**0.0000**	**30.1157**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	9.1700e-003	2.2600e-003	4.0000e-005	1.1800e-003	8.0000e-005	1.2600e-003	3.3000e-004	7.0000e-005	4.0000e-004	0.0000	3.7766	3.7766	1.4000e-004	6.0000e-004	3.9585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7600e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.9129	0.9129	2.0000e-005	2.0000e-005	0.9196
Total	**4.6000e-004**	**9.3500e-003**	**5.0200e-003**	**5.0000e-005**	**2.4800e-003**	**9.0000e-005**	**2.5700e-003**	**6.8000e-004**	**7.0000e-005**	**7.5000e-004**	**0.0000**	**4.6895**	**4.6895**	**1.6000e-004**	**6.2000e-004**	**4.8781**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1001	0.0000	0.1001	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.2050	0.1402	3.4000e-004		8.1800e-003	8.1800e-003		7.5300e-003	7.5300e-003	0.0000	29.8742	29.8742	9.6600e-003	0.0000	30.1157
Total	**0.0196**	**0.2050**	**0.1402**	**3.4000e-004**	**0.1001**	**8.1800e-003**	**0.1083**	**0.0547**	**7.5300e-003**	**0.0622**	**0.0000**	**29.8742**	**29.8742**	**9.6600e-003**	**0.0000**	**30.1157**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7600e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.9129	0.9129	2.0000e-005	2.0000e-005	0.9196
Total	**3.2000e-004**	**1.8000e-004**	**2.7600e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**0.9129**	**0.9129**	**2.0000e-005**	**2.0000e-005**	**0.9196**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Fine Grading - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0450	0.0000	0.0450	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2987	0.2004	3.4000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003	0.0000	29.8742	29.8742	9.6600e-003	0.0000	30.1157
Total	**0.0103**	**0.2987**	**0.2004**	**3.4000e-004**	**0.0450**	**8.0000e-003**	**0.0530**	**0.0246**	**8.0000e-003**	**0.0326**	**0.0000**	**29.8742**	**29.8742**	**9.6600e-003**	**0.0000**	**30.1157**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7600e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.9129	0.9129	2.0000e-005	2.0000e-005	0.9196
Total	**3.2000e-004**	**1.8000e-004**	**2.7600e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**0.0000**	**0.9129**	**0.9129**	**2.0000e-005**	**2.0000e-005**	**0.9196**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0874	0.6872	0.8210	1.4600e-003		0.0259	0.0259		0.0250	0.0250	0.0000	119.8773	119.8773	0.0196	0.0000	120.3666
Total	**0.0874**	**0.6872**	**0.8210**	**1.4600e-003**		**0.0259**	**0.0259**		**0.0250**	**0.0250**	**0.0000**	**119.8773**	**119.8773**	**0.0196**	**0.0000**	**120.3666**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0976	0.0290	4.1000e-004	0.0147	5.8000e-004	0.0153	4.2600e-003	5.5000e-004	4.8100e-003	0.0000	40.3794	40.3794	8.8000e-004	5.9600e-003	42.1772
Worker	0.0198	0.0113	0.1736	5.9000e-004	0.0819	3.2000e-004	0.0822	0.0218	3.0000e-004	0.0221	0.0000	57.3289	57.3289	1.1800e-003	1.3200e-003	57.7530
Total	**0.0220**	**0.1089**	**0.2025**	**1.0000e-003**	**0.0966**	**9.0000e-004**	**0.0975**	**0.0260**	**8.5000e-004**	**0.0269**	**0.0000**	**97.7082**	**97.7082**	**2.0600e-003**	**7.2800e-003**	**99.9302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0554	1.1437	0.8896	1.4600e-003		0.0483	0.0483		0.0483	0.0483	0.0000	119.8771	119.8771	0.0196	0.0000	120.3664
Total	**0.0554**	**1.1437**	**0.8896**	**1.4600e-003**		**0.0483**	**0.0483**		**0.0483**	**0.0483**	**0.0000**	**119.8771**	**119.8771**	**0.0196**	**0.0000**	**120.3664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0976	0.0290	4.1000e-004	0.0147	5.8000e-004	0.0153	4.2600e-003	5.5000e-004	4.8100e-003	0.0000	40.3794	40.3794	8.8000e-004	5.9600e-003	42.1772
Worker	0.0198	0.0113	0.1736	5.9000e-004	0.0819	3.2000e-004	0.0822	0.0218	3.0000e-004	0.0221	0.0000	57.3289	57.3289	1.1800e-003	1.3200e-003	57.7530
Total	**0.0220**	**0.1089**	**0.2025**	**1.0000e-003**	**0.0966**	**9.0000e-004**	**0.0975**	**0.0260**	**8.5000e-004**	**0.0269**	**0.0000**	**97.7082**	**97.7082**	**2.0600e-003**	**7.2800e-003**	**99.9302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1729	1.3589	1.6233	2.8800e-003		0.0512	0.0512		0.0494	0.0494	0.0000	237.0300	237.0300	0.0387	0.0000	237.9975
Total	**0.1729**	**1.3589**	**1.6233**	**2.8800e-003**		**0.0512**	**0.0512**		**0.0494**	**0.0494**	**0.0000**	**237.0300**	**237.0300**	**0.0387**	**0.0000**	**237.9975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1908	0.0566	8.0000e-004	0.0291	1.1200e-003	0.0302	8.4200e-003	1.0800e-003	9.5000e-003	0.0000	77.9956	77.9956	1.7200e-003	0.0115	81.4660
Worker	0.0372	0.0208	0.3297	1.1400e-003	0.1619	6.0000e-004	0.1625	0.0431	5.5000e-004	0.0436	0.0000	111.3804	111.3804	2.1600e-003	2.5200e-003	112.1855
Total	**0.0413**	**0.2116**	**0.3863**	**1.9400e-003**	**0.1910**	**1.7200e-003**	**0.1927**	**0.0515**	**1.6300e-003**	**0.0531**	**0.0000**	**189.3761**	**189.3761**	**3.8800e-003**	**0.0140**	**193.6515**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1096	2.2615	1.7590	2.8800e-003		0.0955	0.0955		0.0955	0.0955	0.0000	237.0298	237.0298	0.0387	0.0000	237.9973
Total	**0.1096**	**2.2615**	**1.7590**	**2.8800e-003**		**0.0955**	**0.0955**		**0.0955**	**0.0955**	**0.0000**	**237.0298**	**237.0298**	**0.0387**	**0.0000**	**237.9973**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1908	0.0566	8.0000e-004	0.0291	1.1200e-003	0.0302	8.4200e-003	1.0800e-003	9.5000e-003	0.0000	77.9956	77.9956	1.7200e-003	0.0115	81.4660
Worker	0.0372	0.0208	0.3297	1.1400e-003	0.1619	6.0000e-004	0.1625	0.0431	5.5000e-004	0.0436	0.0000	111.3804	111.3804	2.1600e-003	2.5200e-003	112.1855
Total	**0.0413**	**0.2116**	**0.3863**	**1.9400e-003**	**0.1910**	**1.7200e-003**	**0.1927**	**0.0515**	**1.6300e-003**	**0.0531**	**0.0000**	**189.3761**	**189.3761**	**3.8800e-003**	**0.0140**	**193.6515**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0697	0.4636	0.7811	1.5400e-003		8.1900e-003	8.1900e-003		8.1900e-003	8.1900e-003	0.0000	125.9593	125.9593	5.6400e-003	0.0000	126.1002
Total	**0.0697**	**0.4636**	**0.7811**	**1.5400e-003**		**8.1900e-003**	**8.1900e-003**		**8.1900e-003**	**8.1900e-003**	**0.0000**	**125.9593**	**125.9593**	**5.6400e-003**	**0.0000**	**126.1002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0300e-003	0.0939	0.0278	3.9000e-004	0.0144	5.5000e-004	0.0149	4.1600e-003	5.3000e-004	4.6900e-003	0.0000	37.8012	37.8012	8.4000e-004	5.5700e-003	39.4822
Worker	0.0174	9.6400e-003	0.1574	5.5000e-004	0.0800	2.8000e-004	0.0803	0.0213	2.6000e-004	0.0215	0.0000	54.1959	54.1959	9.9000e-004	1.2100e-003	54.5799
Total	**0.0195**	**0.1035**	**0.1851**	**9.4000e-004**	**0.0944**	**8.3000e-004**	**0.0952**	**0.0255**	**7.9000e-004**	**0.0262**	**0.0000**	**91.9971**	**91.9971**	**1.8300e-003**	**6.7800e-003**	**94.0621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0541	1.1177	0.8694	1.5400e-003		0.0472	0.0472		0.0472	0.0472	0.0000	125.9591	125.9591	5.6400e-003	0.0000	126.1001
Total	**0.0541**	**1.1177**	**0.8694**	**1.5400e-003**		**0.0472**	**0.0472**		**0.0472**	**0.0472**	**0.0000**	**125.9591**	**125.9591**	**5.6400e-003**	**0.0000**	**126.1001**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0300e-003	0.0939	0.0278	3.9000e-004	0.0144	5.5000e-004	0.0149	4.1600e-003	5.3000e-004	4.6900e-003	0.0000	37.8012	37.8012	8.4000e-004	5.5700e-003	39.4822
Worker	0.0174	9.6400e-003	0.1574	5.5000e-004	0.0800	2.8000e-004	0.0803	0.0213	2.6000e-004	0.0215	0.0000	54.1959	54.1959	9.9000e-004	1.2100e-003	54.5799
Total	**0.0195**	**0.1035**	**0.1851**	**9.4000e-004**	**0.0944**	**8.3000e-004**	**0.0952**	**0.0255**	**7.9000e-004**	**0.0262**	**0.0000**	**91.9971**	**91.9971**	**1.8300e-003**	**6.7800e-003**	**94.0621**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.0800e-003	0.0220	0.0473	8.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	7.0351	7.0351	3.3000e-004	0.0000	7.0434
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.0800e-003**	**0.0220**	**0.0473**	**8.0000e-005**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**7.0351**	**7.0351**	**3.3000e-004**	**0.0000**	**7.0434**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	6.0000e-005	1.0100e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3479	0.3479	1.0000e-005	1.0000e-005	0.3503
Total	**1.1000e-004**	**6.0000e-005**	**1.0100e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3479**	**0.3479**	**1.0000e-005**	**1.0000e-005**	**0.3503**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0587	0.0493	8.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	7.0351	7.0351	3.3000e-004	0.0000	7.0434
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7500e-003**	**0.0587**	**0.0493**	**8.0000e-005**		**2.0600e-003**	**2.0600e-003**		**2.0600e-003**	**2.0600e-003**	**0.0000**	**7.0351**	**7.0351**	**3.3000e-004**	**0.0000**	**7.0434**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	6.0000e-005	1.0100e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3479	0.3479	1.0000e-005	1.0000e-005	0.3503
Total	**1.1000e-004**	**6.0000e-005**	**1.0100e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3479**	**0.3479**	**1.0000e-005**	**1.0000e-005**	**0.3503**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5000e-004	4.2800e-003	8.9900e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.2766	1.2766	5.0000e-005	0.0000	1.2779
Total	**1.1828**	**4.2800e-003**	**8.9900e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**5.0000e-005**	**0.0000**	**1.2779**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.5000e-004	2.4100e-003	1.0000e-005	1.2200e-003	0.0000	1.2300e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.8295	0.8295	2.0000e-005	2.0000e-005	0.8354
Total	**2.7000e-004**	**1.5000e-004**	**2.4100e-003**	**1.0000e-005**	**1.2200e-003**	**0.0000**	**1.2300e-003**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**0.8295**	**0.8295**	**2.0000e-005**	**2.0000e-005**	**0.8354**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	5.0000e-005	0.0000	1.2779
Total	**1.1827**	**0.0118**	**9.1600e-003**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**5.0000e-005**	**0.0000**	**1.2779**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.5000e-004	2.4100e-003	1.0000e-005	1.2200e-003	0.0000	1.2300e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.8295	0.8295	2.0000e-005	2.0000e-005	0.8354
Total	**2.7000e-004**	**1.5000e-004**	**2.4100e-003**	**1.0000e-005**	**1.2200e-003**	**0.0000**	**1.2300e-003**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**0.8295**	**0.8295**	**2.0000e-005**	**2.0000e-005**	**0.8354**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1841	0.1851	1.6473	3.2400e-003	0.4039	2.2200e-003	0.4061	0.1079	2.0700e-003	0.1100	0.0000	315.7297	315.7297	0.0210	0.0155	320.8703
Unmitigated	0.1945	0.2021	1.7965	3.6500e-003	0.4579	2.4700e-003	0.4604	0.1224	2.3000e-003	0.1247	0.0000	356.2299	356.2299	0.0227	0.0169	361.8362

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	374.46	374.46	374.46	864,856	762,803
City Park	0.00	0.00	0.00		
Strip Mall	244.95	244.95	244.95	377,231	332,718
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	619.41	619.41	619.41	1,242,087	1,095,520

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.555148	0.059467	0.187500	0.120419	0.022094	0.005825	0.011277	0.007430	0.000952	0.000505	0.025870	0.000875	0.002638
City Park	0.555148	0.059467	0.187500	0.120419	0.022094	0.005825	0.011277	0.007430	0.000952	0.000505	0.025870	0.000875	0.002638
Strip Mall	0.555148	0.059467	0.187500	0.120419	0.022094	0.005825	0.011277	0.007430	0.000952	0.000505	0.025870	0.000875	0.002638
Unenclosed Parking with Elevator	0.555148	0.059467	0.187500	0.120419	0.022094	0.005825	0.011277	0.007430	0.000952	0.000505	0.025870	0.000875	0.002638

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.0496	19.0496	7.7000e-003	9.3000e-004	19.5206
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.4640	33.4640	0.0135	1.6400e-003	34.2913
NaturalGas Mitigated	6.5100e-003	0.0558	0.0249	3.5000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	64.3915	64.3915	1.2300e-003	1.1800e-003	64.7741
NaturalGas Unmitigated	7.5600e-003	0.0648	0.0290	4.1000e-004		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	74.8372	74.8372	1.4300e-003	1.3700e-003	75.2819

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.334e+006	7.1900e-003	0.0615	0.0262	3.9000e-004		4.9700e-003	4.9700e-003		4.9700e-003	4.9700e-003	0.0000	71.1871	71.1871	1.3600e-003	1.3100e-003	71.6101
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	68400	3.7000e-004	3.3500e-003	2.8200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.6501	3.6501	7.0000e-005	7.0000e-005	3.6718
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.5600e-003**	**0.0648**	**0.0290**	**4.1000e-004**		**5.2200e-003**	**5.2200e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**74.8372**	**74.8372**	**1.4300e-003**	**1.3800e-003**	**75.2819**

Menlo Flats - 2030 Analysis - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.14983e+006	6.2000e-003	0.0530	0.0226	3.4000e-004		4.2800e-003	4.2800e-003		4.2800e-003	4.2800e-003	0.0000	61.3593	61.3593	1.1800e-003	1.1200e-003	61.7240
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	56820	3.1000e-004	2.7900e-003	2.3400e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0321	3.0321	6.0000e-005	6.0000e-005	3.0502
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.5100e-003**	**0.0558**	**0.0249**	**3.6000e-004**		**4.4900e-003**	**4.4900e-003**		**4.4900e-003**	**4.4900e-003**	**0.0000**	**64.3915**	**64.3915**	**1.2400e-003**	**1.1800e-003**	**64.7741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	614046	22.7250	9.1900e-003	1.1100e-003	23.2868
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	153600	5.6845	2.3000e-003	2.8000e-004	5.8251
Unenclosed Parking with Elevator	136576	5.0545	2.0400e-003	2.5000e-004	5.1794
Total		**33.4640**	**0.0135**	**1.6400e-003**	**34.2913**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	405234	14.9972	6.0700e-003	7.4000e-004	15.3679
City Park	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	74160	2.7446	1.1100e-003	1.3000e-004	2.8124
Unenclosed Parking with Elevator	35340.8	1.3079	5.3000e-004	6.0000e-005	1.3403
Total		**19.0496**	**7.7100e-003**	**9.3000e-004**	**19.5206**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8210	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656
Unmitigated	0.8210	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0352	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656
Total	**0.8210**	**0.0135**	**1.1718**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8300e-003**	**0.0000**	**1.9656**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0352	0.0135	1.1718	6.0000e-005		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	1.9198	1.9198	1.8300e-003	0.0000	1.9656
Total	**0.8210**	**0.0135**	**1.1718**	**6.0000e-005**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**1.9198**	**1.9198**	**1.8300e-003**	**0.0000**	**1.9656**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7248	0.2985	7.1600e-003	15.3198
Unmitigated	6.9053	0.3730	8.9400e-003	18.8928

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	10.2943 / 6.48991	6.1680	0.3366	8.0600e-003	16.9861
City Park	0 / 0.571911	0.0741	3.0000e-005	0.0000	0.0759
Strip Mall	1.11109 / 0.680989	0.6632	0.0363	8.7000e-004	1.8308
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**6.9053**	**0.3730**	**8.9300e-003**	**18.8928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.23547 / 6.48991	5.1026	0.2694	6.4600e-003	13.7612
City Park	0 / 0.571911	0.0741	3.0000e-005	0.0000	0.0759
Strip Mall	0.88887 / 0.680989	0.5482	0.0291	7.0000e-004	1.4827
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.7248**	**0.2985**	**7.1600e-003**	**15.3198**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Menlo Flats - 2030 Analysis - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.4897	0.2653	0.0000	11.1229
Unmitigated	17.9586	1.0613	0.0000	44.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	72.68	14.7534	0.8719	0.0000	36.5509
City Park	0.04	8.1200e-003	4.8000e-004	0.0000	0.0201
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**17.9586**	**1.0613**	**0.0000**	**44.4917**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	18.17	3.6884	0.2180	0.0000	9.1377
City Park	0.01	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Strip Mall	3.9375	0.7993	0.0472	0.0000	1.9802
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.4897**	**0.2653**	**0.0000**	**11.1229**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.14	50	402	0.73	Diesel

Boilers

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Total	**0.0165**	**0.0461**	**0.0421**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**7.6540**	**7.6540**	**1.0700e-003**	**0.0000**	**7.6809**

11.0 Vegetation

APPENDIX F

HEALTH RISK ASSESSMENT DATA

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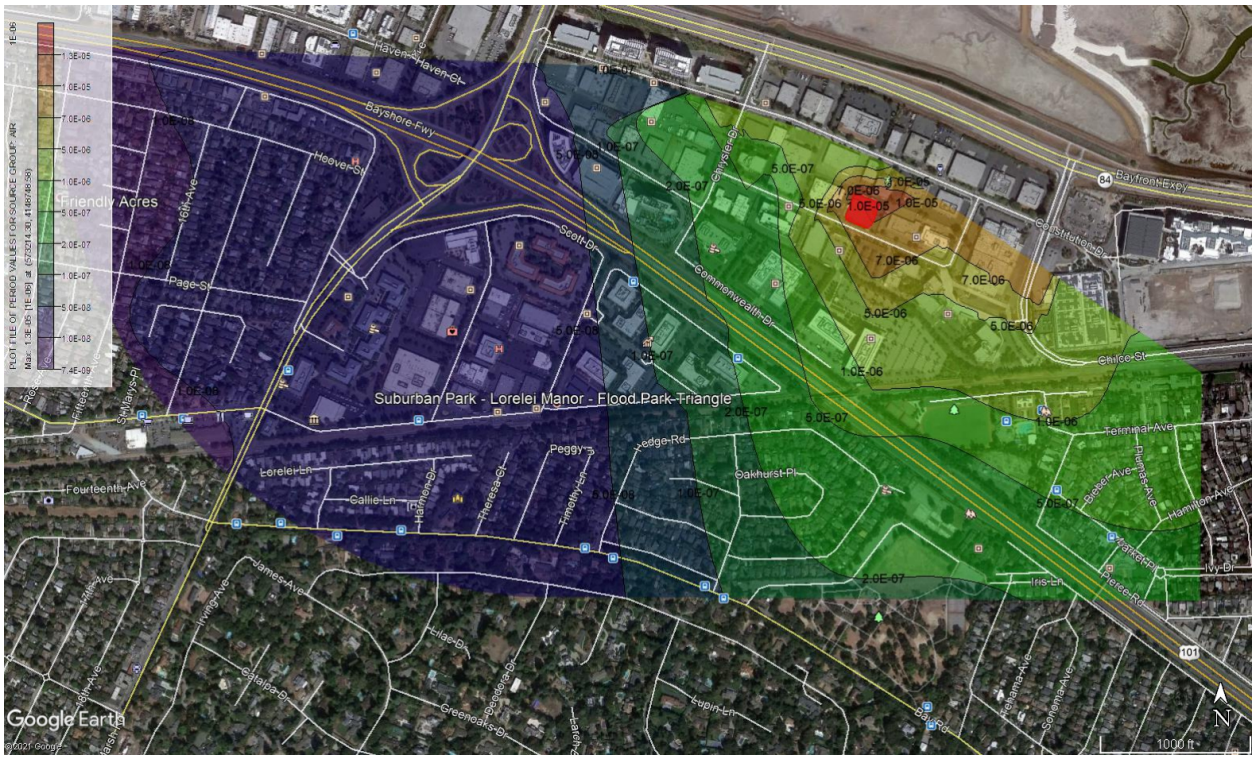
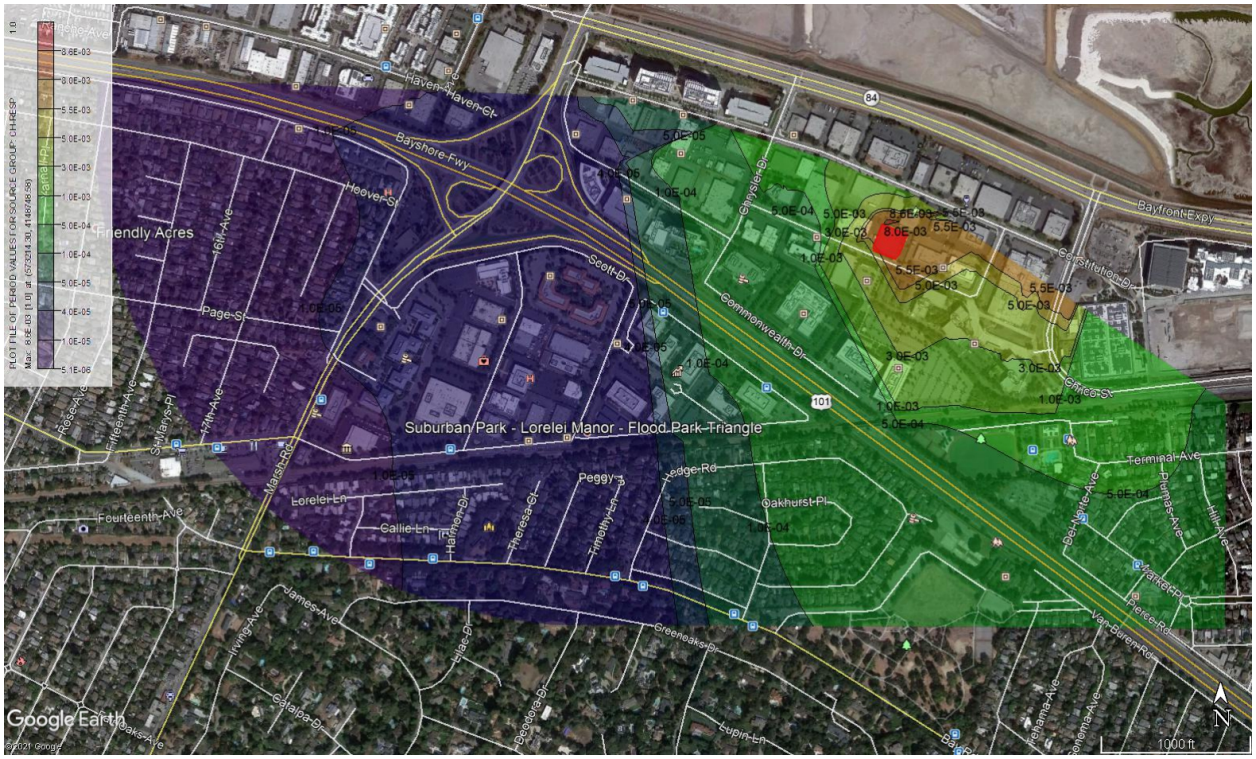
Surrounding Sensitive Receptors

Unmitigated Construction Cancer Risk

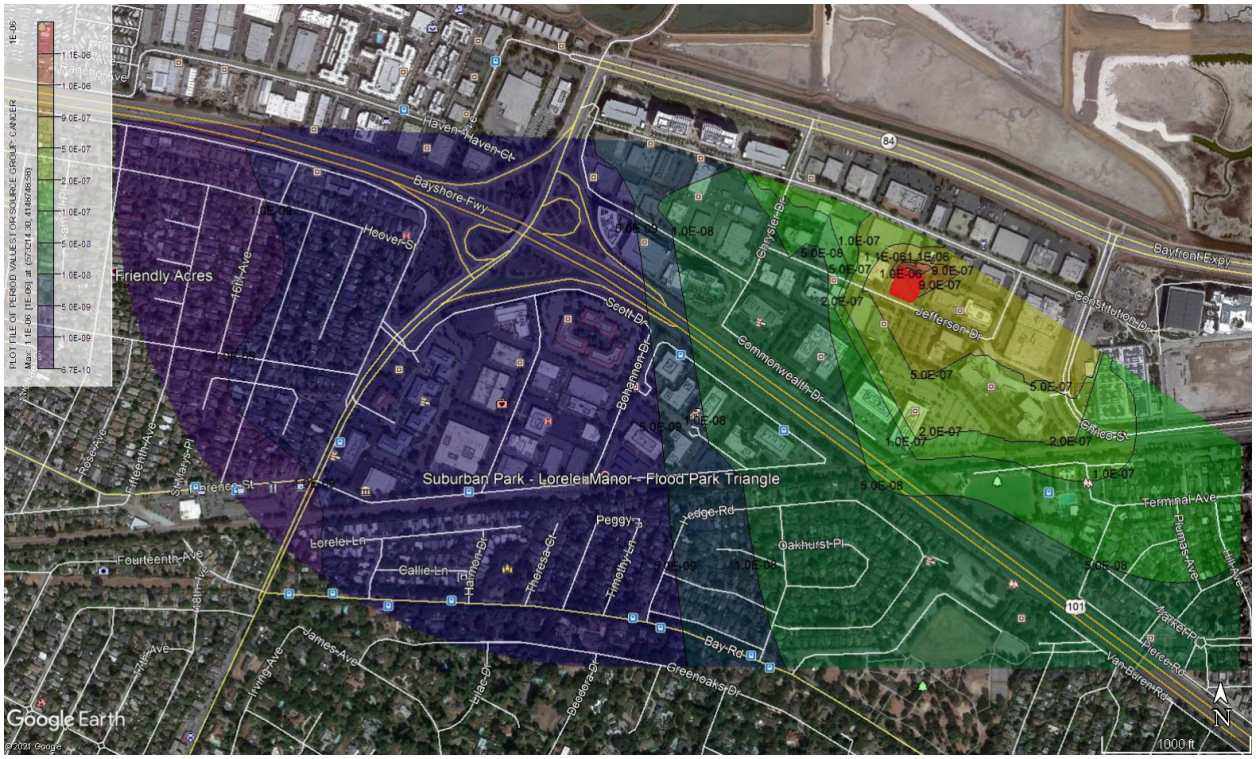


Unmitigated Construction Chronic Hazard Index



Unmitigated Construction $PM_{2.5}$ Concentrations

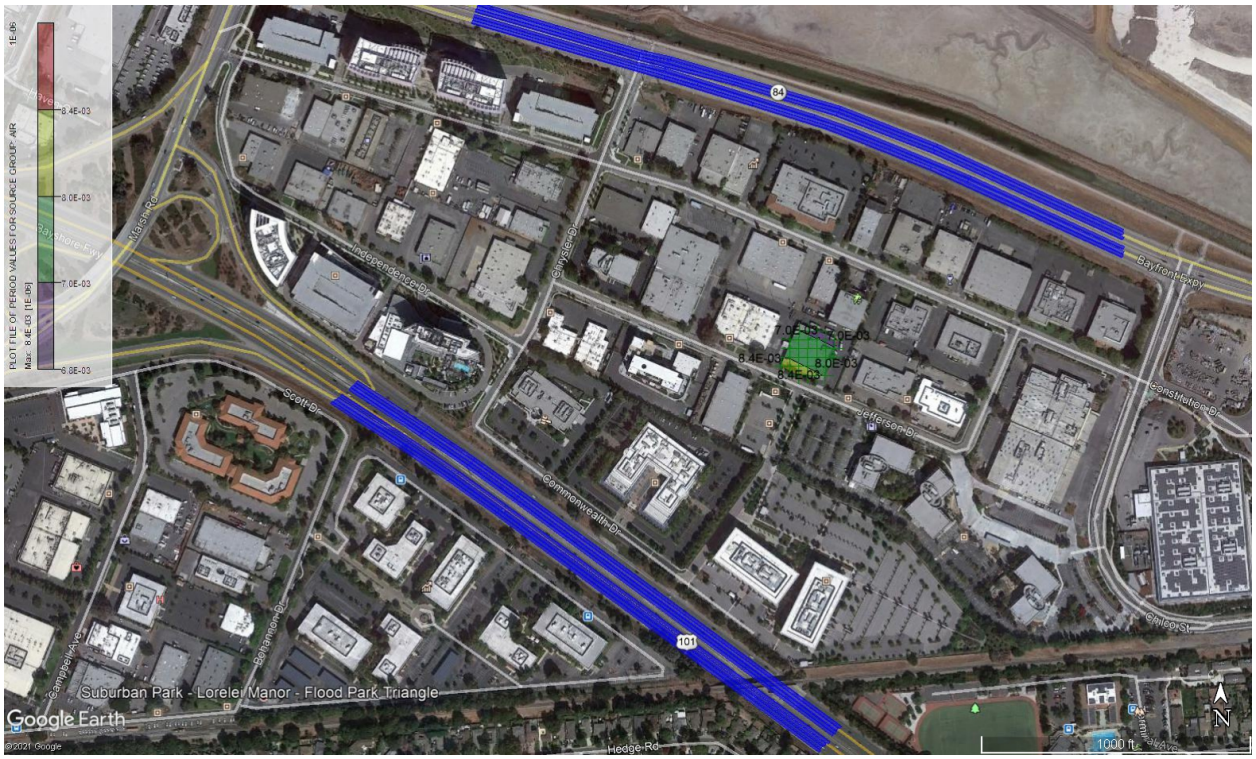
Mitigated Construction Cancer Risk



Mitigated Construction Chronic Hazard Index

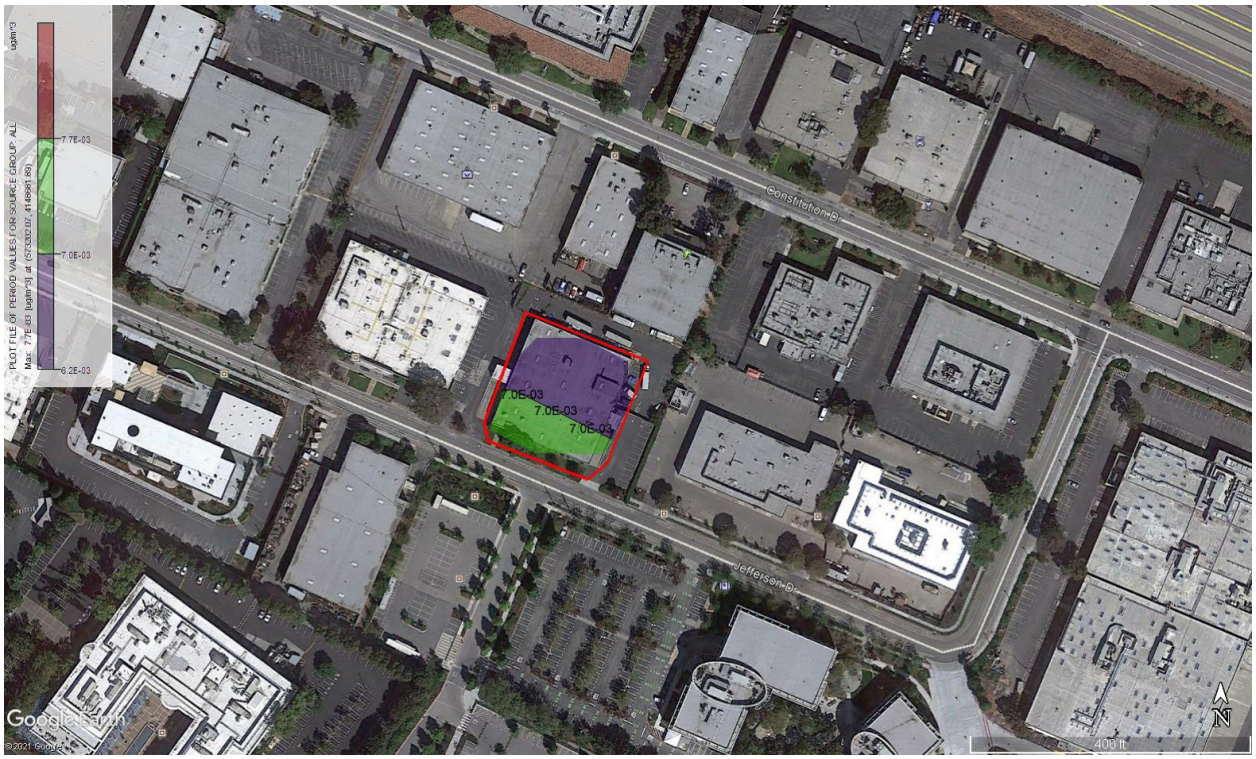
Mitigated Construction $PM_{2.5}$ Concentrations

Surrounding Roadways



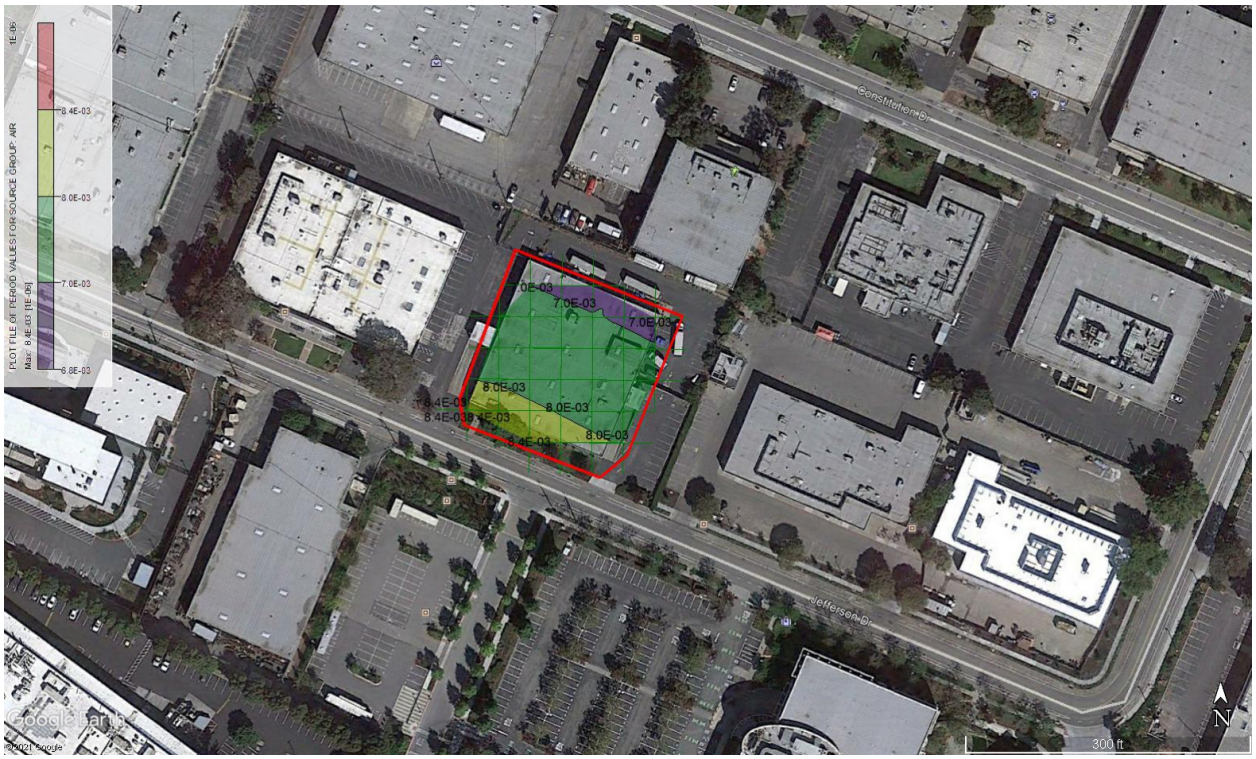
Operational Cancer Risk

Operational Chronic Hazard Index



Operational Acute Hazard Index

Operational $PM_{2.5}$ Concentrations



APPENDIX G

NOISE DATA

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TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34760 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	60.2	116.5	244.3	523.1

TABLE Existing-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32420 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.6	233.4	499.5

TABLE Existing-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34070 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
99.7	203.4	432.7	929.5

TABLE Existing-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	104.8	218.4	467.0

TABLE Existing-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40440 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
110.2	227.3	484.7	1041.8

TABLE Existing-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11200 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	54.3	114.8	246.2

TABLE Existing-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3800 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	70.6

TABLE Existing-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6850 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	82.6	177.4

TABLE Existing-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5820 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	93.6

TABLE Existing-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2840 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	58.2

TABLE Existing-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5010 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	84.8

TABLE Existing-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7890 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	53.5	114.6

TABLE Existing with Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34830 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
60.3	116.6	244.6	523.8

TABLE Existing with Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32470 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	111.7	233.6	500.0

TABLE Existing with Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34210 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
99.9	203.9	433.9	932.0

TABLE Existing with Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29460 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.2	219.2	468.7

TABLE Existing with Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40820 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
110.8	228.7	487.7	1048.3

TABLE Existing with Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11340 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	54.8	115.7	248.3

TABLE Existing with Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4080 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	74.0

TABLE Existing with Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Existing with Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7000 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	83.7	180.0

TABLE Existing with Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6140 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.61

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	97.0

TABLE Existing with Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Existing with Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	62.7

TABLE Existing with Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Existing with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5050 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	85.2

TABLE Existing with Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Existing with Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8210 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	54.9	117.7

TABLE Near Term -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41170 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.7	129.5	273.0	585.3

TABLE Near Term -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36710 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
61.9	120.5	253.2	542.4

TABLE Near Term -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 46230 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 72.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
119.5	248.0	529.7	1138.9

TABLE Near Term -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38020 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
63.1	123.2	259.1	555.2

TABLE Near Term -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45080 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 72.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
117.6	243.9	520.9	1120.0

TABLE Near Term -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Near Term

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11830 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	56.3	119.0	255.3

TABLE Near Term -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5370 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	88.8

TABLE Near Term -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8140 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	92.6	199.1

TABLE Near Term -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6850 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	104.3

TABLE Near Term -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4170 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	75.1

TABLE Near Term -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7120 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	107.0

TABLE Near Term -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Near Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8920 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	58.0	124.3

TABLE Near Term with Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41240 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.8	129.7	273.3	586.0

TABLE Near Term with Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36760 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
62.0	120.6	253.4	542.9

TABLE Near Term with Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 46370 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 72.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
119.7	248.5	530.8	1141.2

TABLE Near Term with Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38180 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
63.2	123.5	259.8	556.7

TABLE Near Term with Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45460 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 72.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	118.2	245.3	523.8	1126.2

TABLE Near Term with Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11970 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	56.7	119.9	257.3

TABLE Near Term with Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5650 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	91.8

TABLE Near Term with Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8290 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	93.7	201.5

TABLE Near Term with Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7170 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	107.5

TABLE Near Term with Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4510 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	79.1

TABLE Near Term with Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7160 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	107.4

TABLE Near Term with Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Near Term with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9240 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	59.3	127.3

TABLE Cumulative without Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Cumulative without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44970 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
68.9	137.0	289.4	620.7

TABLE Cumulative without Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39320 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
64.2	125.8	264.9	567.7

TABLE Cumulative without Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 59250 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 73.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
139.1	291.7	624.6	1343.6

TABLE Cumulative without Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 43610 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
67.8	134.3	283.6	608.2

TABLE Cumulative without Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52530 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 73.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
129.1	269.6	576.6	1240.1

TABLE Cumulative without Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15860 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	67.9	144.5	310.3

TABLE Cumulative without Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7210 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	0.0	50.4	107.9

TABLE Cumulative without Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10110 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	106.9	230.0

TABLE Cumulative without Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Cumulative without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9170 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	59.0	126.6

TABLE Cumulative without Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Cumulative without Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6540 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	101.2

TABLE Cumulative without Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	56.6	121.3

TABLE Cumulative without Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Cumulative without Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12320 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	71.8	154.1

TABLE Cumulative with Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Cumulative with Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45040 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.85

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.0	137.1	289.7	621.4

TABLE Cumulative with Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of Scott Drive
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39370 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	64.2	125.9	265.1	568.2

TABLE Cumulative with Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Willow Road
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 59390 SPEED (MPH): 50 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 73.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
139.3	292.2	625.6	1345.7

TABLE Cumulative with Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Marsh Road north of US-101
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 43770 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
67.9	134.6	284.3	609.7

TABLE Cumulative with Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Bayfront Expressway east of Marsh Road
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52810 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 73.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
129.6	270.5	578.6	1244.5

TABLE Cumulative with Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chilco Street south of Bayfront Expressway
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	68.3	145.3	312.2

TABLE Cumulative with Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Bayfront Expressway
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7390 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	51.2	109.7

TABLE Cumulative with Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive west of Chilco Street
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10260 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	50.4	107.9	232.2

TABLE Cumulative with Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive north of Jefferson Drive
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9490 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	60.4	129.6

TABLE Cumulative with Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Jefferson Drive east of Chrysler Drive
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6880 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	104.6

TABLE Cumulative with Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Constitution Drive east of Chrsyler Drive
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8640 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	56.8	121.7

TABLE Cumulative with Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/22/2021
ROADWAY SEGMENT: Chrysler Drive south of Constitution Drive
NOTES: Menlo Flats - Cumulative with Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12640 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	73.0	156.8
