

CITY OF SOUTH SAN FRANCISCO
ECONOMIC AND COMMUNITY DEVELOPMENT DEPARTMENT



City of
South San Francisco
California

1440 SAN MATEO AVENUE PROJECT

Initial Study/Mitigated Negative Declaration

June 2016

Prepared by:



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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

June 2016

A. PROJECT INFORMATION

1. Project Title: 1440 San Mateo Avenue Project
2. Lead Agency Name and Address: City of South San Francisco
Economic and Community Development Department
400 Grand Avenue
South San Francisco, CA 94080
3. Contact Person and Phone Number: Tony Rozzi, AICP
Senior Planner
(650) 877-8535
4. Project Location: San Mateo Avenue and Lowrie Avenue
South San Francisco, CA 94080
5. Project Sponsor's Name and Address: Gary M. Semling, Architect, NCARB, AIA
Managing Associate, Stantec Architecture
1383 North McDowell Blvd., Ste. 250
Petaluma, CA 94954
6. Project Applicant: Andrew Jaksich
Avis Rent-a-Car System, LLC
513 Eccles Avenue
South San Francisco, CA 94080
7. Existing General Plan Designation: Community Commercial (Regional Commercial)
8. Existing Zoning Designation: Freeway Commercial
9. Proposed Zoning Designation: Mixed Industrial
10. Project Description Summary:

The approximately one-acre proposed project site is located in the City of South San Francisco, east of the intersection of San Mateo Avenue and Lowrie Avenue, west of Produce Avenue, and south of Colma Creek. The project site consists of three vacant parcels identified as Assessor's Parcel Numbers (APNs) 015-114-420 (0.14-acre), 015-114-480 (0.47-acre), and 015-114-490 (0.38-acre). The proposed project site is currently zoned Freeway Commercial (FC) and automobile/vehicle rental uses are not permitted

under the FC zoning designation; therefore, the project applicant is seeking approval of a rezone of the three project parcels to the Mixed Industrial (MI) zoning designation. With approval of said rezone of the project site, the property would be used for automobile/vehicle rental uses in conjunction with the parcels immediately west of the subject site. Physical improvements on the project site are limited to restriping and sealing the existing surface parking lot to demarcate a maximum of 200 vehicle stalls for temporary staging of vehicles; installing landscaping on a portion of the southern boundary of the site; trenching for lighting conduit; and installing additional parking lot lights. The project would not include repaving of the project site.

B. SOURCES

The following documents are referenced information sources utilized by this analysis:

1. Association of Bay Area Governments. Interactive Liquefaction Hazard Map. Available at: <http://quake.abag.ca.gov/earthquakes/#liquefaction>. Accessed April 2016.
2. Bay Area Air Quality Management District. Plans & Climate. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans.aspx>. Accessed April 2016.
3. Bay Area Air Quality Management District. Air Quality Standards and Attainment Status. Available at: <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>. Accessed April 2016.
4. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
5. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
6. California Department of Conservation Division of Land Resource Protection Farmland Mapping and Monitoring Program. *San Mateo County Important Farmland Map*. 2014.
7. California Department of Fish and Wildlife. *RareFind 5*. Available at: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 2016.
8. City of South San Francisco. *Housing Element 2015-2023*. April 2015.
9. City of South San Francisco. *South San Francisco Municipal Code*. Revised April 2016.
10. City of South San Francisco. *South San Francisco Zoning Ordinance*. Adopted July 28, 2010.
11. Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: <http://www.envirostor.dtsc.ca.gov/public>. Accessed April 2016.
12. Dyett & Bhatia. *City of South San Francisco General Plan*. October 1999.
13. Dyett & Bhatia. *City of South San Francisco General Plan Draft EIR*. June 1999.
14. Federal Emergency Management Agency. *Flood Insurance Rate Map (Map Number ID: 06081C0043E)*. Available at: <https://msc.fema.gov/portal>. Accessed April 2016.
15. Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Guidelines*. May 2006.
16. Fehr & Peers Transportation Consultants. *Arata Property Transportation Assessment*. February 3, 2015.
17. PMC. City of South San Francisco *Climate Action Plan*. February 13, 2014.
18. County of San Mateo. *San Bruno Mountain Habitat Conservation Plan*. November 1982.
19. United States Department of Agriculture Natural Resources Conservation Science. *Web Soil Survey*. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed April 2016.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

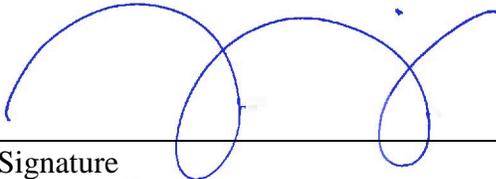
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is “Less Than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

- | | | |
|----------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology & Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

D. DETERMINATION

On the basis of this initial study:

- 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 applicant. 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” on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

Tony Rozzi, AICP, Senior Planner
Printed Name

June 7, 2016
Date

City of South San Francisco
For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the 1440 San Mateo Avenue Project (proposed project). The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed. The mitigation measures prescribed for environmental effects described in this IS/MND will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project conditions of approval. The City will adopt findings and a Mitigation Monitoring and Reporting Program (MMRP) for the project in conjunction with approval of the project.

The City of South San Francisco adopted their General Plan and associated Environmental Impact Report (EIR) in October 1999. The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq.*), and includes an examination of the potential wide-ranging effects resulting from implementation of the General Plan land use diagram. Measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan were identified in the General Plan EIR.

The environmental setting of each section of this IS/MND has been largely based on information in the City's General Plan and associated EIR as well as a site visit conducted by Raney and City staff. In addition, technical traffic and air quality/greenhouse gas emissions reports have been prepared for the proposed project by Fehr & Peers and Raney Planning & Management, Inc., respectively. The technical reports used in the preparation of this IS/MND are available upon request at the City of South San Francisco located at 400 Grand Avenue, South San Francisco, California.

City of South San Francisco Project Review Process

After a project application is complete, the application is subject to environmental, public, and discretionary review through and by the City's Planning Commission and/or City Council, depending upon the type of project, as defined by the City's Municipal Code and state law. The Conditions of Approval (COAs) identified through staff review of the project, and any additional ones identified through the public review process, become required of the project as a matter of law pursuant to the South San Francisco Municipal Code. Prior to the City issuing a building, grading, and/or demolition permit, all City departments and divisions review the project plans for compliance with the identified COAs and any additional conditions added pursuant to the public review process. Permits are not issued by the City's Building Division in the absence of authorization from City staff or in the absence of the identified requirements being incorporated into the project plans.

F. PROJECT DESCRIPTION

A description of the project location and setting, project background, the components of the project, and required discretionary actions, is provided below.

Project Location and Existing Site Conditions

The approximately one-acre proposed project site is located east of the intersection of San Mateo Avenue and Lowrie Avenue, west of Produce Avenue, and south of Colma Creek (see Figure 1, Regional Location Map and Figure 2, Project Vicinity Map). The project site consists of three vacant parcels identified as APNs 015-114-420 (0.14-acre), 015-114-480 (0.47-acre), and 015-114-490 (0.38-acre). Surrounding land uses include the aforementioned adjacent lot to the west, auto body shops to the south and west, the Park 'N Fly facility to the southeast, various commercial uses to the south, and Colma Creek to the north.

The project site is currently a vacant, paved lot surrounded by a chain link fence. The site contains two existing light poles and an unused structure at the southern boundary, consisting of a ladder leading to a small enclosure with a door and windows. A small homeless encampment was located beneath the structure at the time of the site visit. One tree and some shrubs are located just outside of the northern boundary of the project site.

Project Background

On June 19, 2015, the project applicant received City approval of a Minor Use Permit (MUP 15-0001) and Design Review (DR15-0024) for the two parcels (APN 015-114-470 and 015-114-460) located immediately west of the subject site. These two parcels and the current project site are on the same overall property that would be rented by Payless Car Rental (see Figure 3, Site Plan). The proposed improvements for the two western parcels include lot striping to accommodate 150 rental cars, a 1,850-square foot (sf) modular office space, a 1,300-sf canopy cover for vehicle hand washing, with water collection and reclamation system, a 5,000-gallon fuel dispensing tank, landscaping, security fences, gates and associated site works. The MUP was required because the two westerly parcels are zoned Mixed Industrial (MI), and pursuant to South San Francisco Municipal Code Section 20.110.002, automobile/vehicle rental uses are allowed in the MI zone subject to approval of a Minor Use Permit.

The project applicant would like to use the approximately one-acre subject site to park rental cars associated with their business. In order to utilize the subject site for such purposes, the three subject parcels need to be rezoned from Freeway Commercial to MI.

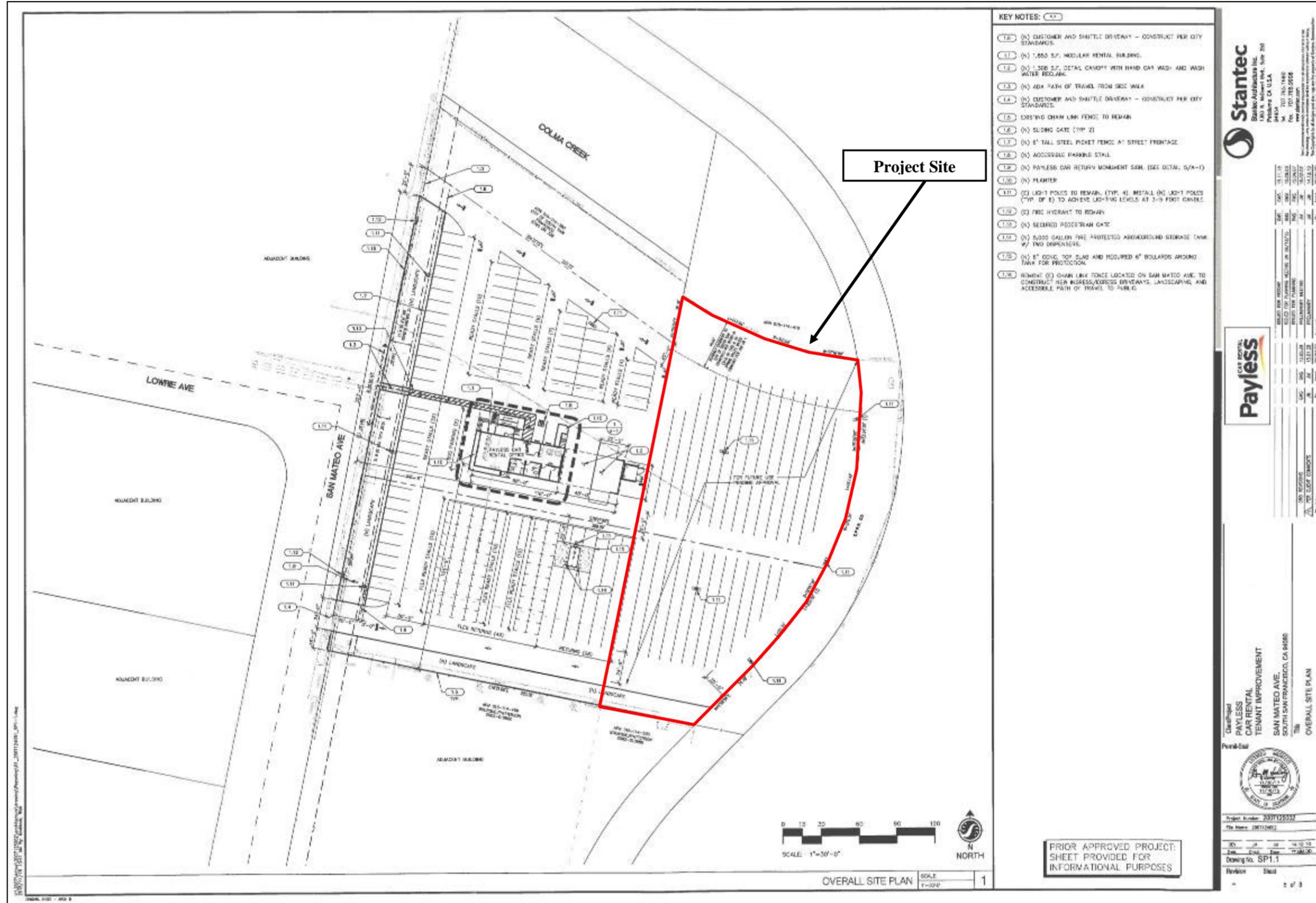
Figure 1
Regional Location Map



Figure 2
Project Vicinity Map



Figure 3
Site Plan



Project Components

The proposed project consists of a rezone of APNs 015-114-420, 015-114-480, and 015-114-490 from Freeway Commercial (FC) to Mixed Industrial (MI) in order to allow automobile/vehicle rental uses on the project site. For the proposed project, the project applicant is seeking a modification to the previously-approved MUP for the parcels immediately west of the project site. Therefore, the necessary entitlements being reviewed by the City of South San Francisco include a rezone of the project site and an MUP modification.

With approval of a rezone of the proposed project site, the entire property would be used for automobile/vehicle rental uses. The scope of improvements associated with the proposed rezone and MUP modification are described in the following sections.

Parking Lot Striping and Sealing

The project site is currently paved with asphaltic concrete. The proposed project would include restriping the project site to demarcate a maximum of 200 parking stalls for the temporary staging of vehicles. The surface lot would then be seal coated to protect the striping. While this Initial Study evaluates a maximum of 200 vehicle stalls, installation of a fire lane through the approximate center of the parking area would likely reduce the total number of parking spaces on the subject site to 170, as shown in Figure 4.

Trenching and Lighting Installation

The project would include the installation of 11 additional parking lot lights within the proposed project site (this total would not include new lights installed on the adjacent western property). The lights would have a maximum height of 20 feet, in accordance with the City's Municipal Code requirements. In order to install the lighting conduit, trenching to an approximate depth of 18 to 24 inches would be necessary on the site. The proposed lighting for the site is further discussed in the Aesthetics section of this IS/MND.

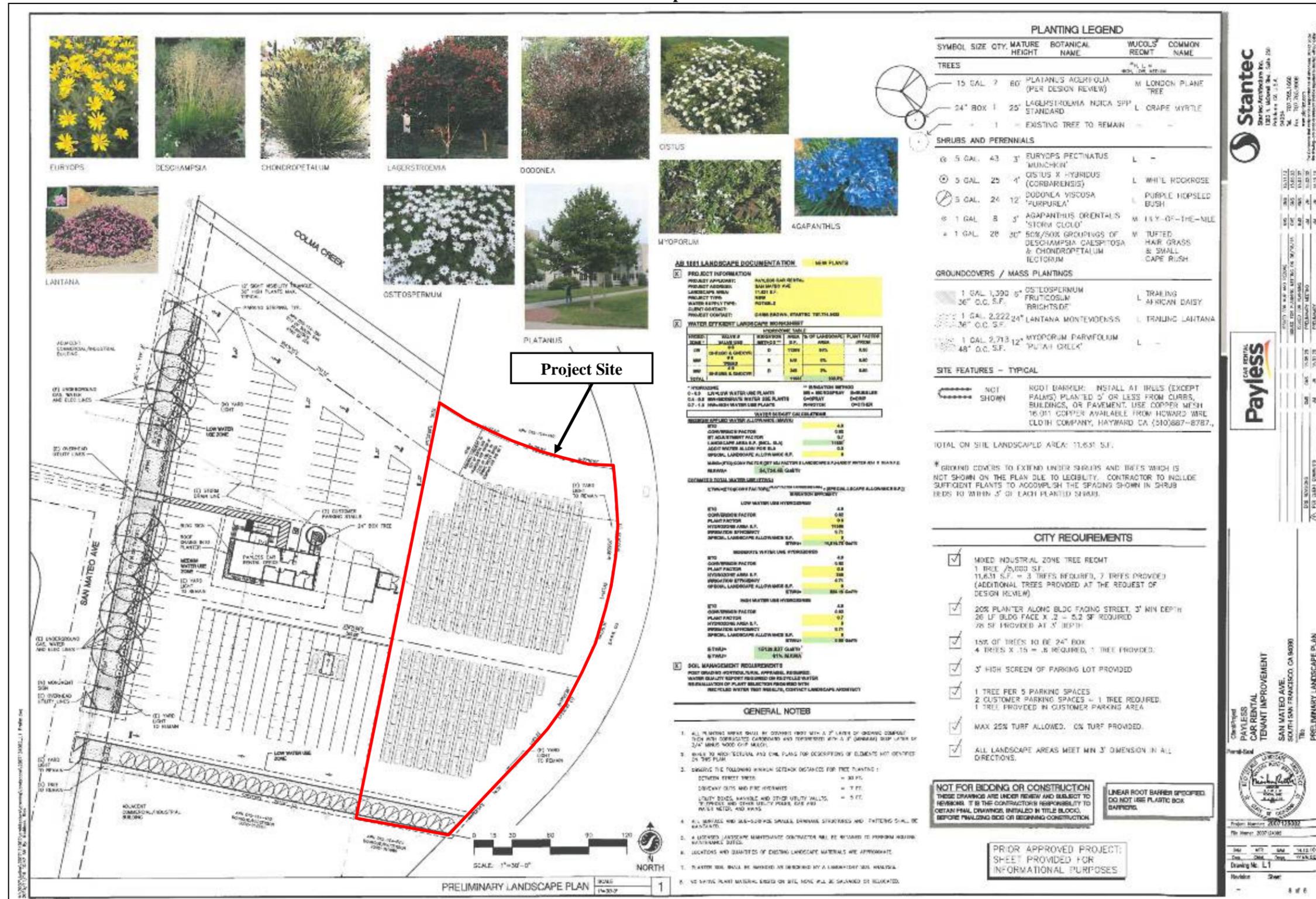
Landscaping

With implementation of the project, the asphaltic concrete along the southern border of the project site would be removed and water-efficient landscaping would be installed, consisting of Purple Hopseed Bushes and groundcover (i.e., trailing lantana) (see Figure 4, Landscape Plan). The project would not include removal of any existing shrubs or the single tree that exist immediately outside of the northern property line.

Infrastructure

The project would not require connection to water or sewer infrastructure, as the project consists only of rental vehicle storage. Storm drain infrastructure already exists on-site, consisting of one catch basin. This catch basin would continue to collect surface runoff from the project site, and route said runoff to the City's storm drain system in San Mateo Avenue.

Figure 4
Landscape Plan



The project is not subject to C.3. stormwater infiltration requirements for the following reasons. Overall, the project would disturb 1,294 sf of the site surface for landscaping installation purposes, and an additional 511 sf for the purposes of trenching for lighting installation. In total, the project would result in disturbance of 1,805 sf of land. The San Mateo C.3. Stormwater Technical Guidance identifies the following applicable threshold for C.3. regulated projects: uncovered parking lots (stand-alone or part of another use) that create and/or replace 5,000 square feet or more of impervious surface. The proposed project does not trigger this threshold. Further discussion regarding drainage can be found in the Hydrology and Water Quality section of this IS/MND.

Discretionary Actions

Implementation of the proposed project would require the following discretionary actions by the City of South San Francisco:

- Adoption of the IS/MND and MMRP;
- Approval of a Rezone of the site from FC to MI; and
- Approval of a modification of MUP 15-0001.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended, as appropriate, as part of the proposed project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

a.c. The proposed project site is located within the Lindenville sub-area, as indicated in the City’s General Plan. Historically, government-built housing for military personnel and shipyard workers was developed during the war on the former marshland between Railroad Avenue, South Spruce Avenue, and San Mateo Avenue – the area is still known as Lindenville. Currently, warehousing/distribution and light industrial uses are dominant; in addition, commercial storage, manufacturing, automobile repair, and commercial automobile uses are present.

The proposed project site is already a surface parking lot, though it is not currently in use and has the appearance of a dilapidated parcel with overgrown weeds throughout. The proposed project consists of striping and sealing the existing paved lot to demarcate a maximum of 200 parking spaces, as well as installation of lighting and landscaping. The proposed landscaping, consisting of Purple Hopseed bushes and groundcover (i.e., trailing lantana) would be installed along the southern boundary of the site and would serve to enhance the aesthetic appearance of the project site.

The site would operate as the rental car parking/staging area for the Payless Car Rental facility, the primary operations for which will be conducted on the two parcels to the west. The above-described minor improvements to the existing surface parking lot would not be considered a substantial degradation of the existing visual character or quality of the site and its surroundings. In addition, the General Plan does not designate any areas as scenic vistas. As such, the proposed project would not result in a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings, and the project’s impact would be *less than significant*.

- b. Neither State nor local scenic highways are located within the vicinity of the proposed project site. U.S. Highway 101 is located approximately 0.2-mile from the project site. U.S. 101 is not designated a State scenic highway in this location. Therefore, implementation of the proposed project would not damage any scenic resources within a State scenic highway, and a *less-than-significant* impact would result.

- d. The project site currently contains two parking lot lights along its eastern boundary. The project would include the installation of 11 additional parking lot lights within two of the three project parcels (i.e., APNs 015-114-480, and -490) (see Figure 5, Site Lighting). The lights would have a maximum height of 20 feet, in accordance with the City's Municipal Code requirements.

Section 20.300.010, Performance Standards, of the Municipal Code requires that lights be placed to deflect light away from adjacent properties and public streets, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties. Properties must not cast light on a public street exceeding one foot-candle (fc) as measured from the centerline of the street, and light exceeding one-half fc must not be cast onto any residentially-zoned property or any property containing residential uses. Residential uses, residentially-zoned properties, or public streets are not located adjacent to the project site. Therefore, the applicable requirement is for the project lighting to be placed to deflect light away from adjacent properties, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties.

Figure 6, Site Photometrics, demonstrates the general photometric schedule for the proposed project site. Due to the placement of the proposed lights, and the requirement for shielding, the lighting intensities at the northern, eastern, and southern property lines are relatively minimal, ranging from a minimum of 0.4 footcandles (fc) to a maximum of 6.9 fc.¹ These intensities would not be considered a substantial new source of light to surrounding properties, none of which are residential. Per the City's Municipal Code, Section 20.300.008, the additional parking lot fixtures shall be shielded so as not to produce obtrusive glare onto the public right-of-way or adjoining properties. All luminaries shall meet the most recently adopted criteria of the Illuminating Engineering Society of North America (IESNA) for "Cut Off" or "Full Cut Off" luminaries.

Sensitive residential receptors are not located within the vicinity of the project site, as the site is surrounded by commercial and industrial development, primarily parking lots. Additionally, the site is not located adjacent to any public streets. Therefore, for the above-stated reasons, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and impacts would be considered *less than significant*.

¹ The intensities at the western property line are of no significance because this area is part of the same proposed car rental operation.

Figure 5
Site Lighting

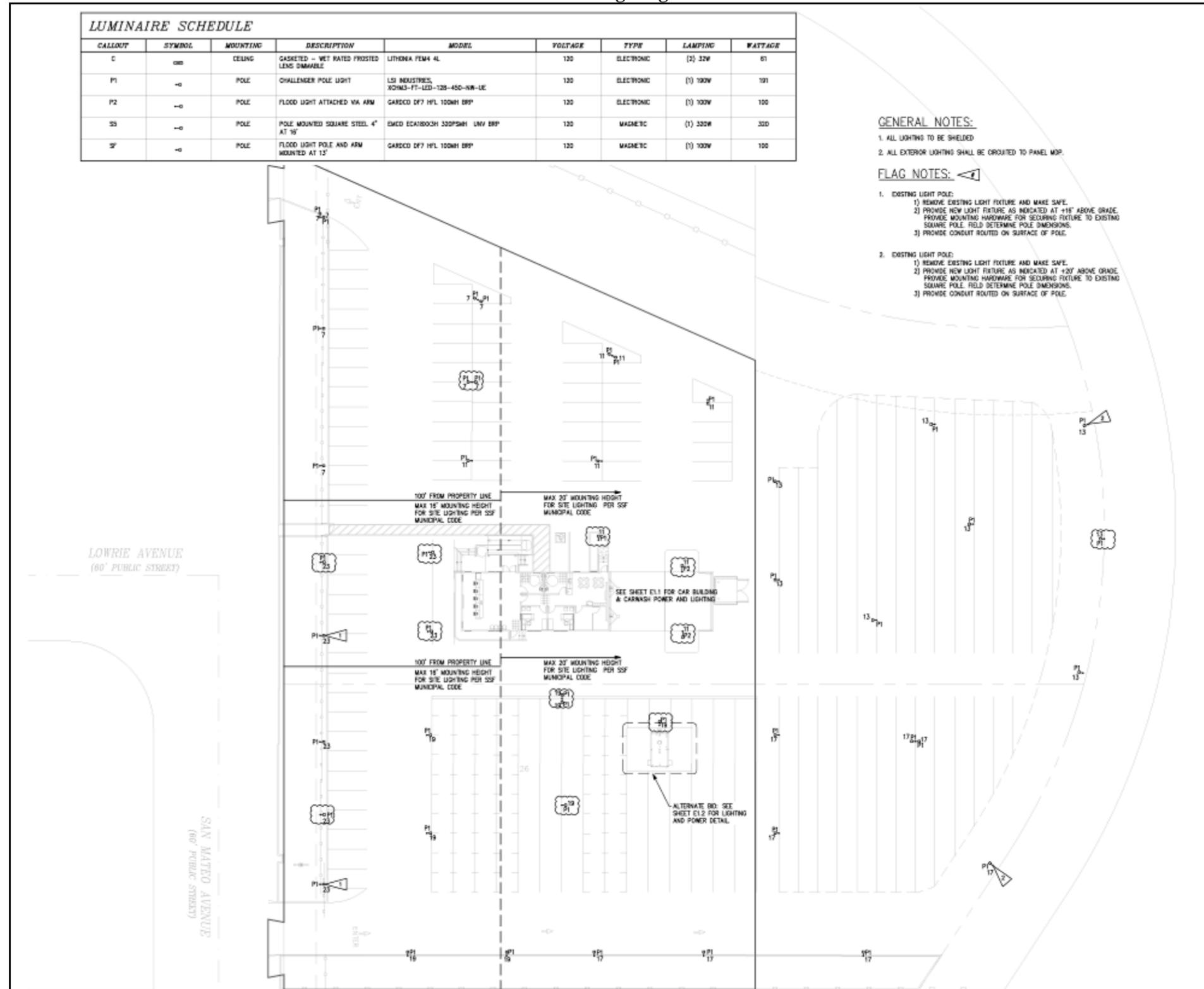
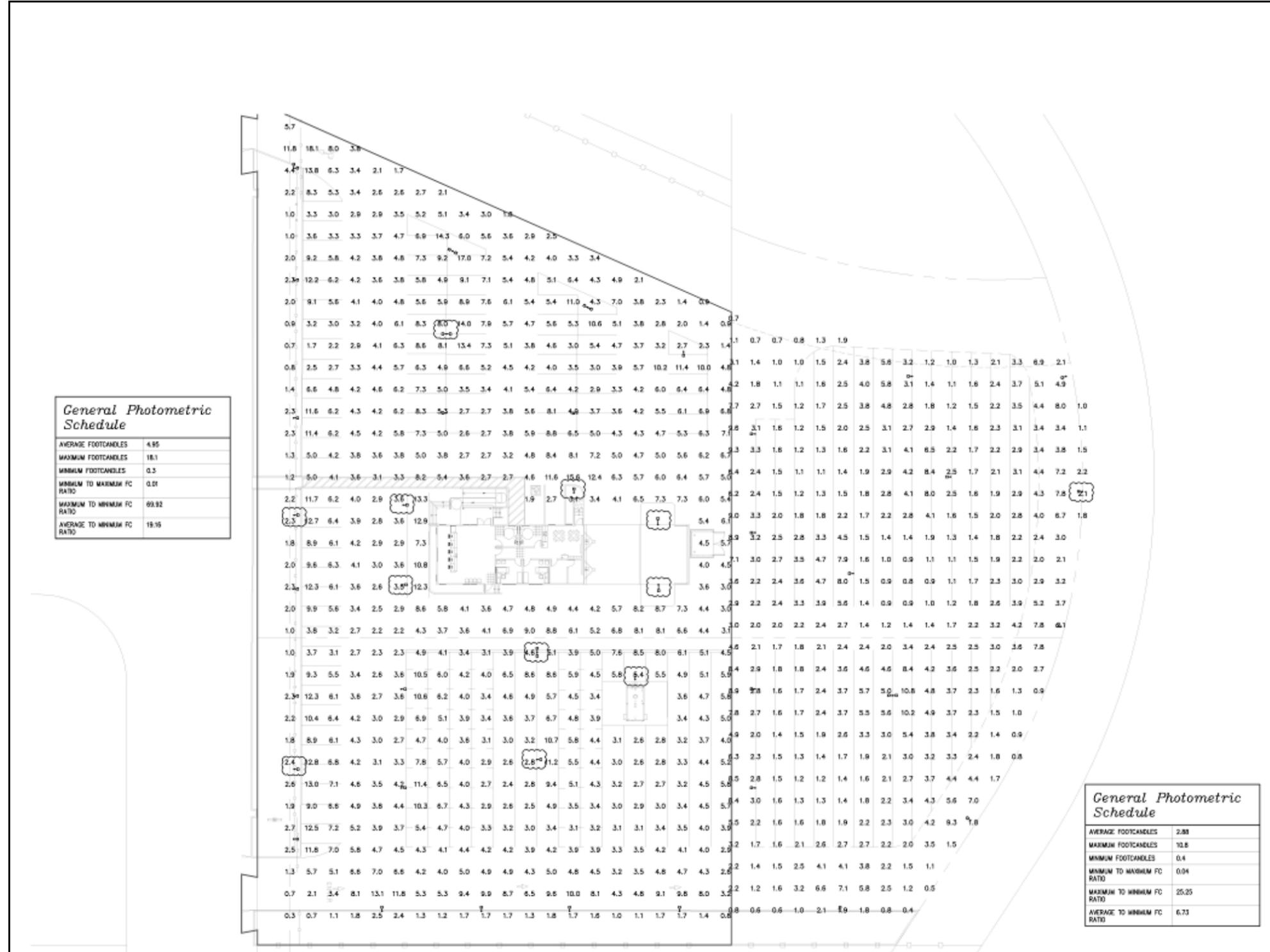


Figure 6
Site Photometrics



II. AGRICULTURE AND FOREST RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

a,b,e. The site is not considered Farmland of Prime, Unique, or Statewide Importance and the site is not under a Williamson Act contract. Per the San Mateo County Important Farmland Map, the site is designated Urban and Built-Up Land.²

The project site is currently zoned Freeway Commercial and the proposed project includes a request to rezone the site to Mixed Industrial. Therefore, the project would not conflict with existing zoning for agricultural use. In addition, the site is not subject to a Williamson Act contract.

For the above-stated reasons, the proposed project would have *no impact* related to the conversion of Farmland to non-agricultural use or conflict with agricultural zoning or a Williamson Act contract.

c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]) or timberland (as defined by Public Resources Code section 4526), and the site is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have *no impact* with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

² California Department of Conservation Division of Land Resource Protection Farmland Mapping and Monitoring Program. *San Mateo County Important Farmland Map*. 2014.

III. AIR QUALITY.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

a-c. The City of South San Francisco is within the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) who regulates air quality in the San Francisco Bay Area. The SFBAAB area is currently designated as a nonattainment area for the State and federal ozone, State and federal particulate matter 2.5 microns in diameter (PM_{2.5}), and State particulate matter 10 microns in diameter (PM₁₀) standards. The SFBAAB is designated attainment or unclassified for all other ambient air quality standards (AAQS). It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour PM_{2.5} federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal PM_{2.5} AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2010 Clean Air Plan, adopted on September 15, 2010. The 2010 Clean Air Plan was developed as a multi-pollutant plan that provides an integrated control strategy

to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM₁₀ standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2010 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAQMD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM₁₀, and PM_{2.5}, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed in Table 1.³ Thus, by exceeding the BAAQMD's mass emission thresholds for operational emissions of ROG, NO_x, or PM₁₀, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1			
BAAQMD Thresholds of Significance			
Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82	82	15
PM _{2.5}	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2010.

³ It should be noted that the BAAQMD resolutions adopting and revising the 2010 significance thresholds were set aside by the Alameda County Superior Court on March 5, 2012. The Alameda Superior Court did not determine whether the thresholds were valid on the merits, but found that the adoption of the thresholds was a project under CEQA, necessitating environmental review. The BAAQMD appealed the Alameda County Superior Court's decision. The Court of Appeal of the State of California, First Appellate District, reversed the trial court's decision. The Court of Appeal's decision was appealed to the California Supreme Court, which granted limited review confined to the questions of under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project? On review, the Supreme Court rejected BAAQMD's argument that CEQA requires an analysis of the environment's impact on a project in every instance. Rather, the Court held that CEQA review should be "limited to those impacts on a project's users or residents that arise from the project's effects on the environment." Ultimately, the Supreme Court reversed the Court of Appeal's decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court's opinion. The California Supreme Court did not review the underlying question whether adoption of the thresholds is a project under CEQA, and no court has indicated that the thresholds lack evidentiary support. BAAQMD continues to provide direction on recommended analysis methodologies, but has withdrawn the recommended quantitative significance thresholds for the time being. The May 2012 BAAQMD CEQA Air Quality Guidelines state that lead agencies may reference the Air District's 1999 Thresholds of Significance available on the Air District's website. Lead agencies may also reference the Air District's CEQA Thresholds Options and Justification Report developed by staff in 2009. The CEQA Thresholds Options and Justification Report, available on the District's website, outlines substantial evidence supporting a variety of thresholds of significance. The air quality and GHG analysis in this IS/MND uses the previously-adopted 2010 thresholds of significance to determine the potential impacts of the proposed project, as the thresholds are supported by substantial evidence.

The proposed project would not be considered new development, but is merely restriping and seal coating an existing parking lot to allow for additional on-site vehicle storage. The proposed project would involve some other minor improvements, including the removal of 1,294 sf of existing pavement, which would be replaced with landscaping, and trenching and installing 11 additional parking lot lights. The project would not involve any grading, repaving, or building construction. The proposed project improvements would involve a total disturbance area of approximately 1,805 sf (or 0.04-acre) and would not directly result in the introduction of any new employees at the site. The minimal amount of improvements would not be expected to generate construction or operational emissions that would substantially contribute to the region's air quality issues or obstruct implementation of the BAAQMD's air quality planning efforts. In order to verify the aforementioned expectations, a comparison of the proposed project's estimated emissions to the BAAQMD thresholds of significance has been conducted.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information should be applied in the model. As such, the proposed project's modeling assumed the following:

- Construction assumed to commence in January 2017 and occur over an approximately one-month period;
- Construction would consist of a demolition and trenching phase and would involve the following pieces of equipment operating for a maximum of eight hours per day:
 - Concrete industrial saw;
 - Rubber-tired dozer;
 - Tractor/loader/backhoe;
 - Generator set; and
 - Air compressor;
- Demolition of approximately 511 sf of existing pavement would be necessary; and
- The proposed project would allow for the generation of approximately 354 trips per day, based on a daily trip generation rate of 1.77 per parking space, according to the Transportation Assessment prepared for the proposed project.

The proposed project's estimated emissions associated with construction, operations, and cumulative conditions are presented and discussed in further detail below.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project’s construction emissions would be below the applicable thresholds of significance.

Table 2				
Maximum Unmitigated Construction Emissions (lbs/day)				
	ROG	NO_x	PM₁₀	PM_{2.5}
Project Construction Emissions	6.03	20.65	1.33	1.12
Thresholds of Significance	54	54	82	54
Exceeds Threshold?	NO	NO	NO	NO

Source: CalEEMod, April 2016 (see Appendix A).

All construction projects are required to comply with the Bay Area Air Quality Management District’s (BAAQMD) dust control measures. These measures are imposed by the City’s Engineering Division on all projects as a condition of building permit issuance and are monitored for compliance by staff and/or City consultants. The measures include all the *Basic Fugitive Dust Emissions Reduction Measures*, *Basic Exhaust Emissions Reduction Measures*, and some of the *Additional Fugitive Dust Emissions Reduction Measures* identified by the BAAQMD as of May 2011. The City requires projects to do the following:

- a) Water all active construction sites at least twice daily.
- b) Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard.
- c) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- d) Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- e) Sweep streets (with wet power vacuum sweepers), if visible soil material is carried onto adjacent public streets, at least once per day. The use of dry power sweeping is prohibited.
- f) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- g) Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiled materials.
- h) Install sandbags or other erosion-control measures to prevent silt runoff to public roadways.
- i) Replant vegetation in disturbed areas as quickly as possible.
- j) Watering should be used to control dust generation during the break-up of pavement.
- k) Cover all trucks hauling demolition debris from the site.
- l) Use dust-proof chutes to load debris into trucks whenever feasible.
- m) Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

- n) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be in proper running order prior to operation.
- o) Diesel powered equipment shall not be left inactive and idling for more than five minutes and shall comply with applicable BAAQMD rules.
- p) Use alternative fueled construction equipment, if possible.
- q) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour and slower, should wind and dust conditions necessitate.
- r) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible and building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.
- s) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five (5) minutes (as required by the California airborne toxic control measure detailed in Title 13, Section 2485 of the California Code of Regulations). Clear signage regarding this requirement shall be provided for construction workers at all access points.
- t) Post a visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within twenty-four (24) hours. The applicable Air District phone number shall also be visible to ensure compliance with applicable regulations.

As such, the proposed project would implement the BAAQMD's Basic Construction Mitigation Measures listed above, to the extent that the measures are feasible for the proposed project's construction activities. Compliance with the aforementioned measures would help to further minimize any construction-related emissions.

Because the proposed project would be below the applicable thresholds of significance for construction emissions, the proposed project would not be considered to result in a significant air quality impact during construction.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance.

Because the proposed project would be below the applicable thresholds of significance for operational emissions, the proposed project would not be considered to result in a significant air quality impact during operations.

Table 3				
Maximum Unmitigated Operational Emissions				
	ROG	NO_x	PM₁₀	PM_{2.5}
Average Daily Emissions (lbs/day)				
Project Operational Emissions	1.72	<0.01	<0.01	<0.01
Thresholds of Significance	54	54	82	54
Exceeds Threshold?	NO	NO	NO	NO
Maximum Annual Emissions (tons/year)				
Project Operational Emissions	0.31	<0.01	<0.01	<0.01
Thresholds of Significance	10	10	15	10
Exceeds Threshold?	NO	NO	NO	NO
<i>Source: CalEEMod, April 2016 (see Appendix A).</i>				
Note: These operational emission calculations assume a total of approximately 354 trips per day for the project site, based on a daily trip generation rate of 1.77 per parking space, with 200 total parking spaces.				

Cumulative Emissions

Past, present and future development projects contribute to the region’s adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project’s individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project’s contribution to the cumulative impact is considerable, then the project’s impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project’s individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB’s existing air quality conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project’s emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region’s existing air quality conditions. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be expected to result in a cumulatively considerable contribution the region’s existing air quality conditions.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2010 CAP. According to BAAQMD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be considered to conflict with or obstruct implementation of regional air quality plans.

Because the proposed project would not conflict with or obstruct implementation of the

- applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, impacts would be considered *less than significant*.
- d. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The proposed project would involve restriping and seal coating an existing parking lot, as well as some other minor improvements. Because the project would not introduce any sensitive users to the site, the proposed project would not be considered a sensitive receptor. The project site is located in an industrial area and is predominantly surrounded by existing industrial and commercial uses. The nearest existing sensitive receptors would be the residences located nearly 1,500 feet to the northwest of the site, opposite Colma Creek and the Caltrain tracks.

The major pollutant concentrations of concern are localized CO emissions and TAC emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of carbon monoxide (CO) are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

The Transportation Assessment prepared for the proposed project analyzed whether the project would cause an increase in traffic that is substantial in relation to the traffic load and capacity of the street system or change the conditions of an existing street in a manner that would substantially impact access or traffic load and capacity of the street system using criteria from applicable plans, policies, and standards for the project area. According to the Transportation Assessment, as discussed in further detail in Section XVI, Transportation/Circulation, of this IS/MND, implementation of the proposed project would not result in any impacts related to transportation or circulation. Accordingly, the proposed project would not be expected to interfere with any applicable congestion management program, regional transportation plan, or local congestion management agency plans.

In addition, according to the Transportation Assessment, the maximum volume that would occur at any of the study intersections for the project under existing plus project conditions would be 3,689 vehicles per hour, which would occur during the PM peak hour at the San Mateo Avenue/Airport Boulevard intersection. Thus, the proposed project traffic would not increase traffic volumes at any affected intersection to more than 24,000 or 44,000 vehicles per hour, as identified in the screening criteria above. As such, a substantial increase in levels of CO at surrounding intersections would not occur. Therefore, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards.

TAC Emissions

For assessing community risks and hazards related to TAC emissions, BAAQMD recommends that any proposed project that includes the siting of a new emission source or sensitive receptor assess associated impacts within 1,000 feet of the project property boundary. As stated above, the proposed project is not considered a sensitive receptor. Accordingly, implementation of the proposed project would not result in the exposure of on-site sensitive receptors to substantial pollutant concentrations associated with any existing nearby uses.

Typical major sources of TAC emissions include, but are not limited to, freeways and high traffic roads, distribution centers, rail yards, gas dispensing facilities, dry cleaners, and distribution centers. The proposed project would not involve any land uses or operations that would be considered major sources of TACs. As such, the proposed project would not generate any substantial pollutant concentrations during operations. The proposed project's short-term, construction-related activities could result in the generation of TACs associated with off-road equipment exhaust emissions. However, construction is temporary, occurs over a relatively short duration in comparison to the operational lifetime of the proposed project, and construction activities for the proposed project are minimal. In addition, as stated above, the nearest sensitive receptor is located nearly 1,500 feet to the northwest of the proposed project site. Therefore, project construction would not be expected to expose any existing sensitive receptors to substantial pollutant concentrations.

Conclusion

Based on the above, the proposed project would not cause or be exposed to substantial pollutant concentrations, including localized CO or TACs, and impacts related to such would be *less than significant*.

- e. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses.

Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, could be found to be objectionable. The proposed project would not involve any land uses or operations that would involve the generation of substantial diesel fumes. The proposed project's short-term, construction-related activities could result in the generation of objectionable odors associated with off-road equipment exhaust emissions. Although diesel fumes from construction equipment are sometimes found to be objectionable, as discussed above, construction is temporary and construction activities for the proposed project are minimal. Construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per Title 8, Section 8.32.050 Special Provisions, of the City's Municipal Code, and would likely only occur over portions of the improvement area at a time. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors. Furthermore, the nearest sensitive receptor is located nearly 1,500 feet to the northwest of the proposed project site, separated from the site by existing development, Caltrain tracks, and Colma Creek. Therefore, the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant.

For the aforementioned reasons, the proposed project would not create objectionable odors, nor would the project site be affected by any existing sources of substantial objectionable odors, and a *less-than-significant* impact related to objectionable odors would result.

IV. BIOLOGICAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a. Figure 4.13-1, Biological Resources, of the General Plan EIR shows sensitive biological habitats in South San Francisco. The proposed project site does not contain any areas identified as a vegetative community or special species habitat. In addition, a search of the California Department of Fish and Wildlife’s (CDFW) Natural Diversity Database (CNDDDB) was performed for the proposed project location to determine the records of sensitive plant and wildlife species within the general vicinity of the area. A total of 65 federally-listed, State-listed, or special-status plant and wildlife species were identified for the general project area, including 35 plant species, 14 insect species, six bird species, three fish species, two reptile and two bat species, and one amphibian and one crustacean species.

Many of the plant and wildlife species occur in specialized habitats, such as riparian, wetlands, marshes, ponds, and other aquatic habitats (e.g., California red-legged frog, California clapper rail, California black rail, San Francisco garter snake, western pond turtle, etc.), as well as coastal scrub (e.g., manzanita, San Francisco Bay spineflower, blue gilia, Stage's dufourine bee, etc.), grasslands (e.g., Crystal Springs lessingia, San Francisco owl's-clover, etc.), and forests (e.g., Townsend's big-eared bat, hoary bat).

The proposed project site is entirely surrounded by other industrial and commercial developments similar to that of the proposed project. Colma Creek is adjacent to the site to the north; however, the project would not include any disturbance of the creek. The project site itself is surrounded by a chain link fence and the project would not include any development outside the boundary of the fence. The proposed project site is highly disturbed and has been previously developed.

The proposed project site does not contain and is not considered, associated with, or located within the vicinity of any riparian habitat, wetlands, or other sensitive natural communities. The absence of suitable habitat and the highly disturbed and urbanized nature of the site and surrounding area would eliminate the potential for any of the special-status species to occur on site. Accordingly, the species identified by the CNDDDB search to potentially occur in the area would not be present at the project site and would not be affected by implementation of the proposed project.

Although the proposed project site is highly disturbed and lacks essential habitat for special-status plants and wildlife species, a remote possibility remains that protected migratory birds in the vicinity could establish nests in trees near the boundary of the site prior to initiation of construction. If new nests are established, construction could result in inadvertent loss of nesting birds unless adequate protective measures are taken. Migratory bird species are protected by the federal Migratory Bird Treaty Act. Should any of the migratory bird species be found nesting in the on-site trees during construction activities, the proposed project could result in a *potentially significant* impact associated with a substantial adverse effect on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service (USFWS).

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

IV-1 Within 14 days prior to commencing construction work during the avian nesting season (March 1 to September 1), a qualified biologist shall conduct a preconstruction nesting bird survey within the site boundaries and the vegetated area between the site's northerly boundary and Colma Creek (If construction work would not occur during the nesting season, a nesting survey is not required). If special-status birds are not identified nesting within the area of effect, further mitigation is not required. If special-status birds are identified nesting within the area of effect, a 75-foot no-disturbance buffer

around the nest(s) shall be staked with orange construction fencing. Construction or earth-moving activities shall be restricted within the identified buffer until the determination is made by a qualified biologist that the young have fledged (i.e., left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by June 15th; however, the date may be later and would have to be determined by a qualified ornithologist. The preconstruction nesting bird survey shall be submitted for review and approval by the City of South San Francisco Planning Division.

- b,c. Wetlands or seasonal wetlands generally denote areas where the soil is seasonally saturated and/or inundated by fresh water for a significant portion of the wet season, and then seasonally dry during the dry season. To be classified as "wetland," the duration of saturation and/or inundation must be long enough to cause the soils and vegetation to become altered and adapted to the wetland conditions. The proposed project site is currently an unused surface parking lot, surrounded by existing development in an urban area. Water features are not located on the project site and the site is not within a floodplain or normally subjected to flooding. As such, wetlands, seasonal wetlands, or vernal pools do not exist on the project site. Similarly, riparian habitat does not exist on the project site or in the vicinity, and the project would not involve removal of any riparian vegetation or sensitive native vegetation. In addition, local or regional sensitive habitat types or natural communities regulated by the CDFW or USFWS are not present or associated with the project footprint.

Colma Creek is located approximately 30 feet north of the project site; however, the project site is entirely enclosed by a chain link fence and the project would not include any disturbance of, or near, Colma Creek.

Consequently, the proposed project would not have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act, riparian habitat, or any other sensitive natural community. Therefore, impacts related to riparian habitat, wetlands, or other sensitive natural communities would be *less than significant*.

- d. As discussed above, the project site is a paved surface parking lot and is located in a currently developed area. Resident or migratory wildlife corridors, or wildlife nursery sites, do not exist on the project site or the immediate vicinity. Therefore, the project would not interfere with the movement of any resident or migratory fish or wildlife species, and impacts would be *less than significant*.
- e. According to the City's Tree Preservation Ordinance, the preservation of trees is essential to the health, welfare and quality of life of the citizens of the City because these trees preserve the scenic beauty of the City, maintain ecological balance, prevent erosion of top soil, counteract air pollution and oxygenate the air, absorb noise, maintain climatic and microclimatic balance, help block wind, and provide shade and color. The Ordinance provides standards and requirements for the protection of certain large trees and trees with unique characteristics, as well as for planting and maintenance of trees for new

development. The Ordinance also establishes recommended standards for planting and maintaining trees on property that is already developed.

Trees are not located on the project site. A single tree is located just outside of the project's northern boundary – this tree would be avoided during striping and sealing of the existing surface parking lot. With retention of this existing tree along the site's northern border, the project would not conflict with the applicable Tree Preservation Ordinance, and impacts would be considered *less than significant*.

- f. The San Bruno Mountain Habitat Conservation Plan (HCP) was prepared for the County of San Mateo in 1982 and was authorized by the U.S. Fish and Wildlife Service (USFWS) in 1983. According to the General Plan EIR, the City of South San Francisco contains two areas specifically set aside as habitat for the conservation of threatened and endangered species – San Bruno Mountain and the portion of Sign Hill currently classified as a City park – which are subject to the San Bruno Mountain HCP. The proposed project site is not within the planning area for the San Bruno Mountain HCP. The City itself does not have an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan. Therefore, *no impact* would occur related to a conflict with such a plan.

V. CULTURAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. The term cultural resources encompasses archaeological, traditional, and “built environment” resources, including, but not necessarily limited to, buildings, structures, objects, districts, and sites (generally 45 years old or older). An historic resource is a structure, site, or feature that is representative of a historic period or building type, but is not of landmark quality. Historic and cultural resources in South San Francisco are protected through the process of local designation and subsequent oversight by the Historic Preservation Commission. In addition to Sign Hill, the City's only national historic landmark, South San Francisco's designated resources include several residential and commercial buildings in the Downtown area.

According to the General Plan EIR, the proposed project site is not located within the vicinity of any identified historic resources. In addition, the project site is currently vacant and does not contain any historical resources. Therefore, implementation of the proposed project would result in a *less-than-significant* impact related to historical resources as defined in Section 15064.5.

- b-d. According to the City’s General Plan EIR, consistent with the City of South San Francisco’s history as an Ohlone settlement location, the City has Native American village sites and shell mounds scattered around the City. Known resources include the following:

- A Native American archaeological village (CA-SMA-299) located within the El Camino Real Corridor Redevelopment Area that contains household items, projectile points, dietary debris, and human burials.
- A large shell mound (CA-SMA-40) and one small shell midden (CA-SMA-40) near the south slope of San Bruno Mountain. The shell mound is considered a significant archaeological resource.

The City's coastal location, and its rich history as a center of industry, makes the existence of additional prehistoric and historic archaeological resources possible. CEQA requires the evaluation of any archaeological resource on the site of a development project and provides for the protection of archaeological resources. City involvement in the identification, mitigation, and monitoring of project impacts on these resources ensures the protection of South San Francisco's cultural heritage. Policy 7.5-I-4 of the General Plan requires that the City ensure the protection of known archaeological resources in the City by requiring a records review for any development proposed areas of known resources and Policy 7.5-I-5 requires for development projects the preparation of a resource mitigation plan and monitoring program by a qualified archaeologist in the event that archaeological resources are uncovered.

The project site has already been disturbed and is an existing paved surface parking lot. Minimal ground disturbance would occur on-site during construction. Trenching for lighting conduit would only extend to a depth of approximately 24 inches. Therefore, for the above-stated reasons, it is unlikely that previously unknown archaeological resources would be identified on-site during construction. However, the City's General Plan EIR states that a high possibility exists for the City to contain Native American resources due to the City's location near the San Francisco Bay. Consequently, the possibility still exists that during construction activities, unidentified archaeological resources, paleontological resources, or human remains may be uncovered, which could result in a *potentially significant* impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

- V-1 *Prior to the issuance of a grading permit or building permit, project plans shall include a requirement (via notation) indicating that if historic and/or cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the applicant shall retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken. All fees associated with the services of the qualified archaeologist shall be paid by the project applicant.*
- V-2 *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the San Mateo County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant.*

The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place in the immediate vicinity of the find, which shall be identified by the qualified archaeologist, until the identified appropriate actions have been implemented. All fees associated with the services of the qualified archaeologist shall be paid by the project applicant.

- e. Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. A Sacred Lands File search, performed by the Native American Heritage Commission (NAHC) for the immediate project area on April 22, 2016, failed to indicate the presence of Native American cultural resources in the immediate project area. In addition, the City has not received requests from tribes for formal notification of projects in the City of South San Francisco, with which the tribe(s) must be traditionally or culturally affiliated, pursuant to Public Resources Code Section 21080.3.1. In the absence of information regarding tribal cultural resources provided by California Native American tribes, the City has relied on the negative results of the NAHC Sacred Lands file search, and the existing disturbed, developed environment of the project site, to conclude that the project is expected to have a ***less-than-significant*** impact to tribal cultural resources.

VI. GEOLOGY AND SOILS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Expose people or structures to 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 based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a.i-a.iii. The San Francisco Bay area is one of the most seismically active areas in the country. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities 2007 estimates a 63 percent chance of at least one magnitude 6.7 or greater earthquake occurring in the Bay Area region between 2007 and 2036. As seen with the damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south of San Francisco, significant damage can occur at considerable distances. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The nearest State-considered active fault to the site is the San Andreas Fault, which is located approximately three miles from the site.

While the project site is located within a seismically-sensitive area, the site has been previously developed and the proposed project, which consists of striping and sealing the existing paved lot, as well as installation of lighting and landscaping, would not include any development or construction of structures on the site. In addition, while people may be located on the project, when moving rental vehicles to/from the adjacent rental facility, these employees would only temporarily be located on the project site. Because the project would not expose people or structures to potential substantial adverse effects associated with fault rupture or strong seismic ground shaking, impacts would be considered *less than significant*.

- aiv. The proposed project site has been previously developed and is surrounded by existing development. In addition, the project site is relatively flat. Therefore, *no impact* related to exposure of people or structures to potential substantial adverse effects associated with landslides would occur.

- b. Implementation of the proposed project would result in ground disturbance on very few areas of the site for trenching and landscaping purposes. A total of 1,805 sf would be disturbed as a result of the project. Land on the site is flat and would have a slight potential for soil erosion. During the early stages of construction activities, topsoil would be exposed due to removal of a portion of the existing pavement near the southern boundary of the site, and prior to installing landscaping on this portion of the site, the potential exists for wind and water erosion to occur, which could adversely affect project site soils. However, per Section 14.04.180 Reduction of Pollutants in Stormwater, of the City's Municipal Code, all construction sites in the City must implement year-round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-stormwater management through all phases of construction until the site is stabilized by landscaping or the installation of permanent erosion control measures. In addition, the project would be required to implement the San Mateo Countywide Water Pollution Prevention Program's construction Best Management Practices (BMPs), including temporary erosion controls to stabilize all denuded areas until permanent erosion controls are established.

After construction is completed, installation of landscaping along the southern boundary of the site would preclude future erosion on the otherwise completely paved site. Therefore, overall, impacts related to soil erosion or loss of topsoil would be considered *less than significant*.

- c-d. As discussed above, according to the General Plan EIR, soils in the flat, lowland eastern portions of the City, which are composed largely of Bay mud overlain with fill, have high shrink-swell potential, high water table, and low strength. These soil conditions amplify earthquake waves and groundshaking, and are subject to liquefaction. In addition, as mentioned above, the project site is located within an area of variable liquefaction. The project site is not, however, located in the area comprised by Bay mud overlain with fill; the site is entirely composed of artificial fill soils. In addition, the project site has been previously developed and is currently paved.

With respect to expansive soils, these soils could damage foundations of aboveground structures, paved roads and streets, and concrete slabs. Expansion and contraction of soils, depending on the season and the amount of surface water infiltration, could exert enough pressure on structures to result in cracking, settlement, and uplift.

The project site was mapped using the Natural Resources Conservation Service (NRCS) Web Soil Survey. The Web Soil Survey map for the project site indicates that the entirety of the project site is composed of Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes. Orthents soil is characterized as well-drained, silty clay, which could potentially have expansive properties.

While the project site is located within an area subject to liquefaction and expansive soils, the site currently consists of a paved parking lot, and the proposed lot does not appear to have damage resulting from these geotechnical hazards. The proposed project would result in the continued use of the site as a parking lot, and no structures would be introduced onto the project site that could be subject to damage from liquefaction or expansive soils. In addition, while people may temporarily be located on the project, when moving rental vehicles to/from the adjacent rental facility, these employees would only be located on the project site for short periods of time. Therefore, the project would result in a *less-than-significant* impact associated with liquefaction.

- e. The project site is a vacant, paved lot and, upon implementation of the project, the site would remain a paved lot used for parking. The site would not require any connection to the City's sewer system. Septic tanks or alternative wastewater disposal systems are not proposed for the project and would not be required. Therefore, *no impact* would occur from soils incapable of adequately supporting the use of septic tanks.

VII. GREENHOUSE GAS EMISSIONS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,b. Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project’s GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

The proposed project would involve restriping and seal coating an existing parking lot to allow for additional on-site vehicle storage. Some other minor improvements would also occur with implementation of the project, including the removal of 1,805 sf of existing pavement, which would be replaced with landscaping, and trenching and installing 11 additional parking lot lights. According to the Transportation Assessment prepared for the proposed project, with the addition of on-site vehicle parking stalls, specifically an increase of a maximum of 200 vehicle stalls for temporary staging of vehicles, the project would be expected to increase the vehicle trips associated with the site. Implementation of the proposed project would cumulatively contribute to increases of GHG emissions.

Estimated GHG emissions attributable to future development is primarily associated with increases of carbon dioxide (CO₂) and, to a lesser extent, other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the proposed project would be from mobile sources.

The City has adopted a Climate Action Plan (CAP) that identifies strategies and actions to reduce GHG emissions. The City has and continues to implement GHG reduction measures, including, but not limited to, the installation of solar facilities at City buildings; requiring bioswales in private development; adopting and enforcing a construction and demolition waste recycling ordinance; adopting and implementing a TDM program; and providing electrical car charging stations at City facilities. The City actively participates

in the San Francisco International Airport noise insulation program which also reduces heat loss and associated GHG emissions in older buildings. The City also spearheads educational programs to reduce GHG emissions. Through conditions of approval, development projects are required to implement a variety of GHG reduction measures. To ensure that development within the City is consistent with the CAP, as well as to aid in streamlining the CEQA process, the City has prepared a Development Review Checklist for two separate project types: additions, alterations, and tenant improvements; and new development.

Table 4 provides a discussion regarding the proposed project’s consistency with the City’s Development Review Checklist, which is included as Appendix E to the CAP. The proposed project would not be considered new development; thus, the Development Review Checklist for additions, alterations, and tenant improvements was used.

Table 4				
City CAP Project Consistency Checklist				
Measure	Yes	No	N/A	Discussion
Does the project provide bicycle facilities, bicycle lanes, or other facilities?			X	The project will not result in the demand for bicycle facilities.
Will the project provide a bike share program for employees or residents?			X	The project would not generate new employees or residents.
Will there be a commute shuttle or public transit stop within 500 feet?	X			Shuttle access to and from the western parcels adjacent to the project site will be provided at buildout of the western parcels.
Is the project subject to a Transportation Demand Management (TDM) program?		X		While the project generates more than 100 daily trips, the City has determined that a TDM program is not required for the project due to very low employee counts.
Will the project provide incentives for commuters?		X		The project would not generate new commuters to the area.
Is the project subject to a traffic impact fee?			X	
How will the net number of parking spaces change on-site?	-	-	-	The project site is already a surface parking lot, though it is not currently in use. The project would include restriping of the site to demarcate a maximum of 200 parking spaces on-site.
Is the project located within a specific plan area, station area, or Priority Development Area?		X		
Will this project provide any alternative-fuel stations?		X		

Table 4				
City CAP Project Consistency Checklist				
Measure	Yes	No	N/A	Discussion
Will the project have any pre-wiring or conduits to accommodate renewable energy facilities or electric vehicle charging stations in the future?		X		
Will project construction activities implement best management practices, such as the BAAQMD's recommended construction mitigations identified in the BAAQMD CEQA Guidelines?	X			As discussed in detail in Section III, Air Quality, of this IS/MND, the proposed project would comply with all applicable BAAQMD rules, regulations, and Basic Construction Mitigation Measures.
Is the building more than 30 years old?			X	The project would not include any buildings.
Will certification of the building be sought under LEED or another green building criteria?			X	The project would not include any buildings.
Will the project be built to CALGreen Tier 1 energy efficiency standards?			X	The project would not include any buildings.
Does the project include any energy-efficient improvements (e.g., double-paned windows, increased insulation, weatherization)?			X	The project would not include any buildings.
Does the project include any upgrades of appliances to more energy efficient models?			X	The project would not include any buildings or appliances.
Will mechanical equipment (e.g., HVAC equipment, boilers, water heaters) be upgraded to more energy efficient models?			X	The project would not include any buildings or mechanical equipment.
Will roofs or surface paving be replaced with high-reflectivity ("cool") surfaces?			X	See above. Project would not involve repaving. However, the project would include replacement of a portion of the existing pavement with landscaping.
How will the net number of trees change on-site?	-	-	-	The project would not involve removal of any existing trees. The project includes removal of a small portion of existing pavement, which would be replaced with landscaping.
Will any renewable energy system be installed as part of this project?		X		The project would not include any buildings.
Is the project a new conversion of unconditioned space 5,000 square feet		X		The project would not include any buildings.

Table 4				
City CAP Project Consistency Checklist				
Measure	Yes	No	N/A	Discussion
or more?				
Is there a plan for construction and demolition waste recycling?	X			The project would be required to comply with the current California Green Building Standards Code, which requires the diversion of 50 percent of construction waste from landfills.
Will there be composting on-site?			X	The project would not include any buildings and would not directly result in the introduction of any new employees at the site. Thus, the project would not generate any solid waste.
Will any water fixtures be replaced with more efficient fixtures?			X	The project would not include any buildings.
Will there be any effort to educate occupants and tenants about water conservation?			X	The project would not involve any new occupants or tenants.
Does the project incorporate low-impact development (LID) practices?			X	The project is exempt from C.3 stormwater infiltration requirements.
Will any xeriscaping be installed?	X			The project includes planting water efficient landscaping along the southern boundary.
Will captured rainwater or graywater be used for irrigation?		X		

Because the proposed project would not include any buildings and consists of restriping and seal coating an existing parking lot, along with some other minor improvements, the majority of the measures identified in the City’s Development Review Checklist are not directly applicable to the proposed project. Based on the discussions presented in Table 4, the proposed project would be expected to be consistent with the applicable measures of the City’s CAP.

In addition to the City’s CAP requirements, the BAAQMD has developed thresholds of significance associated with development projects for GHG emissions of 1,100 metric tons per year carbon dioxide equivalent units (MTCO_{2e}/yr). If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with applicable GHG regulations. For informational purposes, the proposed project’s GHG emissions were quantified using CalEEMod using the same assumptions as presented in Section III, Air Quality, of this IS/MND and compared to the 1,100 MTCO_{2e}/yr threshold of significance.

According to the CalEEMod results, the proposed project would result in operational GHG emissions of 20.56 MTCO_{2e}/yr, which is well below the 1,100 MTCO_{2e}/yr threshold of significance. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD has an adopted a threshold of significance for construction-related GHG emissions. However, even if the proposed project's total construction GHG emissions of 15.43 MTCO_{2e}/yr are included with the annual operational GHG emissions, the resultant total GHG emissions of 35.99 MTCO_{2e}/yr would still be well below the 1,100 MTCO_{2e}/yr threshold of significance. Therefore, using the BAAQMD threshold of significance, the proposed project would not be expected to result in a significant impact related to GHG emissions.

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and impacts would be considered *less than significant*.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,b. Known hazardous materials are not present on the proposed project site. In addition, the project would not involve any modifications to the existing land uses. During construction, hazards from construction activities (e.g., use of heavy machinery, storage of fuel for machinery, potential dust emissions, etc.) could cause a temporary impact to the public or the environment. However, all construction activities would be required to follow protocol, including compliance with applicable policies, standards, and regulations in order to ensure a less-than-significant impact.

Therefore, because the proposed project would not create a significant hazard to the public or the environment through the routine use, disposal, transport, or accidental release of hazardous materials, impacts would be considered *less than significant*.

- c. As stated above, the proposed project would not involve the routine transport, use, or disposal of hazardous materials. In addition, the nearest existing or proposed school facility is All Souls Catholic School, which is over 0.75-mile from the project site. Therefore, the proposed project would result in a *less-than-significant* impact associated with hazardous emissions or handling of hazardous materials within one-quarter mile of an existing or proposed school.
- d. The proposed project site has been previously developed and is surrounded by existing industrial and commercial land uses. The project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, *no impact* would result from implementation of the proposed project.
- e. The nearest airport is the San Francisco International Airport (SFO), which is located approximately 1.5 miles east of the project site, on the opposite side of Highway 101. The City of South San Francisco is within the San Mateo County Comprehensive Airport Land Use Plan (CALUP) boundary. The project site is located outside of the five safety compatibility zones identified in the CALUP. Because of this, and the fact that the proposed project includes striping and sealing for parking and installation of lighting and landscaping, the project would not result in a safety hazard for people residing or working in the project area, and the impact would be *less than significant*.
- f. The proposed project is not within the vicinity of a private airstrip. Thus, the proposed project would not result in a safety hazard for people residing or working in the project area, and *no impact* would occur.
- g. The project involves the storage/temporary staging of rental vehicles for the Payless Vehicle car rental business. While the proposed project would indirectly support additional traffic trips as vehicles come to/from the rental facility and are temporarily staged on the subject parking lot, these vehicle trips would not be expected to interfere with an adopted emergency response plan. San Mateo Avenue would not be altered or obstructed as part of this project. Because the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, impacts would be considered *less than significant*.
- h. The proposed project is located in a commercial and industrial area that is highly disturbed. The project site and surrounding areas are regularly maintained and are not considered “wildlands” where wildland fires are a risk to structures. According to Figure 4.8-1, Fire Hazard Management Units, in the City’s General Plan EIR, the project site is not located within an area that needs vegetation management or other measures to reduce wildland fire risk and increase the potential for successful fire suppression. The proposed project is required to comply with the City’s General Plan policies and procedures pertaining to reduction of fire hazards, as well as California State Public Resource Codes

4290 and 4291 that require management along roadsides. In addition, the project would not include the construction of any structures on-site. Therefore, because the risk of on-site structures being subject to wildland fires is negligible and the project would be required to comply with applicable policies and regulations, impacts related to exposure of people or structures to the risk of loss, injury, or death involving wildland fires would be considered *less than significant*.

IX. HYDROLOGY AND WATER QUALITY.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a,e-f. The Federal Clean Water Act prohibits the discharge of pollutants to navigable waters from point and non-point sources unless authorized by a NPDES permit. Point source discharges generally pertain to discharges from wastewater treatment facilities or other identifiable dischargers. Non-point discharges generally pertain to areawide or stormwater discharges. In California, NPDES permits are issued and enforced by the

Regional Water Quality Control Boards. The City of South San Francisco is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The City has NPDES permit coverage from the RWQCB.

On March 10, 2003, the State Water Resources Control Board began regulating all stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. Performance Standard NDCC-13 of the City's NPDES permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The project would disturb less than one acre of land and an NPDES General Construction Permit would not be required; however, as discussed in the Geology and Soils section of this IS/MND, the project would be required to implement erosion Best Management Practices (BMPs) during construction.

In addition, San Mateo County was required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. All municipalities within the County have to require post-construction stormwater controls as part of their obligations under Provision C.3 of the Municipal Regional Stormwater Permit (MRP). This is a National Pollutant Discharge Elimination System (NPDES) permit issued by the San Francisco Bay Regional Water Quality Control Board (Water Board), allowing municipal stormwater systems to discharge to local creeks, San Francisco Bay, and other water bodies.

The project is not subject to C.3. stormwater infiltration requirements for the following reasons. Overall, the project would disturb 1,294 sf of the site surface for landscaping installation purposes, and an additional 511 sf for the purposes of trenching for lighting installation. In total, the project would result in disturbance of 1,805 sf of land. The San Mateo C.3. Stormwater Technical Guidance identifies the following applicable threshold for C.3. regulated projects: uncovered parking lots (stand-alone or part of another use) that create and/or replace 5,000 square feet or more of impervious surface. The proposed project does not trigger this threshold.

The proposed commercial parking lot use does not involve any operations typically associated with the generation or discharge of polluted water. Thus, typical operations on the project site would not violate any water quality standards or waste discharge requirements, nor degrade water quality. No washing of vehicles or refueling will occur on the project site. These activities will be conducted on the two westerly parcels, which are not the subject of this IS/MND.

Because the proposed project would comply with all applicable regulations and would not involve uses associated with the generation or discharge of polluted water, the proposed project would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality, and the project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, impacts would be considered *less than significant*.

- b. The project site is vacant and has been previously paved. The proposed project would not include any need for an increase in water use at the site. In addition, because the project would result in removal of a portion of the pavement along the southern boundary of the site and the subsequent introduction of landscaping to that portion, the project would result in a reduction in impervious surfaces on the site, as compared to existing conditions. Thus, the proposed project would allow for a greater potential area for groundwater recharge than what currently exists on the site. Therefore, overall, implementation of the proposed project would not interfere substantially with groundwater recharge. Because the project would not substantially deplete groundwater supplies or interfere with groundwater recharge, the project's impact would be considered *less than significant*.
- c,d. The proposed project site is currently a vacant, paved lot that is surrounded by existing commercial and industrial development in an urban, developed area. The project would result in the continued use of the site as a parking lot and would slightly reduce the amount of impervious surface area on the project site due to the introduction of landscaping along the site's southern boundary. Implementation of the proposed project would consist of striping and sealing for parking spaces, trenching and installation of lighting, and installation of landscaping, none of which would result in any alteration to the existing drainage patterns on the site. Therefore, the project would have *no impact* related to substantially altering the existing drainage pattern of the site or area such that substantial erosion/siltation or flooding would occur on- or off-site.
- g. The proposed project consists of striping and sealing a parking area, trenching for and installing parking lot lighting, and placing landscaping along a portion of the southern site boundary. Therefore, the proposed project would not place any housing within a 100-year floodplain, and *no impact* would occur.
- h,i. The project site is located within a Federal Emergency Management Agency (FEMA) flood hazard Zone X (shaded), according to the FEMA Flood Insurance Rate Map for the project site.⁴ Zone X (shaded) is defined as an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. However, the project site has been previously paved, is relatively flat, and is surrounded by existing development in an industrial and commercial area. The proposed project would not include the construction of any structures on-site. In addition, according to Figure 4.7-1, Draft General Plan Policies for Flood Protection, of the City's General Plan EIR, the project site is not located within the 100-year floodplain. Accordingly, implementation of the proposed project would not result in an increase in risks associated with placing structures within a 100-year floodplain.

In conclusion, the proposed project would not place a structure within a 100-year floodplain that would impede or redirect flood flows, and would not expose people or structures to risks involving flooding, including flooding as a result of the failure of a levee or dam. Therefore, impacts related to flooding would be considered *less than significant*.

⁴Federal Emergency Management Agency. *Flood Insurance Rate Map Number 06081C0043E*. October 16, 2012.

- j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines. When tsunamis reach the shoreline, high swells of water break and wash inland with great force. A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, with destructive capacity that is not as great as that of a tsunami.

The City of South San Francisco is located approximately five miles east of the Pacific Ocean, separated by mountainous terrain, and approximately one mile west of the San Francisco Bay. According to the General Plan, earthquakes could cause tsunamis or seiches in the San Francisco Bay and, as portions of the City are located adjacent to the Bay and are low-lying, tsunami or seiche inundation is a possibility. Wave run-up is estimated at approximately 4.3 feet (msl) for tsunami with a 100-year recurrence and 6.0 feet (msl) for a 500-year tsunami. The project site is 13 feet above msl; therefore, the project site would be outside the runup zone subject to inundation by a 500-year tsunami and outside the any potential tsunami hazard zone. As such, the proposed project would not be expected to be exposed to flooding risks associated with seiches or tsunamis.

Mudflows typically occur in mountainous or hilly terrain, and the project site and surrounding area is relatively flat. Thus, the likelihood for danger from mudflows would be low at the site.

Because the proposed project would not be threatened by seiches, tsunamis, or mudflows, a *less-than-significant* impact from such phenomena would result.

X. LAND USE AND PLANNING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a. The proposed project site is currently developed with a surface parking lot and is surrounded by existing development. Therefore, the project would not physically divide an established community and *no impact* would occur.
- b. According to the land use map for the Lindenville Planning Sub-Area of the SSF General Plan, the proposed project site is designated Community Commercial (CC), with an accompanying “Regional Commercial” designation. According to the General Plan, regional commercial areas are reserved for region-serving commercial uses. However, the proposed use of the site as a rental car storage/staging area is consistent with the overall range of uses allowed by the broader CC GP designation. For example, the CC land use designation includes retail and department stores, eating and drinking establishments, commercial recreation, service stations, automobile sales and repair services, financial, business and personal services, motels, educational and social services are permitted. Therefore, because the project site would serve as a parking lot for a commercial rental car company, the project would be consistent with the project site’s current General Plan land use designation. In addition, the proposed project site is currently surrounded by existing industrial and commercial development, including auto body, other auto services, and long-term parking lot uses.

The proposed project site is currently zoned Freeway Commercial (FC) and automobile/vehicle rental uses are not permitted under the FC zoning designation; therefore, the project applicant is seeking approval of a rezone of the project parcels to MI to allow vehicle rental uses on the site, and to establish consistency with the current MI zoning designation for the parcels immediately adjacent to the west.

Because the proposed project would be consistent with the current General Plan land use designation for the site and because the proposed rezone of the project site to MI would result in consistency with existing surrounding land uses, including the parcels immediately to the west, the project’s overall impact related to a conflict with applicable

land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect would be *less than significant*.

- c. The San Bruno Mountain HCP was prepared for the County of San Mateo in 1982 and was authorized by the U.S. Fish and Wildlife Service (USFWS) in 1983. According to the General Plan EIR, the City of South San Francisco contains two areas specifically set aside as habitat for the conservation of threatened and endangered species – San Bruno Mountain and the portion of Sign Hill currently classified as a City park – which are subject to the San Bruno Mountain HCP. The proposed project site is not within the planning area for the San Bruno Mountain HCP. The City itself does not have an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan. Therefore, *no impact* would occur related to a conflict with such a plan.

XI. MINERAL RESOURCES.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

a,b. The proposed project site has not been delineated as a locally important mineral recovery site within the General Plan or on any other land use plan. Mineral resources of value to the region have been not identified at the project site. In addition, the project site has been previously developed and is surrounded by other existing developments. Therefore, ***no impact*** to mineral resources would occur as a result of the proposed project.

XII. NOISE.

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a,c. The proposed project would include striping and sealing the vacant project site to create parking spaces, trenching and installation of lighting, and installation of landscaping. The project would not result in a change to the existing uses on the site and the site is surrounded by existing commercial and industrial land uses. The site does not currently contain any noise-producing uses. In addition, the nearest sensitive receptors to the proposed project would be located to the north approximately 1,500 feet from the project site. Therefore, the proposed project would not expose persons to or generate noise levels in excess of established standards or cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Therefore, a ***less-than-significant*** impact would result.

b. The primary vibration-generating activities associated with the project would occur during trenching for lighting and during striping and sealing of the project site. The types of vibration impact include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 5 shows the typical vibration levels produced by construction equipment.

Type of Equipment	Peak Particle Velocity (ppv) @ 25 feet (inches/second)	Approximate Velocity Level @ 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Small Bulldozer	0.003	58
Auger/Drill Rigs	0.089	87
Jackhammer	0.035	79
Vibratory Hammer	0.070	85
Vibratory Compactor/Roller	0.210	94

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

The Table 5 data indicates that construction vibration levels, with the exception of the vibratory compactor/roller, are less than the 0.2 in/sec ppv threshold of damage⁵ to buildings at distances of 25 feet. With respect to vibratory equipment, implementation of the project would only involve the use of jackhammers to break up pavement and, per Table 3, at a 25-foot distance jackhammers would generate 0.035 ppv. The nearest structures are over 25 feet from the project site; therefore, vibration would be less than 0.2 in/sec.

Based upon the information in Table 5 and the Caltrans Technical Advisory, vibrations are not predicted to exceed safe thresholds at any adjacent sensitive receptors. Construction of the project would not require the use of pile driving. Additionally, the risk of annoyance due to construction vibrations is very low considering the distance to the nearest receptors. Therefore, this impact is considered *less than significant*.

- d. Construction activities associated with the proposed project would result in temporary increase in noise levels from limited pavement removal, parking lot striping and sealing, and trenching for lighting conduit.

All construction would be conducted in accordance with Title 8, Section 8.32.050(d) of the City's Municipal Code. Section 8.32.050(d) indicates that construction, alteration, repair or landscape maintenance activities which are authorized by a valid City permit shall be allowed on weekdays between the hours of 8 AM and 8 PM, on Saturdays between the hours of 9 AM and 8 PM, and on Sundays and holidays between the hours of 10 AM and 6 PM, or at such other hours as may be authorized by the permit, if they meet at least one of the following noise limitations:

- (1) No individual piece of equipment shall produce a noise level exceeding ninety dB at a distance of twenty-five feet. If the device is housed within a structure or trailer on the property, the measurement shall be made outside

⁵ California Department of Transportation. *Transportation Related Earthborne Vibrations* [pg.11]. February 20, 2002.

the structure at a distance as close to 25 feet from the equipment as possible.

- (2) The noise level at any point outside of the property plane of the project shall not exceed ninety dB.

The Building Division enforces and monitors the construction noise regulations. Construction-related impacts would be short-term in nature and would be reduced to a *less-than-significant* level through adherence to the Municipal Code regulations regarding the days and hours of construction activity.

- e. The San Francisco International Airport (SFO) is located approximately 1.5 miles east of the project site, on the opposite side of Highway 101. According to the City's General Plan EIR, aircraft departures from SFO are the primary source of transportation noise in the City. Figure 4.5-2, Aircraft Noise and Noise Insulation Program Area, of the City's General Plan EIR indicates that the project site is located just outside the 65 dB aircraft noise exposure contour. The San Mateo County CALUP establishes noise/land use compatibility standards, which specify the compatible noise standard for commercial land uses to be less than 70 dB. Because the proposed project would not be subjected to aircraft noise above 65 dB, which is less than the 70 dB compatibility standards, and the project would not introduce any residents or employees to the area, the project would not expose people residing or working in the project area to excessive noise levels associated with the nearby airport. Therefore, a *less-than-significant* impact would occur.
- f. The proposed project site is not located within the vicinity of a private airstrip. Thus, the proposed project would not result in a safety hazard for people residing or working in the project area, and *no impact* would occur.

XIII. POPULATION AND HOUSING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a. The one-acre project site is currently vacant. The proposed project would consist of striping and sealing the lot for rental car parking, as well as installing lighting and landscaping. As such, the project would not directly induce population growth in the developed area. In addition, the project would not include any employment-generating uses. Furthermore, the project would not indirectly induce population growth because road extensions or added infrastructure would not occur in previously undeveloped areas. Thus, development of the proposed project would result in **no impact** related to inducing substantial population growth either directly or indirectly.
- b,c. The one-acre project site is vacant land unoccupied and located within an industrial/commercial area of South San Francisco. Given the vacant state of the site and industrially-developed character of the site’s immediate vicinity, the project would have **no impact** related to the displacement of substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere.

XIV. PUBLIC SERVICES.

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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a,b. The proposed project site is located within the jurisdiction of the South San Francisco Fire Department (SSFFD), which provides fire protection services and emergency medical services within the City and to areas within the County. The 92 employees of the SSFFD operate out of five stations within the City of South San Francisco. The nearest fire station is Fire Station 62 located at 249 Harbor Way, which is approximately 0.5-mile east of the project site.

The South San Francisco Police Department (SSFPD) provides law enforcement services to the project site. The SSFPD serves a population of over 60,000 residents and is allotted 83 sworn and 35 civilian positions. The SSFPD is divided into two Divisions – Operations and Services – each commanded by a Captain. The SSFPD is located at 33 Arroyo Drive, which is approximately 1.5 miles northwest of the project site.

The proposed project site would store cars for the proximate car rental facility. In order to deter theft, the chain link fencing around the project site would remain. Therefore, the increase in police services demand associated with the project would be expected to be minimal. In addition, the project would not result in the construction of any flammable structures on the project site. Therefore, the project would not result in any increase in demand for police and fire protection services or the need for new or physically altered fire or police service facilities and a *less-than-significant* impact would occur.

c. Because the proposed project would consist of striping and sealing for parking spaces, trenching and installation of lighting, and installation of landscaping, the project would not directly or indirectly induce population growth in the City. Accordingly, implementation of the proposed project would not increase the number of students within the City or the demand for school services. Therefore, the proposed project would result in *no impact* associated with the provision of school facilities or services.

d,e. As the proposed project would consist of striping and sealing for parking spaces, trenching and installation of lighting, and installation of landscaping, the project would

not directly or indirectly induce population growth in the City. Accordingly, implementation of the proposed project would not increase the demand for parks or other public facilities or services; and the project would result in *no impact*.

XV. RECREATION.

Would the project:

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a,b. As described above in the Public Services section of this IS/MND, the proposed project is a commercial rental car parking/staging area and, therefore, would not include the need for park facilities. In addition, as discussed in the Population and Housing section of this IS/MND, the project would not directly or indirectly increase population growth, and an increased demand for new, or expansion of, any existing park facilities would not occur. Therefore, the project would result in *no impact* associated with recreation.

XVI. TRANSPORTATION/TRAFFIC.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a.b. As discussed previously in this IS/MND, the proposed project is located adjacent to vacant parcels to the west (APNs 015-114-470 and 015-114-460) for which the project applicant has previously received a Minor Use Permit (15-0001) and Design Review approval (DR15-0024) from the City of South San Francisco. The parcels are zoned MI and are intended for future use as the Payless Car Rental business. Future improvements to the two western parcels will include lot striping to accommodate an anticipated 150 rental cars, a 1,850-sf modular office space, a 1,300-sf canopy cover for vehicle hand washing with water collection and reclamation system, a 5,000-gallon fuel dispensing tank, and landscape, security fences, gates and associated site works.

The aforementioned improvements are not part of the proposed project analyzed in this IS/MND. However, the transportation assessment that was prepared for the project by

Fehr & Peers⁶ analyzed traffic operations under the scenario of buildout of the western parcels (referred to as the “Arata Property” in the assessment) in addition to the proposed project. The scope of work associated with the proposed project only includes restriping the proposed project site to add a maximum of 200 vehicle stalls for temporary staging of vehicles, installing landscaping on a portion of the southern boundary of the site, and trenching and installing additional lighting.

Trip Generation

Trip generation rates are not available in the 9th Edition of the Institute of Transportation Engineers (ITE) publication *Trip Generation Manual* for car rental sites. Therefore, vehicle trip generation estimates for the western parcels and the proposed project during both AM and PM peak hours were developed using driveway counts collected from a similar Payless rental car business.

Table 6, below, shows the vehicle trip generation estimates for three scenarios – 50 percent occupancy of the western parcels (No Project), 100 percent occupancy of the western parcels (No Project) and 100 percent occupancy of the western parcels (Plus Project).

# of Vehicles Available for Rental	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
70 (Approximately 50% Occupancy) (Western Parcels)	124	5	1	6	6	5	11
150 – (Approximately 100% Occupancy) (Western Parcels)	265	10	1	11	12	10	22
350 (Approximately 100% Occupancy) (Western Parcels + Proposed Project)	619	22	2	24	27	23	50

Source: Fehr & Peers, Arata Transportation Assessment, February 3, 2015.

Existing Plus Western Parcels Plus Proposed Project Traffic Operations

Traffic operations throughout the study area were analyzed using the methodology detailed in the transportation assessment (see Appendix B). Table 7, below, shows the LOS results for both Existing Plus Western Parcels and Existing Plus Western Parcels Plus Proposed Project scenarios. Attachment A of Appendix B documents detailed existing conditions, impact criteria, and findings.

⁶Fehr & Peers. *Arata Property Transportation Assessment*. February 3, 2015.

Table 7
Existing, Existing Plus Western Parcels, and Existing Plus Western Parcels Plus Project Conditions
Intersection Operations Summary

Intersection	Control ¹	Peak Hour	Existing Conditions		Existing + 50% Occupancy (Western Parcels) (No Project)		Existing + 100% Occupancy (Western Parcels) (No Project)		Existing + 100% Occupancy (Western Parcels) + Proposed Project	
			Delay ²	LOS ²	Delay ²	LOS ²	Delay ²	LOS ²	Delay ²	LOS ²
San Mateo Ave./Airport Blvd. ³	Signal	AM	35	D	31	D	35	D	35	D
		PM	43	D	43	D	43	D	43	D
San Mateo Ave./Lowrie Ave.	SSSC	AM	<10 (EB15)	A (B)	<10 (EB15)	A (C)	<10 (EB15)	A (C)	<10 (EB15)	A (C)
		PM	<10 (EB23)	A (C)	<10 (EB23)	A (C)	<10 (EB23)	A (C)	<10 (EB24)	A (C)
San Mateo Ave./Peninsula Auto Body Driveway/Ingress Driveway	SSSC	AM	<10 (WB14)	A (B)	<10 (WB15)	A (B)	<10 (WB15)	A (B)	<10 (WB15)	A (C)
		PM	<10 (WB12)	A (B)	<10 (WB12)	A (B)	<10 (WB12)	A (B)	<10 (WB12)	A (B)
San Mateo Ave./Egress Driveway	SSSC	AM	N/A ⁴	N/A ⁴	<10 (WB13)	A (B)	<10 (WB13)	A (B)	<10 (WB12)	A (B)
		PM	N/A ⁴	N/A ⁴	<10 (WB13)	A (B)	<10 (WB12)	A (B)	<10 (WB13)	A (B)

Notes:

1. Signal = signalized intersection; SSSC = side-street stop-controlled intersection
2. Traffic operations results include LOS and delay. LOS is based on delay thresholds published in the *Highway Capacity Manual*.
3. N/A = intersection does not exist under existing conditions

Source: Fehr & Peers, Arata Property Transportation Assessment, February 3, 2015.

The significance criteria states that acceptable operations for the study intersections is LOS D (less than 55 seconds of average control delay per vehicle) or better. As shown in Table 7, below, all intersections analyzed for the western parcels, and in the vicinity of the proposed project, are projected to meet the standard under the evaluated scenarios; therefore, the buildout of the western parcels and implementation of the project itself would not have significant impacts on the study intersections.

Conclusion

As discussed above, although the proposed project would cause a slight increase in traffic in the area, the incremental increase would not result in adverse traffic impacts per the thresholds of significance used for this analysis. Therefore, the proposed project would have a *less-than-significant* impact related to causing an increase in traffic that would be substantial in relation to the existing traffic load and capacity of the street system, and the exceedance of any LOS standards.

- c. The proposed project would not directly induce population growth in the area and thus would not be expected to result in any increase in air traffic levels. As such, the project would not result in any affects to or from the nearby SFO airport. Because the project would not result in any changes to existing regional air traffic patterns or activity, *no impact* would occur.
- d. The transportation assessment includes a sight distance assessment that was conducted at the San Mateo Avenue driveways of the western parcels. Failure to meet minimum sight distances for either corner sight distance or stopping sight distance, as defined in Chapter 400 of the *Caltrans Highway Design Manual* (HDM), could warrant the installation of traffic control.

Corner sight distance signifies the line of sight maintained between the driver of a vehicle waiting at the cross road – in the case of the western parcels, the egress driveway north of Lowrie Avenue and the driver of an approaching vehicle on San Mateo Avenue. Based on a 25 mile per hour (mph) roadway, adequate sight distance would be feasible if landscaping is maintained and parking is prohibited adjacent to the exit driveway.

Stopping sight distance is the distance required by the driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object in the road becomes visible and in advance of reaching the object. The HDM defines the minimum stopping sight distance requirement as 150 feet for a roadway with a posted speed limit of 25 mph. For vehicles turning from San Mateo Avenue into the project driveway or vehicles passing the egress driveway, sight distance is estimated to be over 150 feet, thus meeting the stopping sight distance requirements. With buildout of the western parcels and adjustment of the speed limit, stopping sight distance conditions would become even greater.

The transportation assessment includes recommendations for the western parcels to ensure that sight distance impacts are less than significant with operation of the western

parcels. The recommendations include maintenance of landscaping along San Mateo Avenue, adjacent to driveways, to avoid sight distance conflicts and restriction of on-street parking on San Mateo Avenue on either side of the egress driveway (approximately 60 feet to the north and 20 feet to the south). These recommendations were included as conditions of the MUP approved for the western parcels on June 19, 2015.

The proposed project would not alter or encroach upon the site design for the western parcels, as the project consists of striping and sealing the project site, and installation of lighting and landscaping. Thus, the project itself would result in a *less-than-significant* impact.

- e. The proposed project site has been previously developed and is surrounded by existing similar developments. Modifications to the existing circulation system in the project area would not occur as a result of the proposed project. According to the transportation assessment, a fire station is located on Harbor Way, approximately 0.5-mile from the western parcels and the project site. Emergency vehicles are able to access the western parcels from the two driveways on San Mateo Avenue and, if one entrance were temporarily blocked, alternative access to the parcels would still be available. Implementation of the proposed project would not alter this access. As such, emergency access to the site and/or surrounding area would not be modified. In addition, the project design includes sufficient emergency vehicle access to the site.

Access to the western parcels would be provided by two driveways – one for egress and one for ingress – on San Mateo Avenue. The access intersections are expected to operate with minimal delay; however, the transportation assessment indicates that way-finding signs should be provided on the western parcels, directing drivers to vehicle return stalls, exit driveway, and major destinations (e.g., Highway 101). In addition, shuttle access to and from the western parcels would be provided by the two driveways off San Mateo Avenue. A shuttle bus parking stall, adjacent to the car rental building, would be provided on the western parcels to allow customers to enter and exit the building directly from the shuttle. These recommendations were included as conditions of the MUP approved for the western parcels on June 19, 2015.

The proposed project would not alter or encroach upon the site design for the western parcels, as the project consists of striping and sealing the project site, and installation of lighting and landscaping. Thus, the project itself would result in *less-than-significant* impacts related to emergency access and site circulation.

- f. The proposed project site is located less than one mile from the San Bruno Bay Area Rapid Transit (BART) station and from the South San Francisco Caltrain station. San Mateo County Transit District (SamTrans) operates 73 bus routes and paratransit service throughout San Mateo County and parts of San Francisco and Palo Alto. The closest SamTrans routes to the project site are 38 and 133, located west of the project site.

According to the transportation assessment, buildout of the western parcels and the proposed project would be expected to generate very few transit trips. The transportation assessment indicates that the transit facilities have the capacity and design to adequately accommodate additional transit trips that would be associated with the western parcels and the project site.

Pedestrian facilities are provided adjacent to the western parcels, such that pedestrians could access the parcels via a designated pedestrian walkway from San Mateo Avenue to the future car rental office. While San Mateo Avenue is a designated bicycle route, bicycle facilities are not currently planned to be provided on the western parcels.

According to the transportation assessment, buildout of the western parcels is expected to generate very few pedestrian trips, and the existing pedestrian facilities in the project area, including sidewalks, crosswalks, and pedestrian signals, have the capacity and design to adequately accommodate the additional pedestrian trips that could be generated. In addition, very few bicycle trips are expected to be generated, and Bike Route 15 on San Mateo Avenue would have the capacity and design to adequately accommodate additional bicycle trips that could be generated.

As discussed above, the proposed project would not alter or encroach upon the site design for the western parcels, as the project consists of striping and sealing the project site, and installation of lighting and landscaping. In addition, the proposed project would be consistent with General Plan goals and policies associated with alternative transportation, as well as all applicable State and local standards, including compliance with parking standards. Therefore, the proposed project would not conflict with any adopted policies supporting alternative transportation, and impacts would be *less than significant*.

XVII. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,b. Wastewater services in the vicinity of the project site are provided by the South San Francisco/San Bruno Water Quality Control Plant, which is located adjacent to the San Francisco Bay on Colma Creek. The average dry weather flow through the wastewater facility is nine million gallons per day (MGD). The proposed project consists of striping and sealing for parking spaces, trenching and installation of lighting, and installation of landscaping on the site. Existing on-site land uses would not be modified and implementation of the project would not result in the need for wastewater services to be provided to the site. Therefore, the proposed project would not generate any additional wastewater flows into the South San Francisco/San Bruno Water Quality Control Plant and ***no impact*** would occur.
- c. The proposed project would not be subject to the C.3 Standards because, as discussed in the Hydrology and Water Quality section of this IS/MND, implementation of the project would only result in disturbance of a total of 1,805 sf (or 0.04-acre) of land. In addition, the proposed project would result in a decrease in the amount of impervious surfaces on-

site due to the replacement of a portion of existing pavement on the southern boundary of the site with landscaping. The proposed project would utilize an existing catch basin to collect stormwater. The water would then be conveyed to the City's storm drain system via an existing on-site connection.

In conclusion, the proposed project would not result in the need for construction of any new storm drainage facilities and a *less-than-significant* impact would occur to existing storm drainage facilities as a result of project implementation.

- d,e. The California Water Service Company – Peninsula District (CWSC) serves the portion of the City of South San Francisco east of Interstate 280, within which the project site is located. The CWSC currently provides potable water service for the project site.

The proposed project consists of striping and sealing for parking spaces, trenching and installation of lighting, and installation of landscaping. Existing land uses on the site would not be modified; however it should be noted that implementation of the project would result in some additional landscaping on-site, the maintenance of which would require a slight increase in water provided to the site. The proposed landscaping would require minimal water for the purposes of upkeep.

The General Plan EIR determined that new development and intensification allowed under the Draft General Plan will result in an increased demand for public water. Water demand projections for the City by the California Water Service Company for the year 2020 range from 5.9 million gallons per day to 9.1 MGD. Assuming the SFWD contract allocation is not modified during the remaining contract period, the CWSC has adequate supply to meet even the highest projected demand. Draft General Plan policies and implementation programs provide the framework for the continued provision of an adequate supply of high quality water to existing and proposed development within the City.

The proposed project is consistent with the project site's General Plan land use designation. The General Plan EIR indicates that impacts related to water facilities supply at buildout of the General Plan would be less-than-significant with implementation of General Plan goals and policies; therefore, the proposed project's impacts related to water facilities and supply would be considered *less than significant*.

- f,g. According to the City's General Plan EIR, disposal and treatment of solid and hazardous waste is overseen by San Mateo County. Solid waste is collected from South San Francisco homes and businesses and then processed at the Scavenger Company's materials recovery facility and transfer station. Materials that cannot be recycled or composted are transferred to the Ox Mountain Sanitary Landfill, located along State Route 92 between Half Moon Bay and the City of San Mateo.

The proposed project would not generate any solid waste during operation. The only solid waste generated by the project would be during the construction phase and the waste would be limited to the removed pavement along the southern boundary and the two

parking lot lights that would also be removed. The project is consistent with the type and intensity of development expected for the site in the General Plan and the project would comply with all federal, State, and local regulations related to solid waste. The City's General Plan determined that the increase in solid waste that would result with buildout of the General Plan would not be a significant impact. Because the proposed project would generate minimal solid waste result in a *less-than-significant* impact related to solid waste services.

XVIII. 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 degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a. As mentioned previously, the project site has a low sensitivity for biological resources and cultural resources. Although unlikely, the potential exists for the project to affect nesting birds during construction activities if found nesting in the existing on-site trees. In addition, the possibility exists that subsurface excavation of the site during grading and other construction activities could unearth deposits of cultural significance. However, this IS/MND includes mitigation measures that would reduce any potential impacts to a less-than-significant level. Therefore, the proposed project would have *less-than-significant* overall impacts to the quality of the environment, plant and wildlife species, and important examples of California history or prehistory.
- b. The proposed project in conjunction with other development within the City of South San Francisco could incrementally contribute to cumulative impacts in the area. However, as discussed in this IS/MND, the project would not result in any impacts with the exception of potential project-level impacts to biological and cultural resources, for which mitigation measures will be required to be implemented, reducing the impacts to a less-than-significant level. While other projects within the City of South San Francisco could result in related impacts, the project’s incremental contribution would not be cumulatively considerable, and the proposed project would ultimately result in a *less-than-significant* impact.
- c. Because the project site has previously been developed and the site is surrounded by existing development, and because the project would develop the site consistent with the

site's existing land use designation, substantial adverse effects on human beings are not anticipated with implementation of the proposed project. More specifically, as described in this IS/MND, the criteria air pollutant and GHG emissions generated by the project would be below the BAAQMD's thresholds of significance. In addition, the project would not involve the use of hazardous materials that could impact human health. Therefore, overall, the project's impact to human health would be *less than significant*.

Appendix A

Payless Vehicle Rental
Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.99	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - proposed project consists of restriping and seal coating an existing parking lot, along with other minor improvements (removal of portion of pavement and replacement with landscaping, trenching and installation of lighting)

Construction Phase - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - adjusted for max 8 hrs/day

Demolition - approximate disturbance area

Vehicle Trips - trip generation rate based on project traffic assessment

Land Use Change -

Sequestration -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblLandUse	LotAcreage	1.80	0.99
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	0.00	1.77
tblVehicleTrips	SU_TR	0.00	1.77
tblVehicleTrips	WD_TR	0.00	1.77

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.7209	2.0000e-004	0.0208	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004	0.0000	0.0463

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	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.7209	2.0000e-004	0.0208	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004	0.0000	0.0463

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/6/2017	5	5	
2	Trenching	Trenching	1/7/2017	1/20/2017	5	10	
3	Architectural Coating	Architectural Coating	1/21/2017	2/3/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,600; Non-Residential Outdoor: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Air Compressors	1	8.00	78	0.48
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	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	3	8.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017

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					0.1006	0.0000	0.1006	0.0152	0.0000	0.0152			0.0000			0.0000
Off-Road	2.0880	20.4977	16.0835	0.0183		1.1484	1.1484		1.0810	1.0810		1,820.9383	1,820.9383	0.4285		1,829.9365
Total	2.0880	20.4977	16.0835	0.0183	0.1006	1.1484	1.2490	0.0152	1.0810	1.0963		1,820.9383	1,820.9383	0.4285		1,829.9365

3.2 Demolition - 2017

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	8.0100e-003	0.1035	0.0794	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.7628	29.7628	2.2000e-004		29.7673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0290	0.0348	0.4059	9.3000e-004	0.0754	5.8000e-004	0.0760	0.0200	5.3000e-004	0.0205		75.0164	75.0164	3.6500e-003		75.0931
Total	0.0370	0.1383	0.4853	1.2300e-003	0.0824	1.9500e-003	0.0844	0.0219	1.7900e-003	0.0237		104.7792	104.7792	3.8700e-003		104.8604

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					0.1006	0.0000	0.1006	0.0152	0.0000	0.0152			0.0000			0.0000
Off-Road	2.0880	20.4977	16.0835	0.0183		1.1484	1.1484		1.0810	1.0810	0.0000	1,820.9383	1,820.9383	0.4285		1,829.9365
Total	2.0880	20.4977	16.0835	0.0183	0.1006	1.1484	1.2490	0.0152	1.0810	1.0963	0.0000	1,820.9383	1,820.9383	0.4285		1,829.9365

3.2 Demolition - 2017

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	8.0100e-003	0.1035	0.0794	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.7628	29.7628	2.2000e-004		29.7673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0290	0.0348	0.4059	9.3000e-004	0.0754	5.8000e-004	0.0760	0.0200	5.3000e-004	0.0205		75.0164	75.0164	3.6500e-003		75.0931
Total	0.0370	0.1383	0.4853	1.2300e-003	0.0824	1.9500e-003	0.0844	0.0219	1.7900e-003	0.0237		104.7792	104.7792	3.8700e-003		104.8604

3.3 Trenching - 2017

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	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479		1,907.9380	1,907.9380	0.2393		1,912.9636
Total	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479		1,907.9380	1,907.9380	0.2393		1,912.9636

3.3 Trenching - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0362	0.0435	0.5074	1.1600e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		93.7705	93.7705	4.5700e-003			93.8664
Total	0.0362	0.0435	0.5074	1.1600e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		93.7705	93.7705	4.5700e-003			93.8664

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	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479	0.0000	1,907.9380	1,907.9380	0.2393			1,912.9636
Total	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479	0.0000	1,907.9380	1,907.9380	0.2393			1,912.9636

3.3 Trenching - 2017

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0362	0.0435	0.5074	1.1600e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		93.7705	93.7705	4.5700e-003			93.8664
Total	0.0362	0.0435	0.5074	1.1600e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		93.7705	93.7705	4.5700e-003			93.8664

3.4 Architectural Coating - 2017

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	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396			376.0961
Total	6.0051	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396			376.0961

3.4 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0254	0.0304	0.3552	8.1000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		65.6394	65.6394	3.2000e-003			65.7065
Total	0.0254	0.0304	0.3552	8.1000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		65.6394	65.6394	3.2000e-003			65.7065

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	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396			376.0961
Total	6.0051	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396			376.0961

3.4 Architectural Coating - 2017

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0304	0.3552	8.1000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		65.6394	65.6394	3.2000e-003		65.7065
Total	0.0254	0.0304	0.3552	8.1000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		65.6394	65.6394	3.2000e-003		65.7065

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546114	0.062902	0.174648	0.122995	0.034055	0.004856	0.015640	0.024397	0.002087	0.003279	0.006673	0.000688	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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						
Parking Lot	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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						
Parking Lot	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Unmitigated	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

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	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Total	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

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	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Total	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Payless Vehicle Rental
Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.99	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - proposed project consists of restriping and seal coating an existing parking lot, along with other minor improvements (removal of portion of pavement and replacement with landscaping, trenching and installation of lighting)

Construction Phase - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - adjusted for max 8 hrs/day

Demolition - approximate disturbance area

Vehicle Trips - trip generation rate based on project traffic assessment

Land Use Change -

Sequestration -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblLandUse	LotAcreage	1.80	0.99
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	0.00	1.77
tblVehicleTrips	SU_TR	0.00	1.77
tblVehicleTrips	WD_TR	0.00	1.77

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.7209	2.0000e-004	0.0208	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004	0.0000	0.0463

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	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.7209	2.0000e-004	0.0208	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004	0.0000	0.0463

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/6/2017	5	5	
2	Trenching	Trenching	1/7/2017	1/20/2017	5	10	
3	Architectural Coating	Architectural Coating	1/21/2017	2/3/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,600; Non-Residential Outdoor: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Air Compressors	1	8.00	78	0.48
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	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	3	8.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017

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					0.1006	0.0000	0.1006	0.0152	0.0000	0.0152			0.0000			0.0000
Off-Road	2.0880	20.4977	16.0835	0.0183		1.1484	1.1484		1.0810	1.0810		1,820.9383	1,820.9383	0.4285		1,829.9365
Total	2.0880	20.4977	16.0835	0.0183	0.1006	1.1484	1.2490	0.0152	1.0810	1.0963		1,820.9383	1,820.9383	0.4285		1,829.9365

3.2 Demolition - 2017

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	9.5300e-003	0.1091	0.1166	3.0000e-004	6.9700e-003	1.3800e-003	8.3500e-003	1.9100e-003	1.2700e-003	3.1700e-003		29.6932	29.6932	2.2000e-004			29.6977
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0289	0.0431	0.3932	8.6000e-004	0.0754	5.8000e-004	0.0760	0.0200	5.3000e-004	0.0205		69.2078	69.2078	3.6500e-003			69.2845
Total	0.0384	0.1521	0.5099	1.1600e-003	0.0824	1.9600e-003	0.0844	0.0219	1.8000e-003	0.0237		98.9010	98.9010	3.8700e-003			98.9823

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					0.1006	0.0000	0.1006	0.0152	0.0000	0.0152			0.0000			0.0000	
Off-Road	2.0880	20.4977	16.0835	0.0183		1.1484	1.1484		1.0810	1.0810	0.0000	1,820.9383	1,820.9383	0.4285			1,829.9365
Total	2.0880	20.4977	16.0835	0.0183	0.1006	1.1484	1.2490	0.0152	1.0810	1.0963	0.0000	1,820.9383	1,820.9383	0.4285			1,829.9365

3.2 Demolition - 2017

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	9.5300e-003	0.1091	0.1166	3.0000e-004	6.9700e-003	1.3800e-003	8.3500e-003	1.9100e-003	1.2700e-003	3.1700e-003		29.6932	29.6932	2.2000e-004		29.6977
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0431	0.3932	8.6000e-004	0.0754	5.8000e-004	0.0760	0.0200	5.3000e-004	0.0205		69.2078	69.2078	3.6500e-003		69.2845
Total	0.0384	0.1521	0.5099	1.1600e-003	0.0824	1.9600e-003	0.0844	0.0219	1.8000e-003	0.0237		98.9010	98.9010	3.8700e-003		98.9823

3.3 Trenching - 2017

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	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479		1,907.9380	1,907.9380	0.2393		1,912.9636
Total	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479		1,907.9380	1,907.9380	0.2393		1,912.9636

3.3 Trenching - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0361	0.0538	0.4915	1.0700e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		86.5098	86.5098	4.5700e-003			86.6057
Total	0.0361	0.0538	0.4915	1.0700e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		86.5098	86.5098	4.5700e-003			86.6057

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	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479	0.0000	1,907.9380	1,907.9380	0.2393			1,912.9636
Total	1.9096	14.6703	12.3976	0.0199		1.0661	1.0661		1.0479	1.0479	0.0000	1,907.9380	1,907.9380	0.2393			1,912.9636

3.3 Trenching - 2017

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0361	0.0538	0.4915	1.0700e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		86.5098	86.5098	4.5700e-003			86.6057
Total	0.0361	0.0538	0.4915	1.0700e-003	0.0943	7.2000e-004	0.0950	0.0250	6.7000e-004	0.0257		86.5098	86.5098	4.5700e-003			86.6057

3.4 Architectural Coating - 2017

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	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396			376.0961
Total	6.0051	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396			376.0961

3.4 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0253	0.0377	0.3441	7.5000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		60.5568	60.5568	3.2000e-003			60.6240
Total	0.0253	0.0377	0.3441	7.5000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		60.5568	60.5568	3.2000e-003			60.6240

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	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396			376.0961
Total	6.0051	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396			376.0961

3.4 Architectural Coating - 2017

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0253	0.0377	0.3441	7.5000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		60.5568	60.5568	3.2000e-003		60.6240
Total	0.0253	0.0377	0.3441	7.5000e-004	0.0660	5.1000e-004	0.0665	0.0175	4.7000e-004	0.0180		60.5568	60.5568	3.2000e-003		60.6240

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546114	0.062902	0.174648	0.122995	0.034055	0.004856	0.015640	0.024397	0.002087	0.003279	0.006673	0.000688	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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						
Parking Lot	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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						
Parking Lot	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		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Unmitigated	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

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	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Total	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

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	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463
Total	1.7209	2.0000e-004	0.0208	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0438	0.0438	1.2000e-004		0.0463

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Payless Vehicle Rental
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	200.00	Space	0.99	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - proposed project consists of restriping and seal coating an existing parking lot, along with other minor improvements (removal of portion of pavement and replacement with landscaping, trenching and installation of lighting)

Construction Phase - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - based on anticipated on-site improvements

Off-road Equipment - adjusted for max 8 hrs/day

Demolition - approximate disturbance area

Vehicle Trips - trip generation rate based on project traffic assessment

Land Use Change -

Sequestration -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblLandUse	LotAcreage	1.80	0.99
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	0.00	1.77
tblVehicleTrips	SU_TR	0.00	1.77
tblVehicleTrips	WD_TR	0.00	1.77

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3139	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	20.4802	20.4802	9.3000e-004	1.9000e-004	20.5590
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.3139	2.0000e-005	1.8700e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	20.4837	20.4837	9.4000e-004	1.9000e-004	20.5628

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Total	0.0000

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	1/1/2017	1/6/2017	5	5	
2	Trenching	Trenching	1/7/2017	1/20/2017	5	10	
3	Architectural Coating	Architectural Coating	1/21/2017	2/3/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,600; Non-Residential Outdoor: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Air Compressors	1	8.00	78	0.48
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	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	3	8.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017**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					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2200e-003	0.0512	0.0402	5.0000e-005		2.8700e-003	2.8700e-003		2.7000e-003	2.7000e-003	0.0000	4.1298	4.1298	9.7000e-004	0.0000	4.1502
Total	5.2200e-003	0.0512	0.0402	5.0000e-005	2.5000e-004	2.8700e-003	3.1200e-003	4.0000e-005	2.7000e-003	2.7400e-003	0.0000	4.1298	4.1298	9.7000e-004	0.0000	4.1502

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	2.0000e-005	2.7000e-004	2.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0674	0.0674	0.0000	0.0000	0.0674
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	7.0000e-005	1.0000e-004	9.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1584	0.1584	1.0000e-005	0.0000	0.1585
Total	9.0000e-005	3.7000e-004	1.2000e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.2258	0.2258	1.0000e-005	0.0000	0.2260

3.2 Demolition - 2017**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					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2200e-003	0.0512	0.0402	5.0000e-005		2.8700e-003	2.8700e-003		2.7000e-003	2.7000e-003	0.0000	4.1298	4.1298	9.7000e-004	0.0000	4.1502
Total	5.2200e-003	0.0512	0.0402	5.0000e-005	2.5000e-004	2.8700e-003	3.1200e-003	4.0000e-005	2.7000e-003	2.7400e-003	0.0000	4.1298	4.1298	9.7000e-004	0.0000	4.1502

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	2.0000e-005	2.7000e-004	2.5000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0674	0.0674	0.0000	0.0000	0.0674
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	7.0000e-005	1.0000e-004	9.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1584	0.1584	1.0000e-005	0.0000	0.1585
Total	9.0000e-005	3.7000e-004	1.2000e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.2258	0.2258	1.0000e-005	0.0000	0.2260

3.3 Trenching - 2017

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	9.5500e-003	0.0734	0.0620	1.0000e-004		5.3300e-003	5.3300e-003		5.2400e-003	5.2400e-003	0.0000	8.6543	8.6543	1.0900e-003	0.0000	8.6771
Total	9.5500e-003	0.0734	0.0620	1.0000e-004		5.3300e-003	5.3300e-003		5.2400e-003	5.2400e-003	0.0000	8.6543	8.6543	1.0900e-003	0.0000	8.6771

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	1.7000e-004	2.5000e-004	2.3700e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3959	0.3959	2.0000e-005	0.0000	0.3964
Total	1.7000e-004	2.5000e-004	2.3700e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3959	0.3959	2.0000e-005	0.0000	0.3964

3.3 Trenching - 2017

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	9.5500e-003	0.0734	0.0620	1.0000e-004		5.3300e-003	5.3300e-003		5.2400e-003	5.2400e-003	0.0000	8.6543	8.6543	1.0900e-003	0.0000	8.6771
Total	9.5500e-003	0.0734	0.0620	1.0000e-004		5.3300e-003	5.3300e-003		5.2400e-003	5.2400e-003	0.0000	8.6543	8.6543	1.0900e-003	0.0000	8.6771

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	1.7000e-004	2.5000e-004	2.3700e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3959	0.3959	2.0000e-005	0.0000	0.3964
Total	1.7000e-004	2.5000e-004	2.3700e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3959	0.3959	2.0000e-005	0.0000	0.3964

3.4 Architectural Coating - 2017

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	0.0278					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2200e-003	0.0146	0.0125	2.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	1.7022	1.7022	1.8000e-004	0.0000	1.7059
Total	0.0300	0.0146	0.0125	2.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	1.7022	1.7022	1.8000e-004	0.0000	1.7059

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	1.2000e-004	1.7000e-004	1.6600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2772	0.2772	1.0000e-005	0.0000	0.2775
Total	1.2000e-004	1.7000e-004	1.6600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2772	0.2772	1.0000e-005	0.0000	0.2775

3.4 Architectural Coating - 2017

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	0.0278					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2200e-003	0.0146	0.0125	2.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	1.7022	1.7022	1.8000e-004	0.0000	1.7059
Total	0.0300	0.0146	0.0125	2.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	1.7022	1.7022	1.8000e-004	0.0000	1.7059

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	1.2000e-004	1.7000e-004	1.6600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2772	0.2772	1.0000e-005	0.0000	0.2775
Total	1.2000e-004	1.7000e-004	1.6600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2772	0.2772	1.0000e-005	0.0000	0.2775

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546114	0.062902	0.174648	0.122995	0.034055	0.004856	0.015640	0.024397	0.002087	0.003279	0.006673	0.000688	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

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						
Parking Lot	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	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000								

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	70400	20.4802	9.3000e-004	1.9000e-004	20.5590
Total		20.4802	9.3000e-004	1.9000e-004	20.5590

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	70400	20.4802	9.3000e-004	1.9000e-004	20.5590
Total		20.4802	9.3000e-004	1.9000e-004	20.5590

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3139	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003
Unmitigated	0.3139	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003

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	1.2500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003
Total	0.3139	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003

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	1.2500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003
Total	0.3139	2.0000e-005	1.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7800e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Payless Vehicle Rental
Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenching	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	2	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	1	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	2	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors	4.43000E-003	2.91300E-002	2.49100E-002	4.00000E-005	2.31000E-003	2.31000E-003	0.00000E+000	3.40434E+000	3.40434E+000	3.60000E-004	0.00000E+000	3.41189E+000
Concrete/Industrial Saws	4.36000E-003	3.19600E-002	2.81200E-002	5.00000E-005	2.30000E-003	2.30000E-003	0.00000E+000	4.03242E+000	4.03242E+000	3.50000E-004	0.00000E+000	4.03987E+000
Generator Sets	2.85000E-003	2.23200E-002	1.88700E-002	3.00000E-005	1.50000E-003	1.50000E-003	0.00000E+000	2.82604E+000	2.82604E+000	2.30000E-004	0.00000E+000	2.83084E+000
Rubber Tired Dozers	2.98000E-003	3.29800E-002	2.48500E-002	2.00000E-005	1.53000E-003	1.41000E-003	0.00000E+000	2.06387E+000	2.06387E+000	6.30000E-004	0.00000E+000	2.07714E+000
Tractors/Loaders/Backhoes	2.37000E-003	2.27700E-002	1.79100E-002	2.00000E-005	1.71000E-003	1.58000E-003	0.00000E+000	2.15959E+000	2.15959E+000	6.60000E-004	0.00000E+000	2.17348E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	4.43000E-003	2.91300E-002	2.49100E-002	4.00000E-005	2.31000E-003	2.31000E-003	0.00000E+000	3.40433E+000	3.40433E+000	3.60000E-004	0.00000E+000	3.41188E+000
Concrete/Industrial Saws	4.36000E-003	3.19600E-002	2.81200E-002	5.00000E-005	2.30000E-003	2.30000E-003	0.00000E+000	4.03242E+000	4.03242E+000	3.50000E-004	0.00000E+000	4.03987E+000
Generator Sets	2.85000E-003	2.23200E-002	1.88700E-002	3.00000E-005	1.50000E-003	1.50000E-003	0.00000E+000	2.82603E+000	2.82603E+000	2.30000E-004	0.00000E+000	2.83084E+000
Rubber Tired Dozers	2.98000E-003	3.29800E-002	2.48500E-002	2.00000E-005	1.53000E-003	1.41000E-003	0.00000E+000	2.06386E+000	2.06386E+000	6.30000E-004	0.00000E+000	2.07714E+000
Tractors/Loaders/Backhoes	2.37000E-003	2.27700E-002	1.79100E-002	2.00000E-005	1.71000E-003	1.58000E-003	0.00000E+000	2.15958E+000	2.15958E+000	6.60000E-004	0.00000E+000	2.17348E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.93743E-006	2.93743E-006	0.00000E+000	0.00000E+000	2.93093E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.53852E-006	3.53852E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.84527E-006	4.84527E-006	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.63051E-006	4.63051E-006	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)
No	Clean Paved Road	% PM Reduction	0.00	
				Frequency (per day)

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Trenching	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Trenching	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.00	0.15		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Appendix B



February 3, 2015

Mark Melbye
Kidder Matthews
Towers at Shores Center
203 Redwood Shores Parkway, Suite 530
Redwood City, CA 94065

Subject: Arata Property Transportation Assessment (SF14-0769)

Dear Mr. Melbye:

This letter provides the draft transportation assessment of the proposed Project at the Arata Property in South San Francisco, CA. This letter summarizes the site plan review and analysis findings. Detailed documentation of the existing conditions and analysis for review and comment by City staff follows this letter in **Attachment A**.

As detailed in this letter, all intersections are projected to meet the standards for acceptable operations under the evaluated scenarios; therefore, the Project does not have a significant impact on the study intersections, and intersection mitigation is not needed.

The following sections present the Project description, site plan review, and transportation impact assessment findings. All figures and attachments are at the end of this document.

PROJECT DESCRIPTION

The Project site is located at 1350 San Mateo Avenue in South San Francisco and is bound by San Mateo Avenue to the west, Colma Creek to the north, and the Peninsula Auto Body Driveway to the south. **Figure 1** shows the Project location.

The Project intends to replace the currently vacant lot, formally a Park-and-Fly parking lot, with a Car Rental Kiosk and associated parking lot as well as construct an egress driveway approximately 200 feet north of the San Mateo Avenue at Lowrie Avenue intersection and an ingress driveway just north of the Peninsula Autobody driveway. Patrons accessing the former Park-and-Fly site used a driveway off of the Peninsula Auto Body driveway, approximately 50 feet east of San

Mateo Avenue. Access to the site through the Peninsula Autobody Driveway would close once the new driveways are constructed.

In the near term, the Project would occupy the western parcels of the site, which would contain approximately 150 parking stalls. Upon approval of rezoning the eastern parcels, the Project would construct additional temporary vehicle staging lanes on the eastern parcels. In total, the site would contain approximately 350 parking stalls.

SITE PLAN REVIEW

The Project site plans have been reviewed with consideration for safe and efficient circulation of vehicles, bicyclists, and pedestrians through the Project site and on the roadways adjacent to the Project site. The site plan review focused on:

- The Proposed driveways interface with the existing roadway network, including sight distances and driveway spacing
- Vehicle circulation and drive aisles within the site
- Pedestrian access and circulation within and adjacent to the site
- Bicycle access and circulation within and adjacent to the site

Site recommendations are presented on **Figure 2**.

VEHICULAR ACCESS AND CIRCULATION

Access to the Project would be provided by two driveways, one for egress and one for ingress, on San Mateo Avenue. The site access intersections are expected to operate with minimal delay.

Recommendation: Provide way-finding signs in the lot, directing drivers to vehicle return stalls, exit driveway, and major destinations (e.g. US-101).

Site Distance and Driveway Assessment

A sight distance assessment was conducted at the San Mateo Avenue driveways. Chapter 400 of the *Caltrans Highway Design Manual* (HDM) defines the minimum required sight distances for different design speeds. The HDM defines two kinds of sight distance: stopping sight distance and corner sight distance, which are defined below. Failure to meet the minimum sight distances could warrant the installation of traffic control.

Corner Sight Distance

Corner sight distance signifies the line of sight maintained between the driver of a vehicle waiting at the cross road, in this case the egress driveway north of Lowrie Avenue and the driver of an approaching vehicle on San Mateo Avenue.

Based on a 25 mile per hour (mph) roadway, adequate sight distance is feasible if landscaping is maintained and parking is prohibited adjacent to the exit driveway.

Stopping Sight Distance

Stopping sight distance is the distance required by the driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object in the road becomes visible and in advance of reaching the object. The HDM defines the minimum stopping sight distance requirement as 150 feet for a roadway with a posted speed limit of 25 mph.

For vehicles turning from San Mateo Avenue into the project driveway or vehicles passing the egress driveway, sight distance is estimated to be over 150 feet, thus meeting the stopping sight distance requirements. If the Project is constructed and the speed limit adjusted, stopping sight distance conditions would become even greater.

Recommendation: Maintain landscaping along San Mateo Avenue, adjacent to the Project driveways, to avoid sight distance conflicts (shrubs should not be higher than approximately 30 inches and tree canopies should be approximately six feet from the ground).

Recommendation: On-street parking should be restricted on San Mateo Avenue on either side of the egress Project driveway to limit sight distance issues; approximately 60 feet to the north and 20 feet to the south.

Figure 3 summarizes the sight distance assessment.

Shuttle Vehicle Access

Shuttle access to and from the site is provided by two driveways off San Mateo Avenue. The site plan indicates a bus parking stall, adjacent to the car rental building which allows customers to enter and exit the building directly from the shuttle.

Emergency Vehicle Access

A fire station is located on Harbor Way, approximately 0.5 miles from the Project site. Emergency vehicles can access the site from either driveway on San Mateo Avenue, so if one entrance is blocked, alternative access would be available.

Pedestrian Access

Pedestrian facilities are provided adjacent to the site, such that pedestrians walking to the Project could access the site. A designated pedestrian walkway is provided from San Mateo Avenue to the Rental Office.

Bicycle Access

San Mateo Avenue is a designated bicycle route. Bicycle facilities on site are not provided. If employees are to bike to the site, bicycle parking should be considered.

PROPOSED PROJECT TRANSPORTATION IMPACT ASSESSMENT

This section provides the transportation impact assessment of the Project, or the existing conditions plus the expected impact of the Project.

EXISTING PLUS PROJECT TRAFFIC OPERATIONS

Traffic operations throughout the study area are analyzed using the Synchro models used in the evaluation of the existing peak hours. **Table 1** shows the LOS results for both scenarios and **Attachment A** documents detailed existing conditions, impact criteria, and findings.

The significance criteria states that acceptable operations for the study intersections is LOS D (less than 55 seconds of average control delay per vehicle) or better. As shown in Table 7, all intersections are projected to meet this standard under the evaluated scenarios; therefore, the Project does not have a significant impact on the study intersections, and intersection mitigation is not needed. The Synchro worksheets used to complete this analysis are provided in **Attachment B**.

TABLE 1: EXISTING CONDITIONS INTERSECTION OPERATIONS SUMMARY

Intersection	Control ¹	Peak Hour	Existing Conditions		Existing Plus 50% Occupancy		Existing Plus 100% Occupancy		Existing Plus 100% Occupancy (Eastern Parcels Acquired)	
			Delay ²	LOS ²	Delay ²	LOS ²	Delay ²	LOS ²	Delay ²	LOS ²
1. San Mateo Avenue / Airport Boulevard ³	Signal	AM PM	35 43	D D	31 43	D D	35 43	D D	35 43	D D
2. San Mateo Avenue / Lowrie Avenue	SSSC	AM PM	<10 (EB 15) <10 (EB 23)	A (B) A (C)	<10 (EB 15) <10 (EB 23)	A (C) A (C)	<10 (EB 15) <10 (EB 23)	A (C) A (C)	<10 (EB 15) <10 (EB 24)	A (C) A (C)
3. San Mateo Avenue / Peninsula Auto Body Driveway / Ingress Driveway	SSSC	AM PM	<10 (WB 14) <10 (WB 12)	A (B) A (B)	<10 (WB 15) <10 (WB 12)	A (B) A (B)	<10 (WB 15) <10 (WB 12)	A (B) A (B)	<10 (WB 15) <10 (WB 12)	A (C) A (B)
4. San Mateo Avenue / Egress Driveway	SSSC	AM PM	n/a ⁴ n/a ⁴	n/a ⁴ n/a ⁴	<10 (WB 13) <10 (WB 13)	A (B) A (B)	<10 (WB 13) <10 (WB 12)	A (B) A (B)	<10 (WB 12) <10 (WB 13)	A (B) A (B)

Notes:

1. Signal = signalized intersection; SSSC = side-street stop controlled intersection.
2. Traffic operations results include LOS (level of service) and delay (seconds per vehicle). LOS is based on delay thresholds published in the Highway Capacity Manual (Transportation Research Board, 2010).
3. Due to its unique intersection geometries and operations, HCM 2000 was used for the analysis.
4. n/a = Intersection does not exist under existing conditions.

Source: *Fehr & Peers, November 2014.*



PEDESTRIAN FACILITIES

The Project is expected to generate very few pedestrian trips. The existing pedestrian facilities in the project area, including sidewalks, crosswalks, and pedestrian signals, have the capacity and design to adequately accommodate additional pedestrian trips generated by the Project.

Recommendations: City engineering staff should review site plan designs to assure that safe and comfortable pedestrian conditions are constructed as part of the Project, including assuring that all sidewalks and curb ramps meet the American Disability Act (ADA) guidelines. Project driveways should be designed to minimize cross-slopes within the sidewalks and with good visibility between entering/exiting vehicles and pedestrians on the sidewalks.

BICYCLE FACILITIES

The Project is expected to generate very few bicycle trips. Bike Route 15 on San Mateo Avenue, the existing bicycle facility in the project area, has the capacity and design to adequately accommodate additional bicycle trips generated by the Project.

TRANSIT FACILITIES

The Project is expected to generate very few transit trips. As detailed in Attachment A, the existing transit facilities within one mile of the Project site are BART, Caltrain, and SamTrans stations. These facilities have the capacity and design to adequately accommodate additional transit trips generated by the Project.

This concludes our transportation findings of the Project at the Arata Property in South San Francisco. For questions or comments, please contact Sarah Nadiranto at (415) 426-2521.

Sincerely,
FEHR & PEERS

A handwritten signature in black ink, appearing to read 'Sarah Nadiranto'. The signature is fluid and cursive, with a large initial 'S' and 'N'.

Sarah Nadiranto



Figures

Figure 1: Project Study Area

Figure 2: Site Plan Review

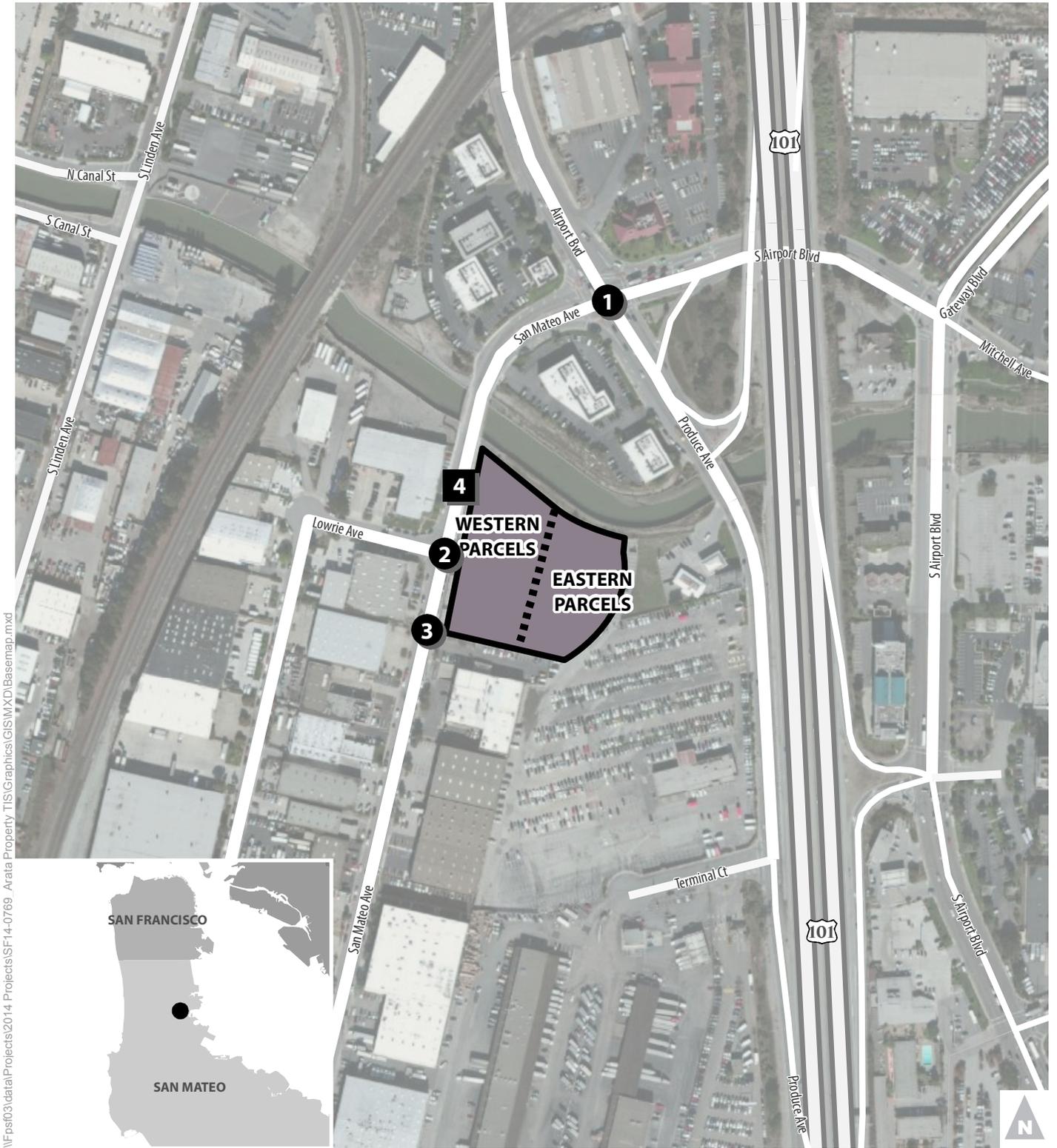
Figure 3: Sight Distance Assessment

Attachments

Attachment A: Detailed Documentation and Findings

Attachment B: LOS Calculation Worksheets

Attachment C: Data Collection – Peak Period Intersection Counts and Driveway Counts



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Study Intersection



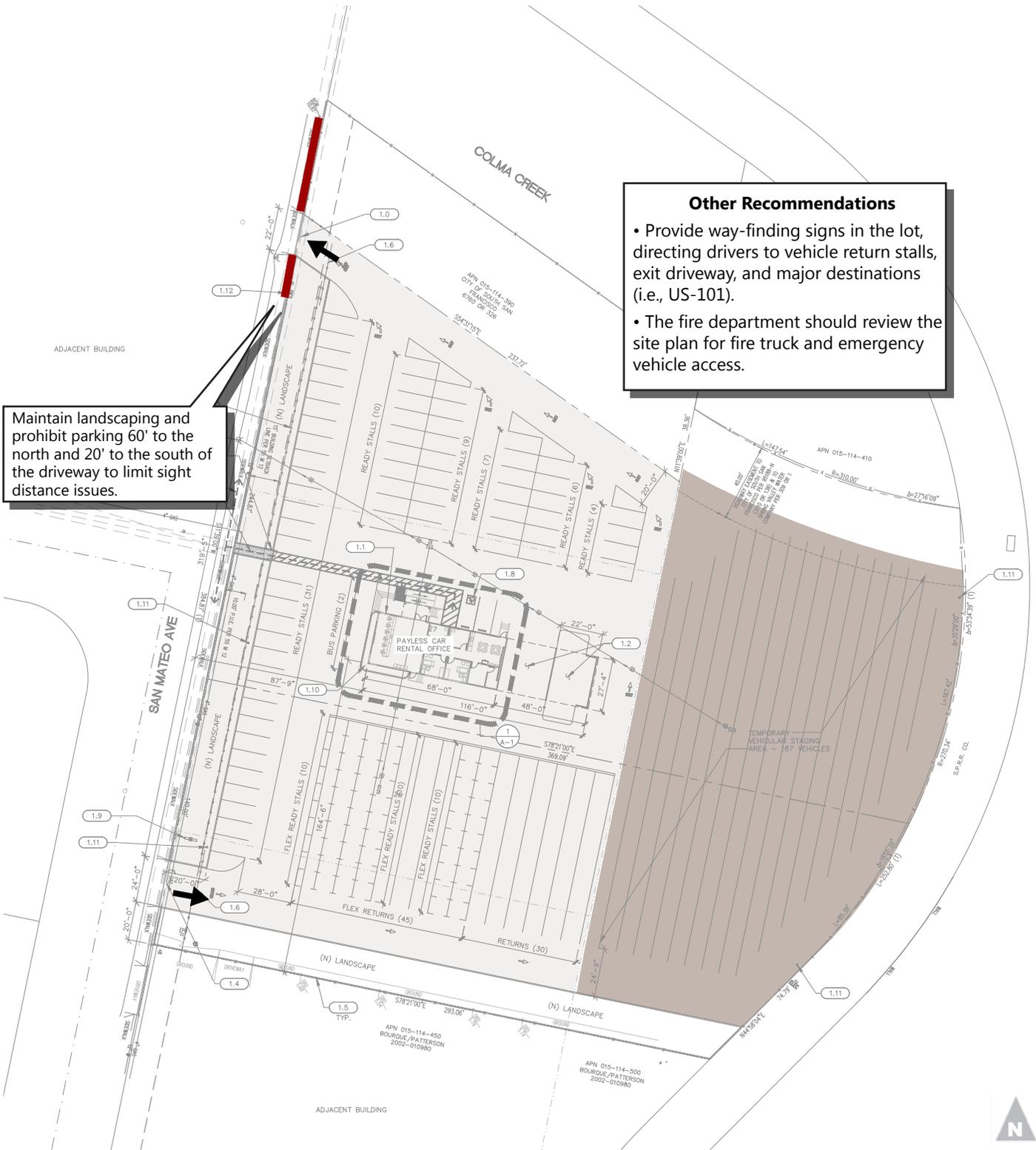
Project Site



Proposed Intersection



Figure 1
Project Location and Study Intersections



Other Recommendations

- Provide way-finding signs in the lot, directing drivers to vehicle return stalls, exit driveway, and major destinations (i.e., US-101).
- The fire department should review the site plan for fire truck and emergency vehicle access.

Maintain landscaping and prohibit parking 60' to the north and 20' to the south of the driveway to limit sight distance issues.

Source: Avis Budget Group, October 2014

- Near-Term Project Site (150 stalls)
- Total Project Site Pending Rezoning Approval (350 stalls)

Note: Vehicles occupied in "Ready Stalls" are available for rental. Flex Return/Return stalls are used for vehicle return and storage. Flex Return/Return stalls operate like a Valet lot where cars are parked behind one another to maximize space.



Figure 2
Site Plan Review

ATTACHMENT A

Attachment A documents the transportation assessment of the proposed Payless Car Rental Project (Project) at the Arata Property. The Attachment documents study locations and study scenarios, significance criteria, existing conditions, Project description including trip generation and trip distribution, and transportation impact assessment for review and comment by City staff.

Figures and Attachments referenced below are found at the end of this document.

STUDY LOCATIONS AND SCENARIOS

The following intersections were selected for assessment based on knowledge of the local area, discussions with City staff, and a preliminary estimate of the amount and prevailing directions of travel of Project-generated vehicles:

1. San Mateo Avenue / Airport Boulevard
2. San Mateo Avenue/ Lowrie Avenue
3. San Mateo Avenue/Peninsula Auto Body Driveway / Project Ingress Driveway
4. San Mateo Avenue / Egress Driveway (Does not exist under existing conditions)

The intersections were evaluated for the weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. **Figure A-1** shows the study intersection locations in relationship to the site and existing AM and PM peak hour turning movement data.

For this study, the following scenarios were evaluated:

- *Existing* – Existing (2014) conditions based on traffic counts collected in September 2014
- *Existing Plus Project* – Existing conditions plus Project-generated vehicles. Rental car operations vary day to day dependent on the season, day of week, and time period. For this reason, three plus Project scenarios were assessed:
 - *Existing Plus Project (~50% Occupancy)*: Assumes approx. 50-percent of the western parcel spaces (70 vehicles) are occupied and available for customer rental
 - *Existing Plus Project (~100% Occupancy)*: Assumes approx. 100-percent of the western parcel spaces (150 vehicles) are occupied and available for customer rental



- *Existing Plus Project (~100% Occupancy Full Site):* Assumes approx. 100-percent of the eastern and western parcel spaces (350 vehicles) are occupied and available for customer rental

ANALYSIS METHODS

The operational performance of a roadway network is commonly described with the term level of service (LOS). LOS is a qualitative description of operating conditions, ranging from LOS A (free-flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays.) LOS E corresponds to operations “at capacity.” When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

The LOS analysis methods used in this study are consistent with the 2010 Highway Capacity Manual (HCM) published by the Transportation Research Board. The HCM methods for calculating LOS for signalized intersections and unsignalized intersections are described below.

SIGNALIZED INTERSECTIONS

Traffic operations at signalized intersections are evaluated using the LOS method described in Chapter 16 of the HCM. A signalized intersection’s LOS is based on the weighted average control delay measured in seconds per vehicle and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. **Table 1** summarizes the relationship between the control delay and LOS for signalized intersections.



TABLE 1: SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual, Transportation Research Board, 2010.*

UNSIGNALIZED INTERSECTIONS

Traffic conditions at unsignalized intersections are evaluated using the method from Chapter 17 of the HCM. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each movement that must yield the right-of-way. For all-way stop-controlled intersections, the average control delay is calculated for the intersection as a whole. At two-way or side street-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left turn movement from the major street, and the entire intersection.

Table 2 summarizes the relationship between delay and LOS for unsignalized intersections.



TABLE 2: UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Little or no delays	< 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual, Transportation Research Board, 2010.*

ASSESSMENT CRITERIA

Significance criteria are used to determine whether a Project impact is considered significant and therefore require mitigation. The Project would have a significant impact on the environment if it would cause an increase in traffic which is substantial in relation to the traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, or delay and congestion at intersections), or change the condition of an existing street (e.g., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system. The City of South San Francisco does not have a level of service policy for vehicles, but strives to balance modes of travel and provide equitable access, recognizing that people travel by a variety of modes, not just in vehicles and that the use of an auto-focused level of service standard does not address the mobility needs for non-auto roadway users.

SIGNIFICANCE CRITERIA

For the purpose of this study and understanding the potential effects of the Project, a significant impact would be identified if:



- If a signalized intersection is projected to operate within expected delay ranges (i.e., LOS D or better with an average control delay of equal to or less than 55 seconds per vehicle) without the project and the project is expected to cause the facility to operate at an unacceptable LOS (LOS E or F);
- If an intersection is projected to operate at or over capacity (i.e., LOS E or F) without the project, and the project is expected to increase the average control delay by more than 5 seconds; or
- If the operations of an unsignalized study intersection is projected to decline with the addition of project traffic, and if the installation of a traffic signal based on the *Manual on Uniform Traffic Control Devices* (MUTCD) Peak Hour Signal Warrant (Warrant 3) would be warranted.
- The project substantially increases traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);
- The project results in inadequate emergency access;
- The project conflicts with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
- A pedestrian or bicycle impact is considered significant if it would:
 - Disrupt existing pedestrian facilities;
 - Interfere with planned pedestrian facilities; or
 - Create inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.
- A bicycle impact is considered significant if it would:
 - Disrupt existing bicycle facilities;
 - Interfere with planned bicycle facilities;
 - Create inconsistencies with adopted bicycle system plans, guidelines, policies, or standards; or
 - Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.
 - A transit impact is considered significant if it would result in development that is inaccessible to transit riders.



EXISTING CONDITIONS

This section outlines the data collection involved in this analysis. It outlines the existing pedestrian, bicycle, and transit facilities and summarized existing operating conditions.

DATA COLLECTION

Existing peak hour vehicle turning movement, bicycle, and pedestrian volume counts were collected from 7:00 to 9:00 AM and from 4:00 to 6:00 PM on Wednesday, September 10, 2014 at the three existing study intersections. The weekday AM peak hour in the study area is generally from 8:00 to 9:00 AM, the weekday PM peak hour is generally from 4:45 to 5:45 PM. **Figure A-1** shows the existing peak hour intersection volumes, lane configurations, and traffic control for the AM and PM peak hours, respectively. Additionally, 24-hour vehicle counts were collected at San Mateo Avenue south of Lowrie Avenue and the two driveways off of the Payless Car rental lot ("Burlingame Payless") at 1409 Rollins Road in Burlingame, CA¹. Additional data collection was also completed, including observations of the lane configurations, signal timings, intersection operations and vehicle queuing. Detailed traffic count sheets are provided in **Attachment C**.

Field Observations

Existing transportation operations were observed at the Project site and the Burlingame Payless during the AM and PM peak period. During the AM peak hour, no major queues were present at the study intersections. Typically, each movement was served within the given green time and queues were within the constructed pocket length. Spillback to downstream intersections was not observed. Similarly, during the PM peak period, queue spillback to downstream intersections was not observed. An increase in vehicle traffic along Airport Boulevard was observed during the PM peak hour due to its direct access to the US-101 South on-ramp. However, vehicles were typically served within the given green time.

The Burlingame Payless does not have on-premises vehicle washing and fueling, so once a customer returns the rental, the vehicle is driven to an off-site facility for cleaning. At times, a vehicle could be driven off the site up to three times before ready for another customer rental.

¹ The purpose of the off-site 24-hour vehicle counts is to collect existing roadway volume information to capture vehicle trip generation of an existing site with similar operating characteristics of the proposed Project. Vehicle count devices were placed away from the intersection to avoid queued vehicles at the signal sitting on the hoses and low traffic speeds, which can lead to inaccurate counts. The peak period study intersection and existing driveway counts adequately captured the traffic at the driveways generated by the land use.



The South San Francisco site proposes on-premises washing and possibly fueling, such that off-site cleaning vehicle trips would not occur regularly.

Customer Shuttle Observations

The Burlingame Payless has two entrances: one driveway onto Rollins Road on the north end of the site and a second driveway onto Carolan Avenue on the south end of the site. Therefore, customer shuttles and vans arriving from San Francisco International Airport enter on Rollins Road and exit on Carolan Avenue, minimizing the space needed for circulation and maneuvering within the parking lot.

Burlingame Payless generally operates at least two shuttles operating at ten minute headways: a mid-size passenger bus and a passenger van.

EXISTING TRAFFIC OPERATIONS

Traffic operations throughout the study area are analyzed using the Synchro 8.0 software program. Synchro calculations are based on the procedures outlined in the HCM. **Table 3** shows the LOS results for the existing weekday AM and PM peak hours. As shown below, the study intersections perform at LOS C or better during the AM peak hour and LOS D or better during the PM peak hours. Long queues and delays are not observed in the analysis and results are consistent with field observations collected in September 2014.

The San Mateo Avenue and Airport Boulevard intersection operates at LOS C and D during the AM and PM peak hour, respectively. The delay during the PM peak hour is associated with an increase in traffic volumes at the intersection because of direct access to the US-101 southbound on-ramp. At the side-street stop controlled intersections, average intersection delay was less than ten seconds and the worst street stop had a delay of 23 seconds. Overall, all study intersections operate well with nominal delay.



TABLE 3: EXISTING CONDITIONS INTERSECTION OPERATIONS SUMMARY

Intersection	Control ¹	Peak Hour	Existing Conditions	
			Delay ²	LOS ²
1. San Mateo Avenue / Airport Boulevard ³	Signal	AM	35	D
		PM	43	D
2. San Mateo Avenue / Lowrie Avenue	SSSC	AM	<10 (EB 15)	A (B)
		PM	<10 (EB 23)	A (C)
3. San Mateo Avenue / Peninsula Auto Body Driveway / Ingress Driveway	SSSC	AM	<10 (WB 14)	A (B)
		PM	<10 (WB 12)	A (B)
4. San Mateo Avenue / Egress Driveway	SSSC	AM	n/a ⁴	n/a ⁴
		PM	n/a ⁴	n/a ⁴

Notes:

1. Signal = signalized intersection; SSSC = side-street stop controlled intersection.
2. Traffic operations results include LOS (level of service) and delay (seconds per vehicle). LOS is based on delay thresholds published in the Highway Capacity Manual (Transportation Research Board, 2010).
3. Due to its unique intersection geometries and operations, HCM 2000 was used for the analysis.
4. n/a = Intersection does not exist under existing conditions.

Source: *Fehr & Peers, November 2014.*

PEDESTRIAN FACILITIES

San Mateo Avenue, which runs adjacent to the western edge of the Project site, has a narrow sidewalk on both sides of the street. There are several supply/light-industrial businesses and parking lots with driveways and curb cuts along San Mateo Avenue. The nearest crosswalks to the Project site are at San Mateo Avenue and Airport Boulevard/Produce Avenue, approximately 500 feet to the north.

Figure A-2 shows existing AM/PM pedestrian crossings at existing study intersections.

BICYCLE FACILITIES

The stretch of San Mateo Avenue adjacent to the Project site does not have visible sharrows (bike and arrow pavement markings placed to guide bicyclists to the best place to ride on the road and remind drivers to share the road with cyclists) but signs along the road designate it as Bike Route 15. The route continues south towards the Centennial Way Trail, which is a 2.85-mile linear park on top of the underground BART tube with a Class I bicycle and pedestrian trail² less than a mile

² Centennial Way Brochure, City of South San Francisco:



from the Project site. The bicycle route on San Mateo Avenue also extends north from the Project site through the intersection with South Airport Boulevard and Produce Avenue and continues south along South Airport Boulevard.

Figure A-2 shows existing bicycle facilities in the study area and bicycle turning movements for the AM and PM peak hour.

TRANSIT FACILITIES

While the Project site is less than a mile from the San Bruno Bay Area Rapid Transit (BART) Station and less than a mile from the South San Francisco Caltrain station, neither of these transit services are close enough to affect project trips. Similarly, San Mateo County Transit District (SamTrans) operates 73 bus routes and paratransit service throughout San Mateo County and parts of San Francisco and Palo Alto, but there are no stops within a half mile (or a 10-minute walk) of the project site.

PROJECT CHARACTERISTICS

This section provides an overview of the proposed Project components and addresses the proposed Project's potential impacts on the surrounding roadway network. This was done using a three-step process:

- 1) **Trip Generation** – The *amount* of vehicle traffic entering/exiting the Project site was estimated.
- 2) **Trip Distribution** – The *direction* of trips would use to approach and depart the site was projected.
- 3) **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

PROJECT TRIP GENERATION

Trip generation rates are not available in the 9th Edition of the Institute of Transportation Engineers (ITE) publication *Trip Generation* Manual for car rental sites. Therefore, vehicle trip generation estimates for the Project during both AM and PM peak hours were developed using driveway counts collected from the Burlingame Payless. It is our understanding that the proposed



Project will operate similarly to the Payless site, with the exception of the vehicle washing and fueling operations.

To calculate trip generation rates, 24-hour pneumatic tube data was collected during an average weekday and total number of parking spaces on site were counted at Burlingame Payless. AM and PM peak hour trip generation rates were estimated based on the number of incoming and outgoing vehicles to the number of available parking stalls. The Burlingame site requires each returned rental make additional trips for vehicle washing and fueling; therefore a factor was applied to decrease driveway counts to account for additional trips that will not occur at the South San Francisco site. The analysis assumes that no off-site vehicle trips would be required, such that vehicle washing and fueling operations would occur on site. The Project site plan proposes to construct a washing station, however, a fueling station may not be provided. If a fueling station is not provided, trip generation rates could increase. However, data collected at the Burlingame Payless site shows that 85-percent of customers return the vehicle with a full tank of gasoline, such that 15-percent of vehicles need to be taken off-site for fuel. Therefore, it is assumed that if 15-percent of vehicles need to drive off-site for fuel, it would not generate enough vehicle traffic to adversely affect intersection delay. **Table 4** shows trip generation estimates based on the methodology described above.

TABLE 4: TRIP GENERATION RATES

Time Period	Rate per Occupied Stall	% Enter	% Exit
AM Peak Hour	0.06	95%	5%
PM Peak Hour	0.14	54%	46%
Daily	1.77	62%	38%

Source: *Fehr & Peers, September 2014.*

Table 5 shows the vehicle trip generation estimates for the three plus Project scenarios



Table 5: Project Trip Generation

Number of Vehicles Available for Rent	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
70 (~50% Occupancy)	124	5	1	6	6	5	11
150 (~100% Occupancy)	265	10	1	11	12	10	22
350 (~100% Occupancy of Eastern and Western Parcels)	619	22	2	24	27	23	50

Source: Fehr & Peers, September 2014.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution is defined as the directions of approach and departure that vehicles would use to arrive at and depart from the site. This traffic analysis assumes that all new Project-generated trips would be distributed proportionately based on an assessment of the current movements at the existing intersections. The study assumes approximately 10% of trips will travel to / come from south San Mateo Avenue, with the remaining 90% of trips traveling to / coming from Airport Boulevard. A majority of trips are assumed to access regional destinations by way of US-101.

Figure A-3 and **Figure A-4** show the Project-generated trips assigned to the intersection turning movements for the AM and PM peak hour, respectively. **Figure A-5** and **Figure A-6** show the Project-generated trips added to existing traffic volumes for the AM and PM peak hour, respectively.

EXISTING PLUS PROJECT TRAFFIC OPERATIONS

As detailed in the letter above, with the Project traffic, intersections are expected to operate at LOS D or better during the AM and PM peak hours, therefore, the Project does not have a significant impact on the study intersections, and intersection mitigation is not needed. Detailed analysis worksheets are provided in **Attachment B**.

This concludes the detailed assessment. For questions or comments, please contact Sarah Nadiranto at (415) 426-2521.



Figures

Figure A-1: Project Study Intersections, Existing Traffic Control, Lane Configurations, and Peak Hour Traffic Volumes

Figure A-2: Existing Bicycle and Pedestrian Facilities and Intersection Volumes

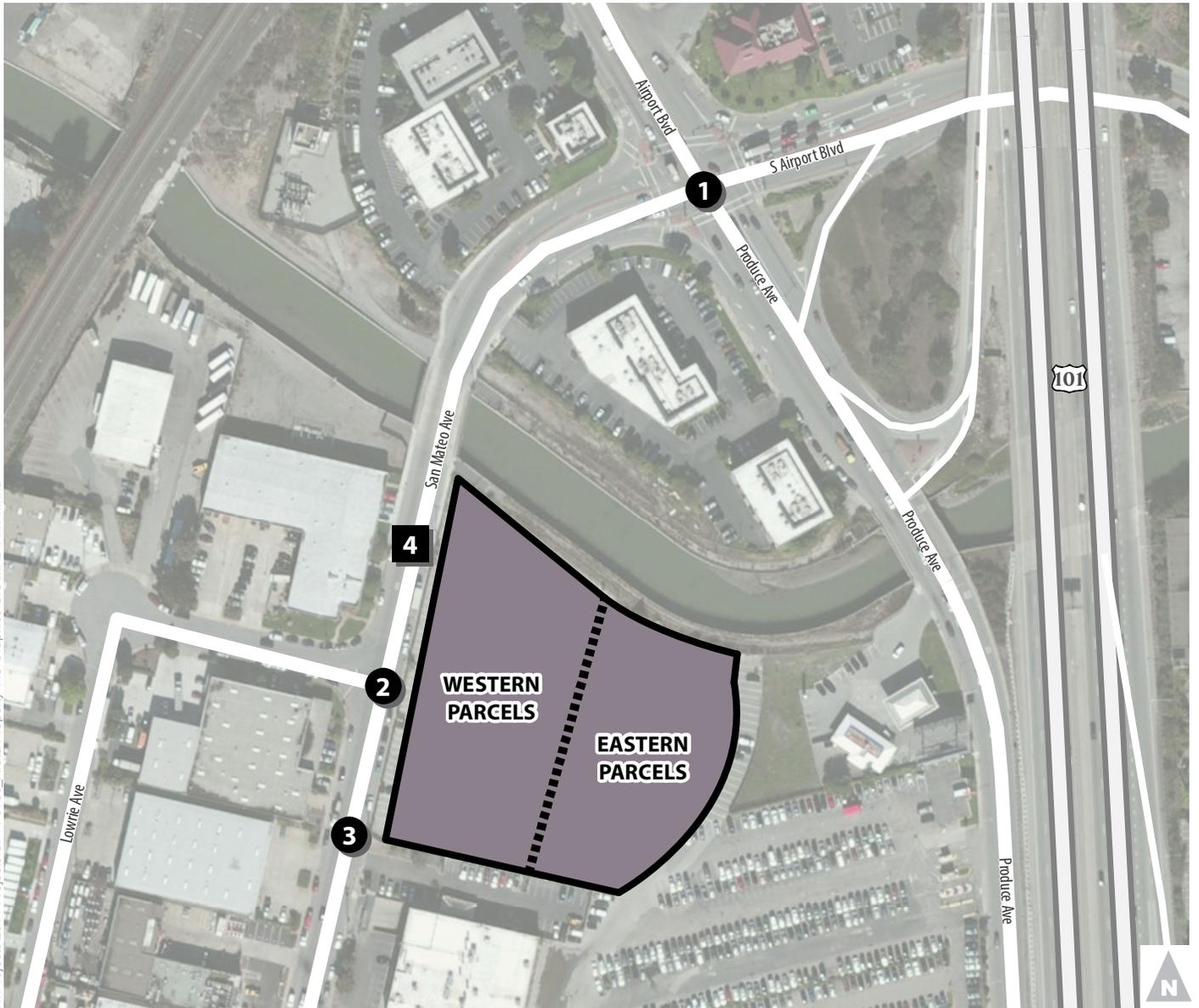
Figure A-3: Project Trip Turning Movements – AM Peak Hour

Figure A-4: Project Trip Turning Movements – PM Peak Hour

Figure A-5: Existing Plus Project Peak Hour Turning Movements – AM Peak Hour

Figure A-6: Existing Plus Project Peak Hour Turning Movements – PM Peak Hour

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1. San Mateo Ave/Airport Blvd	2. Lowrie Ave/San Mateo Ave	3. Peninsula Autobody Drwy/San Mateo Ave	4. Proposed Drwy/San Mateo Ave
<p> San Mateo Avenue: 76 (65) left, 665 (1,070) through, 157 (123) right Airport Boulevard: 203 (450) left, 180 (207) through, 362 (827) right Produce Avenue: 98 (141) left, 150 (167) through, 128 (220) right San Mateo Avenue (from Produce Ave): 186 (113) left, 36 (22) through, 309 (205) right </p>	<p> San Mateo Avenue: 68 (38) left, 331 (347) right Lowrie Avenue: 30 (79) left, 5 (14) right San Mateo Avenue (from Lowrie Ave): 12 (15) left, 343 (406) right </p>	<p> San Mateo Avenue: 335 (365) left, 1 (2) right Peninsula Autobody Driveway: 352 (421) left, 0 (1) right San Mateo Avenue (from Peninsula Driveway): 0 (1) left, 1 (0) right </p>	<p style="text-align: center;">PROPOSED INTERSECTION</p>



Traffic Signal



Turn Lane



Study Intersection



Stop Sign

AM (PM) Peak Hour Traffic Volume



Future Study Intersection

Figure A-1

Existing Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control



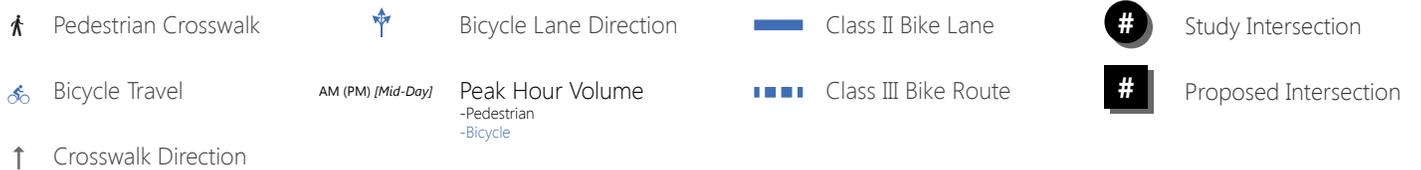
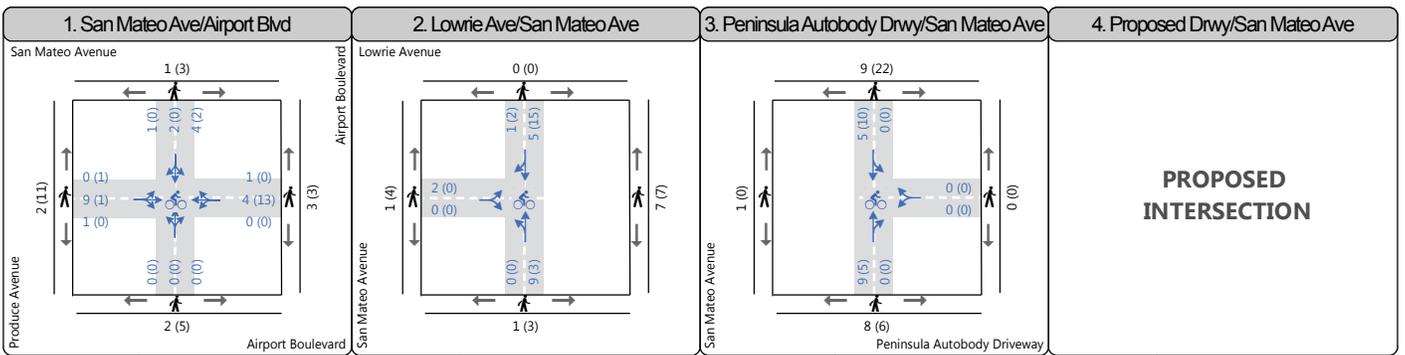
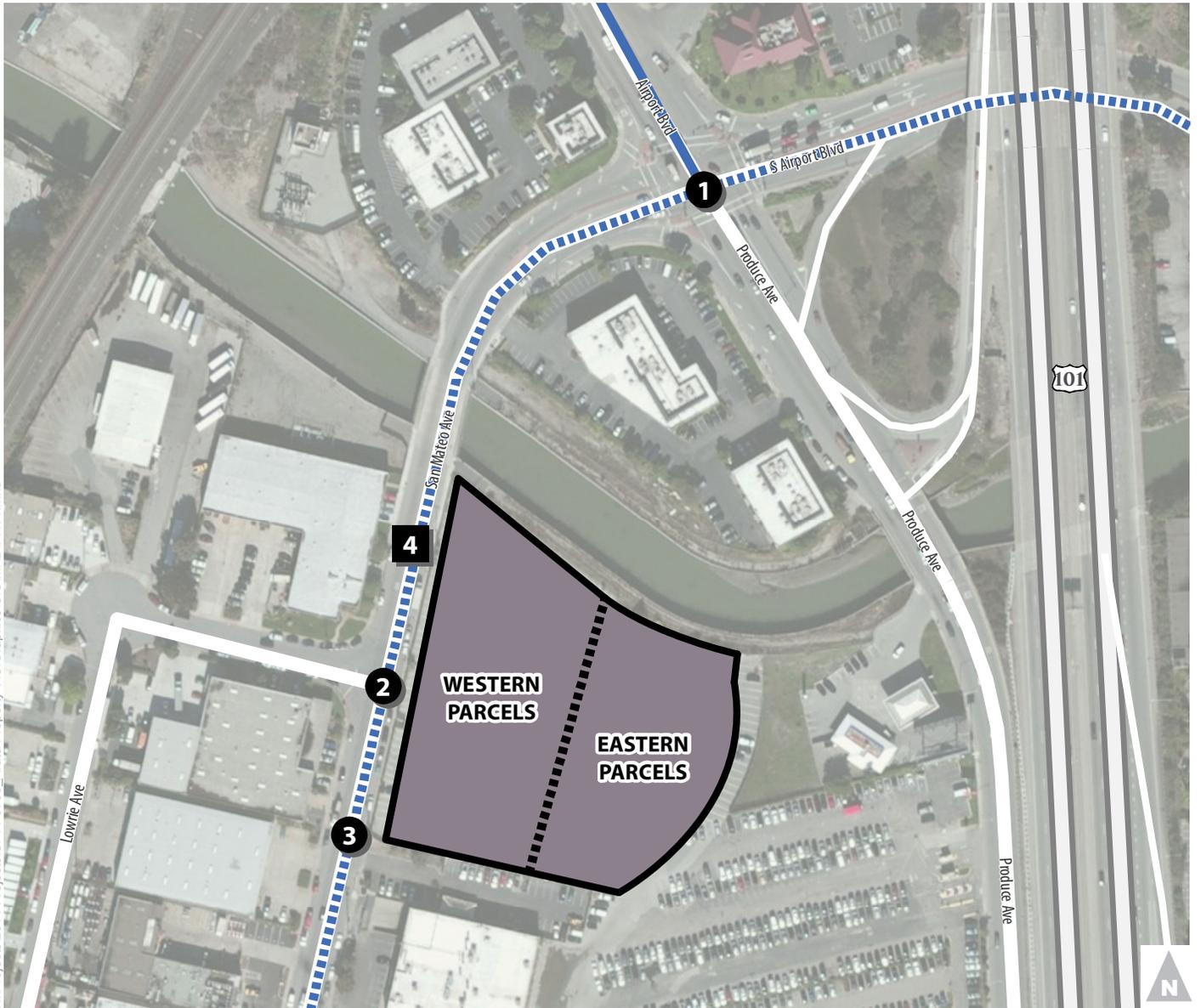
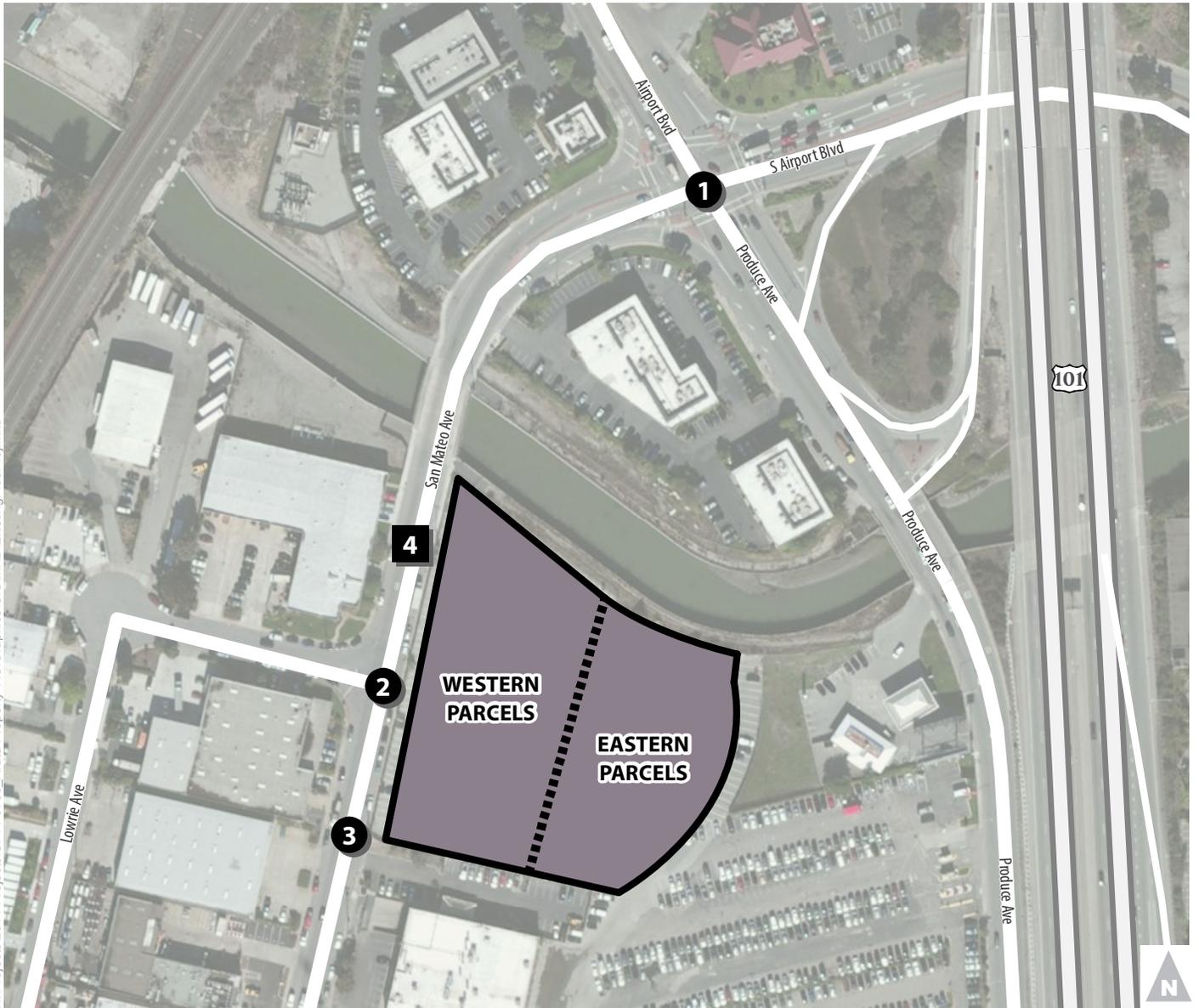


Figure A-2
Existing Pedestrian and Bicycle Facilities and Volumes

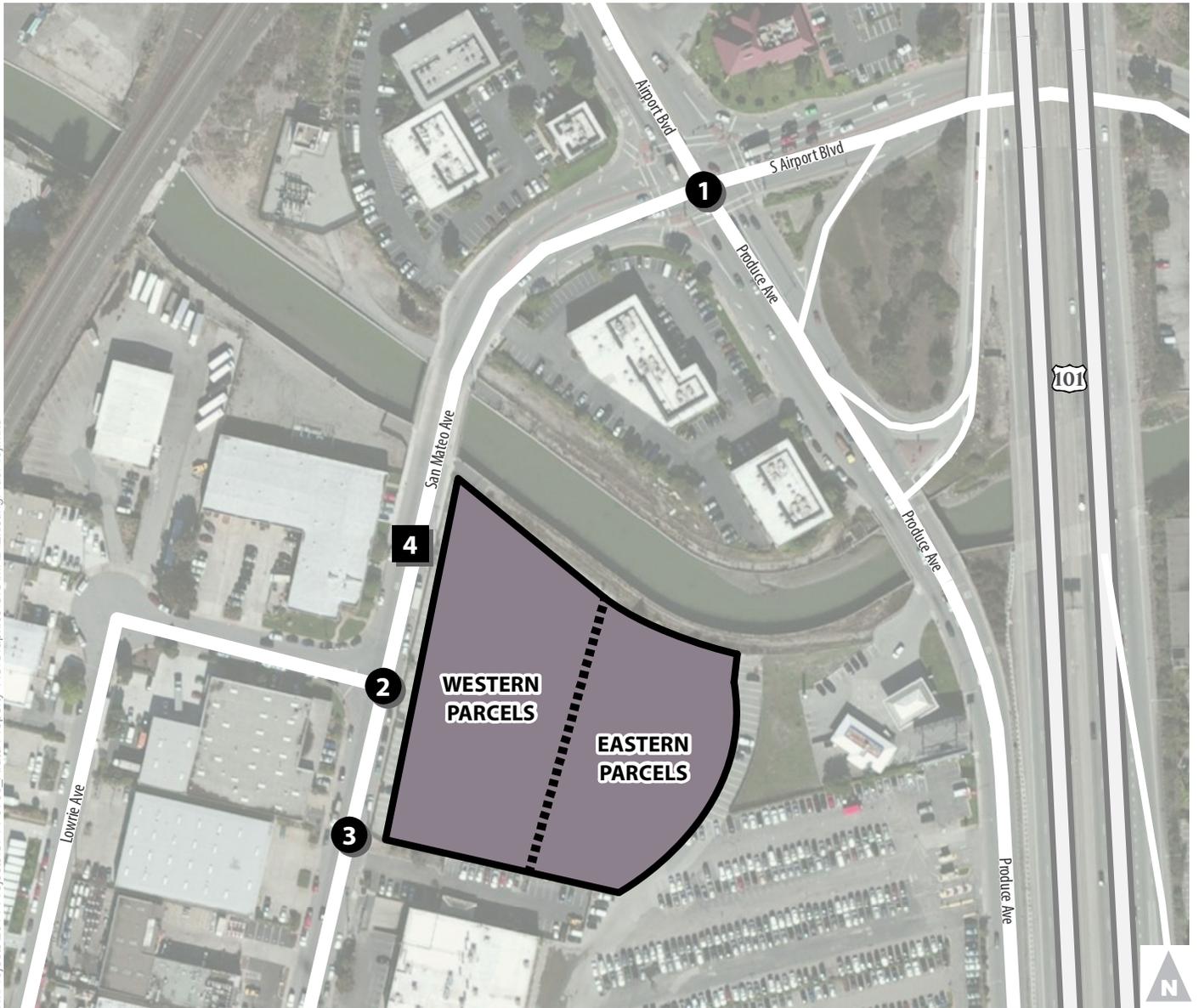


1. San Mateo Ave/Airport Blvd	2. Lowrie Ave/San Mateo Ave	3. Peninsula Autobody Drwy/San Mateo Ave	4. Proposed Drwy/San Mateo Ave
<p>San Mateo Avenue: 1 (1) [2], 0 (0) [0], 0 (0) [0]</p> <p>Airport Boulevard: 0 (0) [0], 2 (4) [9], 0 (0) [0]</p> <p>Produce Avenue: 1 (1) [1], 1 (1) [1], 1 (1) [1]</p> <p>3 (5) [10], 0 (0) [0], 0 (0) [0]</p>	<p>San Mateo Avenue: 0 (0) [0], 5 (10) [20]</p> <p>Lowrie Avenue: 0 (0) [0], 0 (0) [0]</p> <p>0 (0) [0], 0 (0) [0]</p>	<p>San Mateo Avenue: 0 (0) [0], 5 (9) [20]</p> <p>Peninsula Autobody Driveway: 0 (0) [0], 0 (0) [0]</p> <p>0 (0) [0], 1 (1) [3]</p>	<p>San Mateo Avenue: 0 (0) [0], 0 (0) [0]</p> <p>Proposed Driveway: 1 (1) [2], 1 (1) [1]</p> <p>0 (0) [0], 0 (0) [0]</p>

- # Study Intersection
- # Proposed Intersection
- Traffic Signal
- Stop Sign
- Turn Lane
- 50% (100%)
[100% plus additional spaces pending zoning]
- Peak Hour Traffic Volume by Parking Utility Scenario



Figure A-3
Project Vehicle Trips - AM

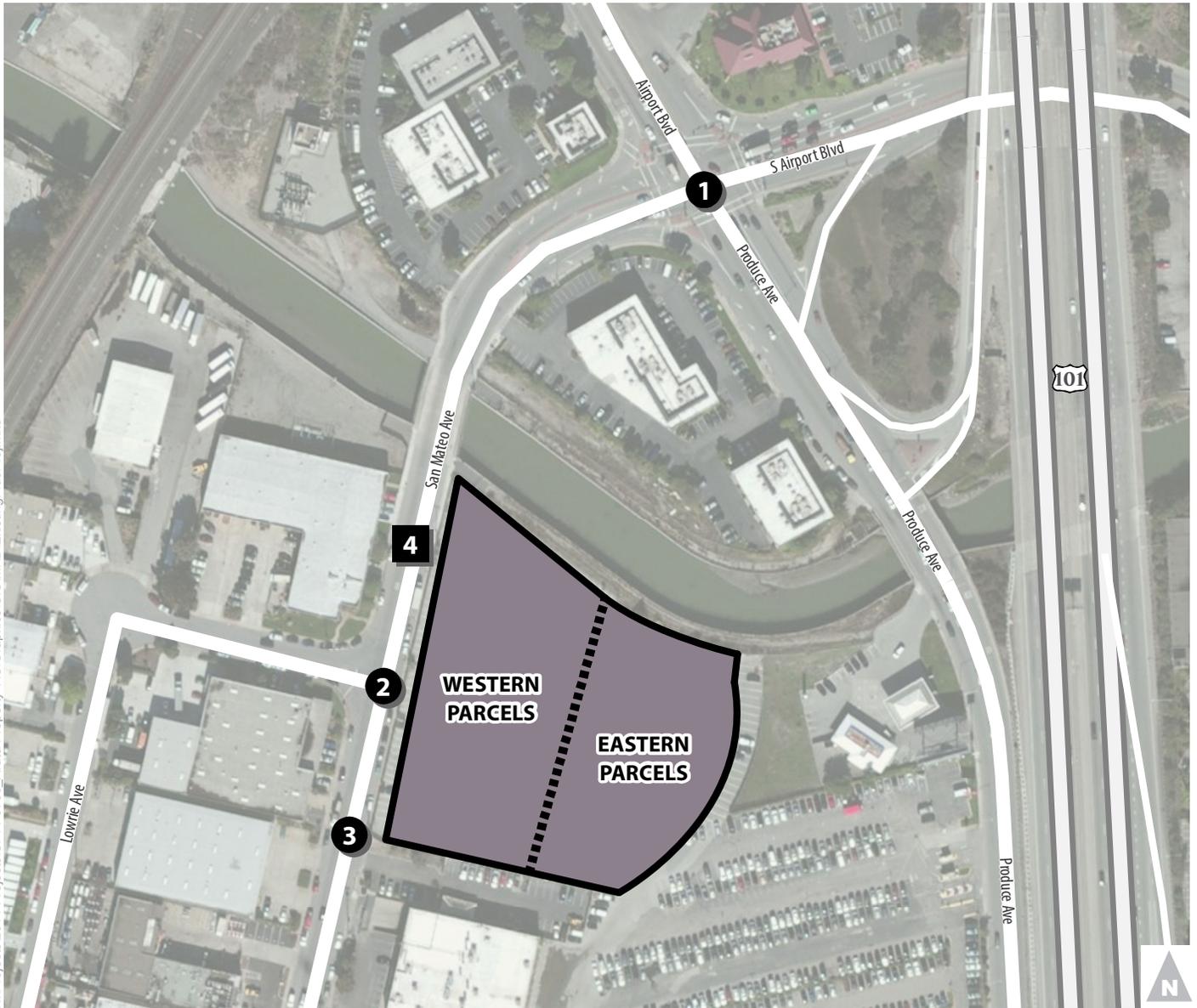


1. San Mateo Ave/Airport Blvd	2. Lowrie Ave/San Mateo Ave	3. Peninsula Autobody Drwy/San Mateo Ave	4. Proposed Drwy/San Mateo Ave
<p>San Mateo Avenue</p> <p>Airport Boulevard</p> <p>Produce Avenue</p> <p>1 (1) [2] 0 (0) [0] 0 (0) [0]</p> <p>0 (0) [0] 3 (5) [11] 0 (0) [0]</p> <p>2 (4) [9] 1 (2) [5] 2 (4) [9]</p> <p>3 (6) [13] 0 (0) [0] 0 (0) [0]</p>	<p>Lowrie Avenue</p> <p>San Mateo Avenue</p> <p>0 (0) [0] 6 (12) [27]</p> <p>0 (0) [0] 0 (0) [0]</p> <p>0 (0) [0] 0 (0) [0]</p>	<p>San Mateo Avenue</p> <p>Peninsula Autobody Driveway</p> <p>0 (0) [0] 6 (11) [25]</p> <p>0 (0) [0] 0 (0) [0]</p> <p>0 (0) [0] 1 (2) [3]</p>	<p>San Mateo Avenue</p> <p>Proposed Driveway</p> <p>0 (0) [0] 0 (0) [0]</p> <p>5 (9) [21] 1 (1) [3]</p> <p>0 (0) [0] 0 (0) [0]</p>

- # Study Intersection
- # Proposed Intersection
- Traffic Signal
- Stop Sign
- Turn Lane
- 50% (100%)
[100% plus additional spaces pending zoning]
- Peak Hour Traffic Volume by Parking Utility Scenario



Figure A-4
Project Vehicle Trips - PM



1. San Mateo Ave/Airport Blvd	2. Lowrie Ave/San Mateo Ave	3. Peninsula Autobody Drwy/San Mateo Ave	4. Proposed Drwy/San Mateo Ave
<p>San Mateo Avenue</p> <p>77 (77) [78] 665 (665) [665] 157 (157) [157]</p> <p>Airport Boulevard</p> <p>203 (203) [203] 182 (184) [189] 362 (362) [362]</p> <p>Produce Avenue</p> <p>99 (99) [99] 151 (151) [151] 129 (129) [129]</p> <p>188 (191) [196] 36 (36) [36] 309 (309) [309]</p>	<p>Lowrie Avenue</p> <p>68 (68) [68] 336 (341) [351]</p> <p>San Mateo Avenue</p> <p>30 (30) [30] 5 (5) [5]</p> <p>12 (12) [12] 343 (343) [343]</p>	<p>San Mateo Avenue</p> <p>335 (335) [335] 6 (10) [21]</p> <p>Peninsula Autobody Driveway</p> <p>0 (0) [0] 1 (1) [1]</p> <p>352 (352) [352] 1 (1) [3]</p>	<p>Proposed Driveway</p> <p>403 (408) [418]</p> <p>San Mateo Avenue</p> <p>1 (1) [2] 1 (1) [1]</p> <p>373 (373) [373]</p>

Study Intersection # Proposed Intersection

Traffic Signal Stop Sign

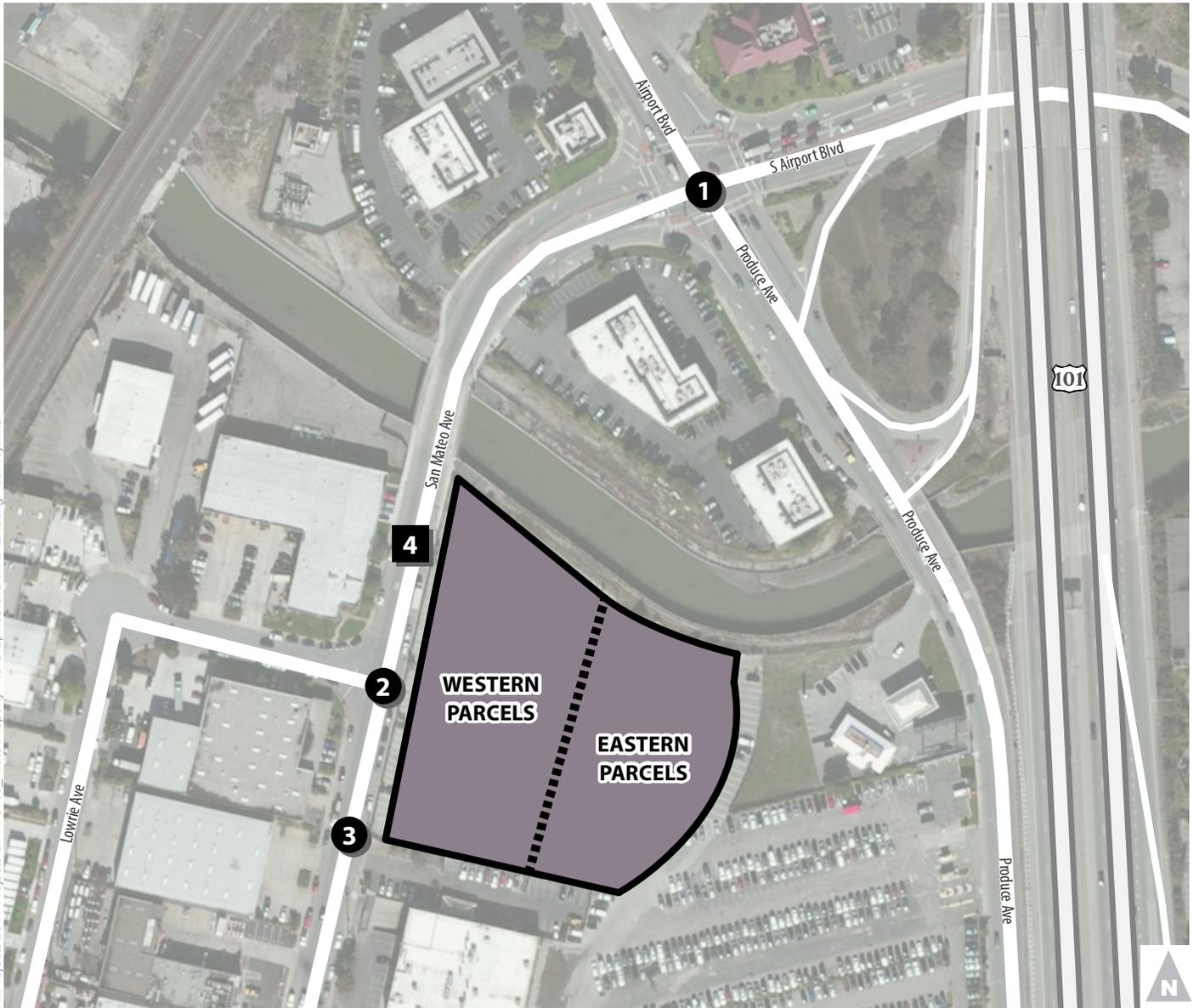
Turn Lane

50% (100%)
[100% plus additional spaces pending zoning]

Peak Hour Traffic Volume by Parking Utility Scenario



Figure A-5
Existing Plus Project Vehicle Trips - AM



1. San Mateo Ave/Airport Blvd	2. Lowrie Ave/San Mateo Ave	3. Peninsula Autobody Drwy/San Mateo Ave	4. Proposed Drwy/San Mateo Ave
<p>San Mateo Avenue</p> <p>96 (96) [97] 1,070 (1,070) [1,070] 123 (123) [123]</p> <p>Airport Boulevard</p> <p>450 (450) [450] 210 (212) [218] 827 (827) [827]</p> <p>Produce Avenue</p> <p>116 (119) [126] 22 (22) [22] 205 (205) [205]</p> <p>143 (145) [150] 168 (169) [172] 222 (224) [229]</p>	<p>Lowrie Avenue</p> <p>38 (38) [38] 363 (369) [374]</p> <p>San Mateo Avenue</p> <p>79 (79) [79] 14 (14) [14]</p> <p>15 (15) [15] 406 (406) [406]</p>	<p>San Mateo Avenue</p> <p>365 (365) [365] 8 (13) [27]</p> <p>Peninsula Autobody Driveway</p> <p>1 (1) [1] 0 (0) [0]</p> <p>San Mateo Avenue</p> <p>421 (421) [421] 2 (3) [4]</p>	<p>Proposed Drwy</p> <p>390 (396) [390]</p> <p>San Mateo Avenue</p> <p>5 (9) [21] 1 (1) [3]</p> <p>485 (485) [485]</p>

Study Intersection # Proposed Intersection

Traffic Signal Stop Sign

Turn Lane

50% (100%)
[100% plus additional spaces pending zoning]

Peak Hour Traffic Volume by Parking Utility Scenario



Figure A-6
Existing Plus Project Vehicle Trips - PM



**ATTACHMENT B:
LEVEL OF SERVICE CALCULATION WORKSHEETS**

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

11/17/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	150	128	362	180	203	186	36	309	157	665	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3373	1533	1610	3307	1555	1770	3539	1557	1770	3539	1558
Flt Permitted	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3373	1533	1610	3307	1555	1770	3539	1557	1770	3539	1558
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	113	172	147	421	209	236	202	39	336	164	693	79
RTOR Reduction (vph)	0	0	129	0	0	187	0	0	270	0	0	52
Lane Group Flow (vph)	93	192	18	210	420	49	202	39	66	164	693	27
Confl. Peds. (#/hr)	1		2	2		1	2		3	3		2
Confl. Bikes (#/hr)			9			4						2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.3	19.6	19.6	30.5	34.8	34.8
Effective Green, g (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.3	19.6	19.6	30.5	34.8	34.8
Actuated g/C Ratio	0.12	0.12	0.12	0.21	0.21	0.21	0.15	0.20	0.20	0.30	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	404	183	334	687	323	270	693	305	539	1231	542
v/s Ratio Prot	c0.06	0.06		c0.13	0.13		c0.11	0.01		0.09	c0.20	
v/s Ratio Perm			0.01			0.03			0.04			0.02
v/c Ratio	0.48	0.48	0.10	0.63	0.61	0.15	0.75	0.06	0.22	0.30	0.56	0.05
Uniform Delay, d1	41.1	41.1	39.2	36.1	35.9	32.4	40.5	32.7	33.7	26.6	26.4	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.9	0.2	3.7	1.6	0.2	10.8	0.0	0.4	0.3	1.9	0.2
Delay (s)	43.0	41.9	39.4	39.8	37.5	32.6	51.3	32.7	34.1	26.9	28.3	21.8
Level of Service	D	D	D	D	D	C	D	C	C	C	C	C
Approach Delay (s)		41.3			36.7			40.0			27.5	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 TWSC
 2: San Mateo Avenue & Lowrie Avenue

11/17/2014

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	5	12	343	331	68
Conflicting Peds, #/hr	0	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	5	12	350	338	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	747	374	408
Stage 1	373	-	-
Stage 2	374	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	381	672	1151
Stage 1	696	-	-
Stage 2	696	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	375	671	1150
Mov Cap-2 Maneuver	375	-	-
Stage 1	695	-	-
Stage 2	686	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	400	-	-
HCM Lane V/C Ratio	0.011	-	0.089	-	-
HCM Control Delay (s)	8.2	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	352	0	1	335
Conflicting Peds, #/hr	9	8	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	367	0	1	349

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	727	376	0
Stage 1	376	-	-
Stage 2	351	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	391	670	1182
Stage 1	694	-	-
Stage 2	713	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	388	665	1182
Mov Cap-2 Maneuver	388	-	-
Stage 1	689	-	-
Stage 2	712	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1182	-
HCM Lane V/C Ratio	-	-	0.003	0.001	-
HCM Control Delay (s)	-	-	14.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

11/17/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	167	220	827	207	450	113	22	205	123	1070	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3357	1538	1610	3281	1538	1770	3539	1557	1770	3539	1543
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3357	1538	1610	3281	1538	1770	3539	1557	1770	3539	1543
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	142	169	222	835	209	455	114	22	207	124	1081	96
RTOR Reduction (vph)	0	0	175	0	0	341	0	0	190	0	0	60
Lane Group Flow (vph)	101	210	47	417	627	114	114	22	17	124	1081	36
Confl. Peds. (#/hr)	3		5	5		3	11		3	3		11
Confl. Bikes (#/hr)			1			13						
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.2	8.2	8.2	40.0	38.0	38.0
Effective Green, g (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.2	8.2	8.2	40.0	38.0	38.0
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.25	0.25	0.10	0.08	0.08	0.40	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	325	149	402	820	384	180	290	127	708	1344	586
v/s Ratio Prot	c0.06	0.06		c0.26	0.19		c0.06	0.01		0.07	c0.31	
v/s Ratio Perm			0.03			0.07			0.01			0.02
v/c Ratio	0.65	0.65	0.31	1.04	1.00dl	0.30	0.63	0.08	0.13	0.18	0.80	0.06
Uniform Delay, d1	43.5	43.5	42.1	37.5	34.8	30.4	43.1	42.4	42.6	19.4	27.7	19.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9	4.4	1.2	54.9	4.3	0.4	7.1	0.1	0.5	0.1	5.2	0.2
Delay (s)	52.4	47.9	43.3	92.4	39.0	30.8	50.2	42.5	43.1	19.5	32.9	19.9
Level of Service	D	D	D	F	D	C	D	D	D	B	C	B
Approach Delay (s)		46.8			51.4			45.4			30.6	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	79	14	15	406	347	38
Conflicting Peds, #/hr	0	3	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	16	17	472	403	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	936	433	451
Stage 1	429	-	-
Stage 2	507	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	294	623	1109
Stage 1	657	-	-
Stage 2	605	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	286	619	1105
Mov Cap-2 Maneuver	286	-	-
Stage 1	655	-	-
Stage 2	591	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1105	-	311	-	-
HCM Lane V/C Ratio	0.016	-	0.348	-	-
HCM Control Delay (s)	8.3	0	22.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.5	-	-

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	421	1	2	365
Conflicting Peds, #/hr	22	6	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	490	1	2	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	941	512	0 0 513 0
Stage 1	512	-	- - - -
Stage 2	429	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	292	562	- - 1052 -
Stage 1	602	-	- - - -
Stage 2	657	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	286	552	- - 1052 -
Mov Cap-2 Maneuver	286	-	- - - -
Stage 1	591	-	- - - -
Stage 2	656	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	552	1052	-
HCM Lane V/C Ratio	-	-	0.002	0.002	-
HCM Control Delay (s)	-	-	11.5	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/3/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	151	129	362	182	203	189	36	309	157	665	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3372	1533	1610	3308	1555	1770	3539	1557	1770	3539	1558
Flt Permitted	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3372	1533	1610	3308	1555	1770	3539	1557	1770	3539	1558
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	114	174	148	421	212	236	205	39	336	164	693	80
RTOR Reduction (vph)	0	0	130	0	0	187	0	0	270	0	0	52
Lane Group Flow (vph)	93	195	18	210	423	49	205	39	66	164	693	28
Confl. Peds. (#/hr)	1		2	2		1	2		3	3		2
Confl. Bikes (#/hr)			9			4						2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.4	19.6	19.6	30.5	34.7	34.7
Effective Green, g (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.4	19.6	19.6	30.5	34.7	34.7
Actuated g/C Ratio	0.12	0.12	0.12	0.21	0.21	0.21	0.15	0.20	0.20	0.30	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	404	183	334	688	323	272	693	305	539	1228	540
v/s Ratio Prot	0.06	c0.06		c0.13	0.13		c0.12	0.01		0.09	c0.20	
v/s Ratio Perm			0.01			0.03			0.04			0.02
v/c Ratio	0.48	0.48	0.10	0.63	0.61	0.15	0.75	0.06	0.22	0.30	0.56	0.05
Uniform Delay, d1	41.1	41.1	39.2	36.1	36.0	32.4	40.5	32.7	33.7	26.6	26.5	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.9	0.2	3.7	1.6	0.2	11.2	0.0	0.4	0.3	1.9	0.2
Delay (s)	43.0	42.0	39.4	39.8	37.6	32.6	51.7	32.7	34.1	26.9	28.4	21.9
Level of Service	D	D	D	D	D	C	D	C	C	C	C	C
Approach Delay (s)		41.3			36.8			40.2			27.6	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	5	12	343	336	68
Conflicting Peds, #/hr	0	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	5	12	350	343	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	753	380	413
Stage 1	379	-	-
Stage 2	374	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	377	667	1146
Stage 1	692	-	-
Stage 2	696	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	371	666	1145
Mov Cap-2 Maneuver	371	-	-
Stage 1	691	-	-
Stage 2	686	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1145	-	396	-	-
HCM Lane V/C Ratio	0.011	-	0.09	-	-
HCM Control Delay (s)	8.2	0	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	352	1	6	335
Conflicting Peds, #/hr	9	8	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	367	1	6	349

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	737	376	0 0 377 0
Stage 1	376	-	- - - -
Stage 2	361	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	386	670	- - 1181 -
Stage 1	694	-	- - - -
Stage 2	705	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	381	665	- - 1181 -
Mov Cap-2 Maneuver	381	-	- - - -
Stage 1	689	-	- - - -
Stage 2	701	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	381	1181	-
HCM Lane V/C Ratio	-	-	0.003	0.005	-
HCM Control Delay (s)	-	-	14.5	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 TWSC
 4: San Mateo Avenue & Proposed Driveway

12/3/2014

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	1	373	0	0	403
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	405	0	0	438

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	843	405	0
Stage 1	405	-	-
Stage 2	438	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	334	646	1154
Stage 1	673	-	-
Stage 2	651	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	334	646	1154
Mov Cap-2 Maneuver	334	-	-
Stage 1	673	-	-
Stage 2	651	-	-

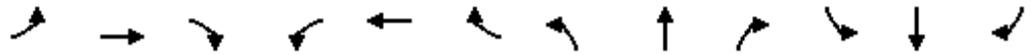
Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	440	1154	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	-	-	13.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/1/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	143	168	222	827	210	450	116	22	205	123	1070	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3357	1538	1610	3281	1538	1770	3539	1557	1770	3539	1543
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3357	1538	1610	3281	1538	1770	3539	1557	1770	3539	1543
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	144	170	224	835	212	455	117	22	207	124	1081	97
RTOR Reduction (vph)	0	0	175	0	0	341	0	0	190	0	0	60
Lane Group Flow (vph)	102	212	49	417	630	114	117	22	17	124	1081	37
Confl. Peds. (#/hr)	3		5	5		3	11		3	3		11
Confl. Bikes (#/hr)			1			13						
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.3	8.2	8.2	40.0	37.9	37.9
Effective Green, g (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.3	8.2	8.2	40.0	37.9	37.9
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.25	0.25	0.10	0.08	0.08	0.40	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	325	149	402	820	384	182	290	127	708	1341	584
v/s Ratio Prot	c0.06	0.06		c0.26	0.19		c0.07	0.01		0.07	c0.31	
v/s Ratio Perm			0.03			0.07			0.01			0.02
v/c Ratio	0.65	0.65	0.33	1.04	1.00dl	0.30	0.64	0.08	0.13	0.18	0.81	0.06
Uniform Delay, d1	43.5	43.5	42.1	37.5	34.8	30.4	43.1	42.4	42.6	19.4	27.8	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.5	4.6	1.3	54.9	4.4	0.4	7.5	0.1	0.5	0.1	5.3	0.2
Delay (s)	53.0	48.2	43.4	92.4	39.2	30.8	50.6	42.5	43.1	19.5	33.0	20.0
Level of Service	D	D	D	F	D	C	D	D	D	B	C	B
Approach Delay (s)		47.1			51.4			45.6			30.8	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	79	14	15	406	353	38
Conflicting Peds, #/hr	0	3	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	16	17	472	410	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	943	440	458
Stage 1	436	-	-
Stage 2	507	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	291	617	1103
Stage 1	652	-	-
Stage 2	605	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	283	613	1099
Mov Cap-2 Maneuver	283	-	-
Stage 1	650	-	-
Stage 2	591	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.9	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1099	-	308	-	-
HCM Lane V/C Ratio	0.016	-	0.351	-	-
HCM Control Delay (s)	8.3	0	22.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.5	-	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	421	2	8	365
Conflicting Peds, #/hr	22	6	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	490	2	9	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	956	513	0
Stage 1	513	-	-
Stage 2	443	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	286	561	1052
Stage 1	601	-	-
Stage 2	647	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	278	551	1052
Mov Cap-2 Maneuver	278	-	-
Stage 1	590	-	-
Stage 2	640	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	1052	-
HCM Lane V/C Ratio	-	-	0.002	0.009	-
HCM Control Delay (s)	-	-	11.5	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	5	485	0	0	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	527	0	0	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	951	527	0
Stage 1	527	-	-
Stage 2	424	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	288	551	1040
Stage 1	592	-	-
Stage 2	660	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	288	551	1040
Mov Cap-2 Maneuver	288	-	-
Stage 1	592	-	-
Stage 2	660	-	-

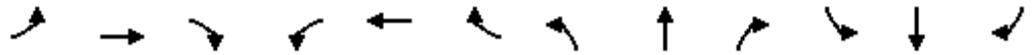
Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	478	1040	-
HCM Lane V/C Ratio	-	-	0.014	-	-
HCM Control Delay (s)	-	-	12.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/3/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	151	129	362	184	203	191	36	309	157	665	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3372	1533	1610	3308	1555	1770	3539	1557	1770	3539	1558
Flt Permitted	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3372	1533	1610	3308	1555	1770	3539	1557	1770	3539	1558
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	114	174	148	421	214	236	208	39	336	164	693	80
RTOR Reduction (vph)	0	0	130	0	0	187	0	0	270	0	0	52
Lane Group Flow (vph)	93	195	18	210	425	49	208	39	66	164	693	28
Confl. Peds. (#/hr)	1		2	2		1	2		3	3		2
Confl. Bikes (#/hr)			9			4						2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.5	19.6	19.6	30.5	34.6	34.6
Effective Green, g (s)	12.0	12.0	12.0	20.8	20.8	20.8	15.5	19.6	19.6	30.5	34.6	34.6
Actuated g/C Ratio	0.12	0.12	0.12	0.21	0.21	0.21	0.16	0.20	0.20	0.30	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	404	183	334	688	323	274	693	305	539	1224	539
v/s Ratio Prot	0.06	c0.06		c0.13	0.13		c0.12	0.01		0.09	c0.20	
v/s Ratio Perm			0.01			0.03			0.04			0.02
v/c Ratio	0.48	0.48	0.10	0.63	0.62	0.15	0.76	0.06	0.22	0.30	0.57	0.05
Uniform Delay, d1	41.1	41.1	39.2	36.1	36.0	32.4	40.5	32.7	33.7	26.6	26.6	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.9	0.2	3.7	1.7	0.2	11.4	0.0	0.4	0.3	1.9	0.2
Delay (s)	43.0	42.0	39.4	39.8	37.6	32.6	51.9	32.7	34.1	26.9	28.5	22.0
Level of Service	D	D	D	D	D	C	D	C	C	C	C	C
Approach Delay (s)		41.3			36.8			40.4			27.7	
Approach LOS		D			D			D			C	

Intersection Summary		
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.61	D
Actuated Cycle Length (s)	100.0	Sum of lost time (s)
Intersection Capacity Utilization	59.3%	17.1
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		B

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	5	12	343	341	68
Conflicting Peds, #/hr	0	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	5	12	350	348	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	758	385	418
Stage 1	384	-	-
Stage 2	374	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	375	663	1141
Stage 1	688	-	-
Stage 2	696	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	370	662	1140
Mov Cap-2 Maneuver	370	-	-
Stage 1	687	-	-
Stage 2	686	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1140	-	395	-	-
HCM Lane V/C Ratio	0.011	-	0.09	-	-
HCM Control Delay (s)	8.2	0	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	352	1	10	335
Conflicting Peds, #/hr	9	8	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	367	1	10	349

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	746	376	0 0 377 0
Stage 1	376	-	- - - -
Stage 2	370	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	381	670	- - 1181 -
Stage 1	694	-	- - - -
Stage 2	699	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	374	665	- - 1181 -
Mov Cap-2 Maneuver	374	-	- - - -
Stage 1	689	-	- - - -
Stage 2	691	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	374	1181	-
HCM Lane V/C Ratio	-	-	0.003	0.009	-
HCM Control Delay (s)	-	-	14.7	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	1	373	0	0	408
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	405	0	0	443

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	848	405	0
Stage 1	405	-	-
Stage 2	443	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	332	646	1154
Stage 1	673	-	-
Stage 2	647	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	332	646	1154
Mov Cap-2 Maneuver	332	-	-
Stage 1	673	-	-
Stage 2	647	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	439	1154	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	-	-	13.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/1/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	169	224	827	212	450	119	22	205	123	1070	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3357	1538	1610	3282	1538	1770	3539	1557	1770	3539	1543
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3357	1538	1610	3282	1538	1770	3539	1557	1770	3539	1543
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	146	171	226	835	214	455	120	22	207	124	1081	97
RTOR Reduction (vph)	0	0	175	0	0	341	0	0	190	0	0	60
Lane Group Flow (vph)	104	213	51	417	632	114	120	22	17	124	1081	37
Confl. Peds. (#/hr)	3		5	5		3	11		3	3		11
Confl. Bikes (#/hr)			1			13						
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.4	8.2	8.2	40.0	37.8	37.8
Effective Green, g (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.4	8.2	8.2	40.0	37.8	37.8
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.25	0.25	0.10	0.08	0.08	0.40	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	325	149	402	820	384	184	290	127	708	1337	583
v/s Ratio Prot	c0.06	0.06		c0.26	0.19		c0.07	0.01		0.07	c0.31	
v/s Ratio Perm			0.03			0.07			0.01			0.02
v/c Ratio	0.67	0.66	0.34	1.04	1.00dl	0.30	0.65	0.08	0.13	0.18	0.81	0.06
Uniform Delay, d1	43.6	43.5	42.2	37.5	34.8	30.4	43.1	42.4	42.6	19.4	27.9	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	4.7	1.4	54.9	4.5	0.4	8.0	0.1	0.5	0.1	5.4	0.2
Delay (s)	53.9	48.2	43.5	92.4	39.3	30.8	51.1	42.5	43.1	19.5	33.2	20.0
Level of Service	D	D	D	F	D	C	D	D	D	B	C	C
Approach Delay (s)		47.4			51.5			45.8			30.9	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	79	14	15	406	359	38
Conflicting Peds, #/hr	0	3	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	16	17	472	417	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	950	447	465
Stage 1	443	-	-
Stage 2	507	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	289	612	1096
Stage 1	647	-	-
Stage 2	605	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	282	608	1092
Mov Cap-2 Maneuver	282	-	-
Stage 1	645	-	-
Stage 2	591	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1092	-	307	-	-
HCM Lane V/C Ratio	0.016	-	0.352	-	-
HCM Control Delay (s)	8.3	0	23	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.5	-	-

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	421	3	13	365
Conflicting Peds, #/hr	22	6	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	490	3	15	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	968	513	0
Stage 1	513	-	-
Stage 2	455	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	282	561	1051
Stage 1	601	-	-
Stage 2	639	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	272	551	1051
Mov Cap-2 Maneuver	272	-	-
Stage 1	590	-	-
Stage 2	627	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	1051	-
HCM Lane V/C Ratio	-	-	0.002	0.014	-
HCM Control Delay (s)	-	-	11.5	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	9	485	0	0	396
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	10	527	0	0	430

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	957	527	0
Stage 1	527	-	-
Stage 2	430	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	286	551	1040
Stage 1	592	-	-
Stage 2	656	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	286	551	1040
Mov Cap-2 Maneuver	286	-	-
Stage 1	592	-	-
Stage 2	656	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	504	1040	-
HCM Lane V/C Ratio	-	-	0.022	-	-
HCM Control Delay (s)	-	-	12.3	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/3/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	151	129	362	189	203	196	36	309	157	665	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3372	1533	1610	3309	1555	1770	3539	1557	1770	3539	1558
Flt Permitted	0.95	0.99	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3372	1533	1610	3309	1555	1770	3539	1557	1770	3539	1558
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	114	174	148	421	220	236	213	39	336	164	693	81
RTOR Reduction (vph)	0	0	130	0	0	187	0	0	270	0	0	53
Lane Group Flow (vph)	93	195	18	210	431	49	213	39	66	164	693	28
Confl. Peds. (#/hr)	1		2	2		1	2		3	3		2
Confl. Bikes (#/hr)			9			4						2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	12.0	12.0	12.0	20.9	20.9	20.9	15.7	19.5	19.5	30.5	34.3	34.3
Effective Green, g (s)	12.0	12.0	12.0	20.9	20.9	20.9	15.7	19.5	19.5	30.5	34.3	34.3
Actuated g/C Ratio	0.12	0.12	0.12	0.21	0.21	0.21	0.16	0.20	0.20	0.30	0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	404	183	336	691	324	277	690	303	539	1213	534
v/s Ratio Prot	0.06	c0.06		c0.13	0.13		c0.12	0.01		0.09	c0.20	
v/s Ratio Perm			0.01			0.03			0.04			0.02
v/c Ratio	0.48	0.48	0.10	0.62	0.62	0.15	0.77	0.06	0.22	0.30	0.57	0.05
Uniform Delay, d1	41.1	41.1	39.2	36.0	36.0	32.3	40.4	32.8	33.8	26.6	26.8	22.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.9	0.2	3.6	1.8	0.2	12.1	0.0	0.4	0.3	2.0	0.2
Delay (s)	43.0	42.0	39.4	39.6	37.7	32.5	52.5	32.8	34.2	26.9	28.8	22.2
Level of Service	D	D	D	D	D	C	D	C	C	C	C	C
Approach Delay (s)		41.3			36.8			40.7			27.9	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	5	12	343	351	68
Conflicting Peds, #/hr	0	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	5	12	350	358	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	768	395	429
Stage 1	394	-	-
Stage 2	374	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	370	654	1130
Stage 1	681	-	-
Stage 2	696	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	365	653	1129
Mov Cap-2 Maneuver	365	-	-
Stage 1	680	-	-
Stage 2	686	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1129	-	390	-	-
HCM Lane V/C Ratio	0.011	-	0.092	-	-
HCM Control Delay (s)	8.2	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	0	352	3	21	335
Conflicting Peds, #/hr	9	8	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	367	3	22	349

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	770	377	0 0 379 0
Stage 1	377	-	- - - -
Stage 2	393	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	369	670	- - 1179 -
Stage 1	694	-	- - - -
Stage 2	682	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	358	665	- - 1179 -
Mov Cap-2 Maneuver	358	-	- - - -
Stage 1	689	-	- - - -
Stage 2	666	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	358	1179	-
HCM Lane V/C Ratio	-	-	0.003	0.019	-
HCM Control Delay (s)	-	-	15.1	8.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

HCM 2010 TWSC
 4: San Mateo Avenue & Proposed Driveway

12/3/2014

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	2	373	0	0	418
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	405	0	0	454

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	859	405	0
Stage 1	405	-	-
Stage 2	454	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	327	646	1154
Stage 1	673	-	-
Stage 2	640	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	327	646	1154
Mov Cap-2 Maneuver	327	-	-
Stage 1	673	-	-
Stage 2	640	-	-

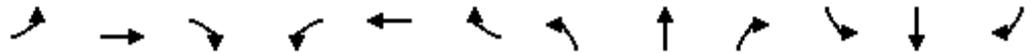
Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	487	1154	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	12.4	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM Signalized Intersection Capacity Analysis

1: Produce Avenue & San Mateo Avenue & Airport Boulevard

12/3/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	172	229	827	218	450	126	22	205	123	1070	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3355	1538	1610	3283	1538	1770	3539	1557	1770	3539	1543
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3355	1538	1610	3283	1538	1770	3539	1557	1770	3539	1543
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	152	174	231	835	220	455	127	22	207	124	1081	98
RTOR Reduction (vph)	0	0	175	0	0	341	0	0	190	0	0	61
Lane Group Flow (vph)	106	220	56	417	638	114	127	22	17	124	1081	37
Confl. Peds. (#/hr)	3		5	5		3	11		3	3		11
Confl. Bikes (#/hr)			1			13						
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.5	8.2	8.2	40.0	37.7	37.7
Effective Green, g (s)	9.7	9.7	9.7	25.0	25.0	25.0	10.5	8.2	8.2	40.0	37.7	37.7
Actuated g/C Ratio	0.10	0.10	0.10	0.25	0.25	0.25	0.10	0.08	0.08	0.40	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	325	149	402	820	384	185	290	127	708	1334	581
v/s Ratio Prot	c0.07	0.07		c0.26	0.19		c0.07	0.01		0.07	c0.31	
v/s Ratio Perm			0.04			0.07			0.01			0.02
v/c Ratio	0.68	0.68	0.37	1.04	1.00dl	0.30	0.69	0.08	0.13	0.18	0.81	0.06
Uniform Delay, d1	43.6	43.6	42.3	37.5	34.9	30.4	43.2	42.4	42.6	19.4	27.9	19.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.2	5.5	1.6	54.9	4.7	0.4	10.1	0.1	0.5	0.1	5.4	0.2
Delay (s)	54.8	49.1	43.9	92.4	39.6	30.8	53.3	42.5	43.1	19.5	33.4	20.1
Level of Service	D	D	D	F	D	C	D	D	D	B	C	C
Approach Delay (s)		48.0			51.5			46.7			31.0	
Approach LOS		D			D			D			C	

Intersection Summary

HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	79	14	15	406	374	38
Conflicting Peds, #/hr	0	3	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	16	17	472	435	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	967	464	482
Stage 1	460	-	-
Stage 2	507	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	282	598	1081
Stage 1	636	-	-
Stage 2	605	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	275	595	1077
Mov Cap-2 Maneuver	275	-	-
Stage 1	634	-	-
Stage 2	591	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1077	-	299	-	-
HCM Lane V/C Ratio	0.016	-	0.362	-	-
HCM Control Delay (s)	8.4	0	23.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.6	-	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	1	421	4	27	365
Conflicting Peds, #/hr	22	6	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	490	5	31	424

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	1001	514	0	0	516	0
Stage 1	514	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	269	560	-	-	1050	-
Stage 1	600	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	254	550	-	-	1050	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	550	1050	-
HCM Lane V/C Ratio	-	-	0.002	0.03	-
HCM Control Delay (s)	-	-	11.6	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	21	485	0	0	409
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	23	527	0	0	445

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	972	527	527
Stage 1	527	-	-
Stage 2	445	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	280	551	1040
Stage 1	592	-	-
Stage 2	646	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	280	551	1040
Mov Cap-2 Maneuver	280	-	-
Stage 1	592	-	-
Stage 2	646	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	492	1040	-
HCM Lane V/C Ratio	-	-	0.053	-	-
HCM Control Delay (s)	-	-	12.7	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



**ATTACHMENT C:
DATA COLLECTION – PEAK PERIOD INTERSECTION
COUNTS AND DRIVEWAY COUNTS**

MARKS TRAFFIC DATA

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916.806.0250

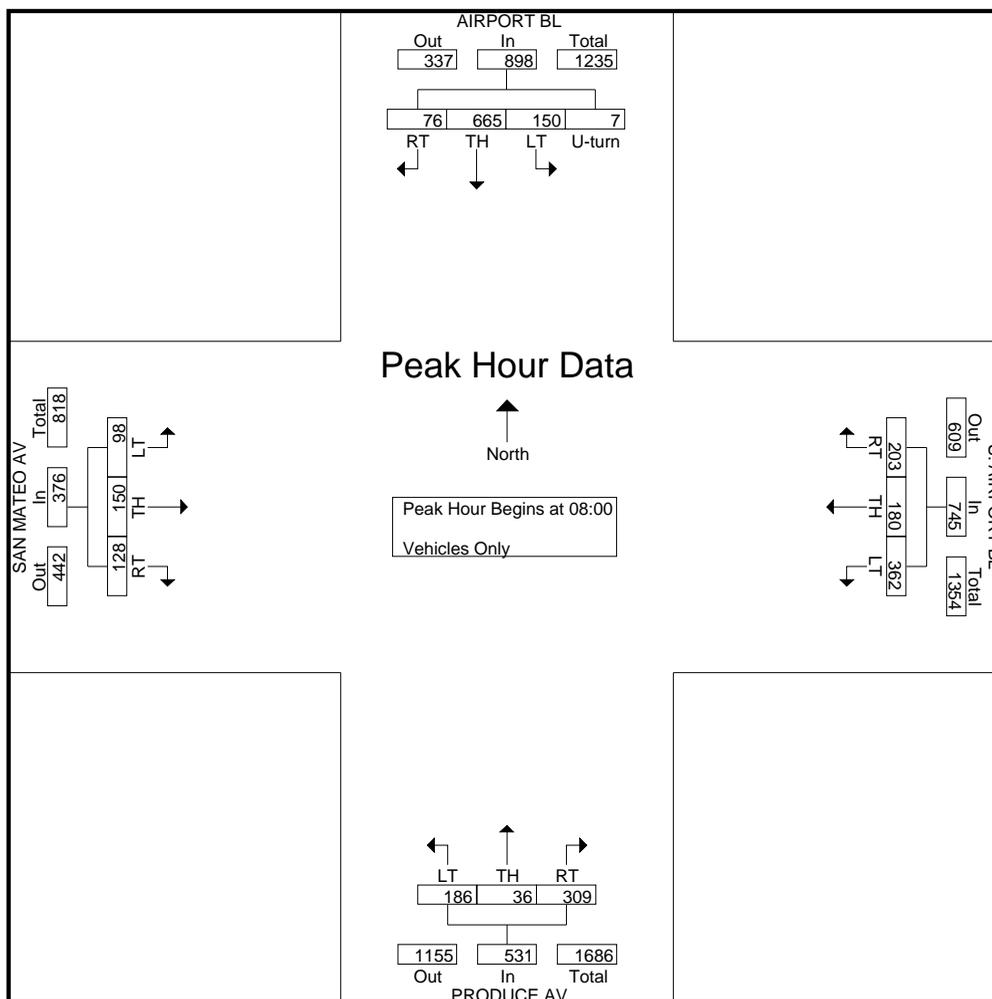
CITY OF SOUTH SAN FRANCISCO

File Name : airport-san mateo-a
Site Code : 7
Start Date : 9/10/2014
Page No : 1

Groups Printed- Vehicles Only

Start Time	AIRPORT BL Southbound					S. AIRPORT BL Westbound				PRODUCE AV Northbound				SAN MATEO AV Eastbound				Int. Total
	RT	TH	LT	U-turn	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
07:00	18	181	24	1	224	32	31	76	139	70	6	30	106	39	21	13	73	542
07:15	17	170	40	2	229	34	37	70	141	76	5	35	116	24	35	19	78	564
07:30	17	179	32	1	229	46	34	87	167	88	5	32	125	29	47	8	84	605
07:45	20	174	46	3	243	38	40	88	166	91	12	43	146	24	37	16	77	632
Total	72	704	142	7	925	150	142	321	613	325	28	140	493	116	140	56	312	2343
08:00	19	170	48	5	242	40	39	96	175	86	15	43	144	32	32	22	86	647
08:15	22	173	41	1	237	46	50	82	178	78	8	48	134	23	36	20	79	628
08:30	17	169	33	1	220	45	44	86	175	69	5	36	110	37	47	24	108	613
08:45	18	153	28	0	199	72	47	98	217	76	8	59	143	36	35	32	103	662
Total	76	665	150	7	898	203	180	362	745	309	36	186	531	128	150	98	376	2550
Grand Total	148	1369	292	14	1823	353	322	683	1358	634	64	326	1024	244	290	154	688	4893
Apprch %	8.1	75.1	16	0.8		26	23.7	50.3		61.9	6.2	31.8		35.5	42.2	22.4		
Total %	3	28	6	0.3	37.3	7.2	6.6	14	27.8	13	1.3	6.7	20.9	5	5.9	3.1	14.1	

Start Time	AIRPORT BL Southbound					S. AIRPORT BL Westbound				PRODUCE AV Northbound				SAN MATEO AV Eastbound				Int. Total
	RT	TH	LT	U-turn	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 08:00																		
08:00	19	170	48	5	242	40	39	96	175	86	15	43	144	32	32	22	86	647
08:15	22	173	41	1	237	46	50	82	178	78	8	48	134	23	36	20	79	628
08:30	17	169	33	1	220	45	44	86	175	69	5	36	110	37	47	24	108	613
08:45	18	153	28	0	199	72	47	98	217	76	8	59	143	36	35	32	103	662
Total Volume	76	665	150	7	898	203	180	362	745	309	36	186	531	128	150	98	376	2550
% App. Total	8.5	74.1	16.7	0.8		27.2	24.2	48.6		58.2	6.8	35		34	39.9	26.1		
PHF	.864	.961	.781	.350	.928	.705	.900	.923	.858	.898	.600	.788	.922	.865	.798	.766	.870	.963



MARKS TRAFFIC DATA

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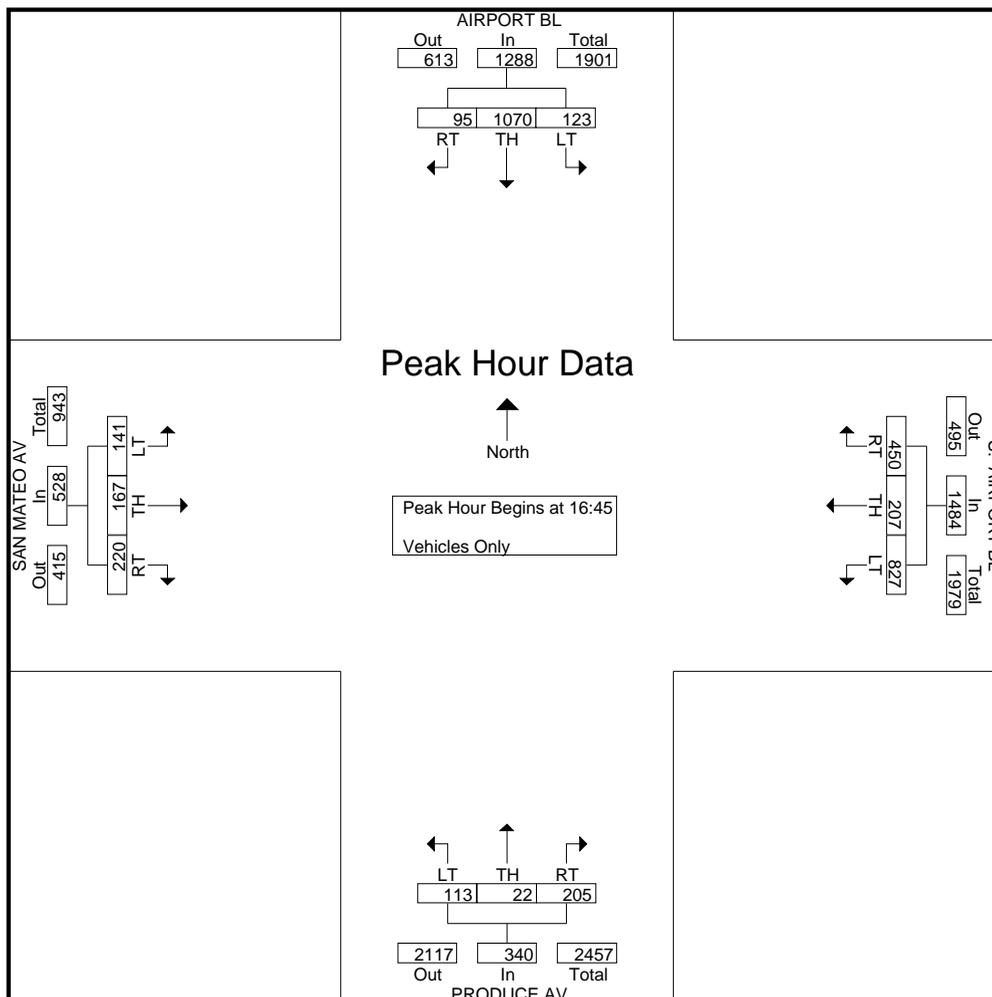
CITY OF SOUTH SAN FRANCISCO

File Name : airport-san mateo-p
Site Code : 7
Start Date : 9/10/2014
Page No : 1

Groups Printed- Vehicles Only

Start Time	AIRPORT BL Southbound				S. AIRPORT BL Westbound				PRODUCE AV Northbound				SAN MATEO AV Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:00	19	222	22	263	69	51	185	305	45	13	27	85	50	32	30	112	765
16:15	14	249	30	293	94	42	192	328	64	8	35	107	39	35	21	95	823
16:30	47	223	21	291	95	53	176	324	49	7	32	88	47	38	25	110	813
16:45	24	256	31	311	97	44	233	374	50	8	31	89	53	44	30	127	901
Total	104	950	104	1158	355	190	786	1331	208	36	125	369	189	149	106	444	3302
17:00	26	272	37	335	99	45	194	338	39	6	34	79	75	48	41	164	916
17:15	29	264	29	322	127	65	198	390	50	5	23	78	46	35	30	111	901
17:30	16	278	26	320	127	53	202	382	66	3	25	94	46	40	40	126	922
17:45	29	235	20	284	117	57	214	388	41	4	17	62	45	33	39	117	851
Total	100	1049	112	1261	470	220	808	1498	196	18	99	313	212	156	150	518	3590
Grand Total	204	1999	216	2419	825	410	1594	2829	404	54	224	682	401	305	256	962	6892
Apprch %	8.4	82.6	8.9		29.2	14.5	56.3		59.2	7.9	32.8		41.7	31.7	26.6		
Total %	3	29	3.1	35.1	12	5.9	23.1	41	5.9	0.8	3.3	9.9	5.8	4.4	3.7	14	

Start Time	AIRPORT BL Southbound				S. AIRPORT BL Westbound				PRODUCE AV Northbound				SAN MATEO AV Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	24	256	31	311	97	44	233	374	50	8	31	89	53	44	30	127	901
17:00	26	272	37	335	99	45	194	338	39	6	34	79	75	48	41	164	916
17:15	29	264	29	322	127	65	198	390	50	5	23	78	46	35	30	111	901
17:30	16	278	26	320	127	53	202	382	66	3	25	94	46	40	40	126	922
Total Volume	95	1070	123	1288	450	207	827	1484	205	22	113	340	220	167	141	528	3640
% App. Total	7.4	83.1	9.5		30.3	13.9	55.7		60.3	6.5	33.2		41.7	31.6	26.7		
PHF	.819	.962	.831	.961	.886	.796	.887	.951	.777	.688	.831	.904	.733	.870	.860	.805	.987



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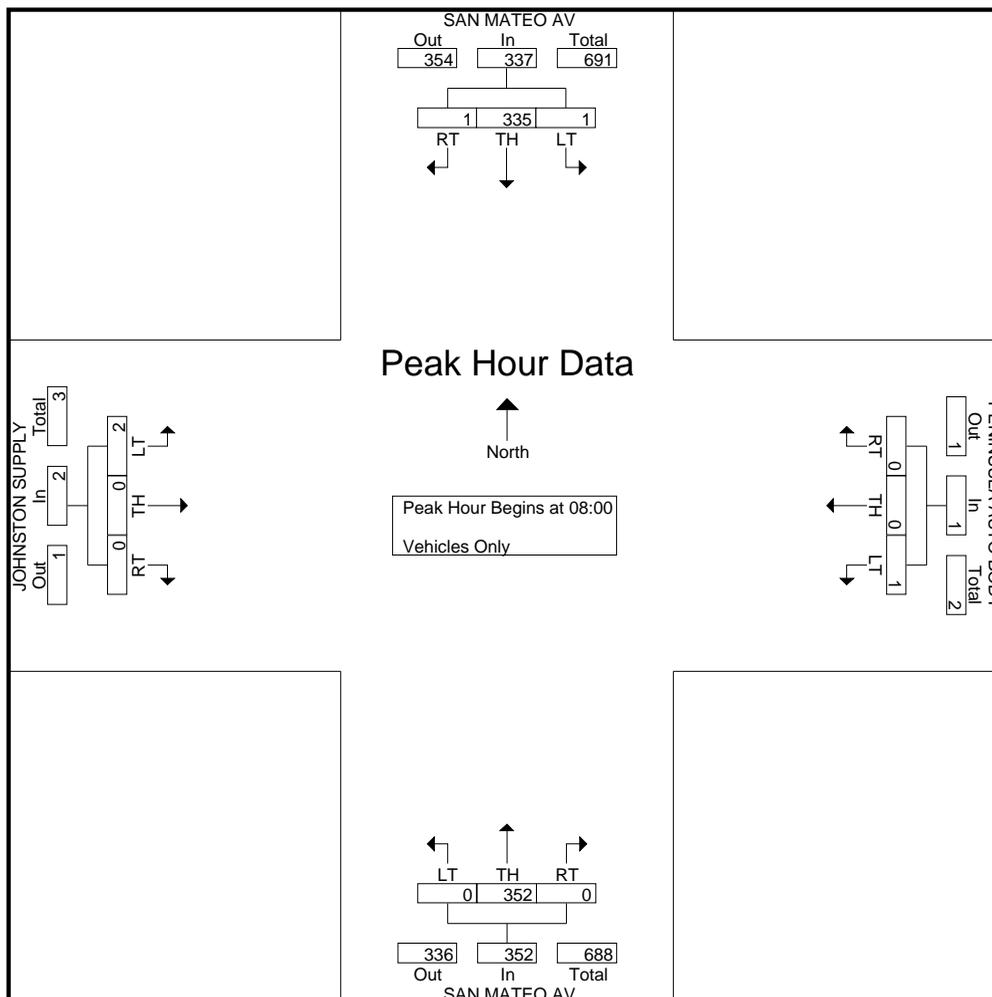
CITY OF SOUTH SAN FRANCISCO

File Name : san mateo-body shop-a
Site Code : 2
Start Date : 9/10/2014
Page No : 1

Groups Printed- Vehicles Only

Start Time	SAN MATEO AV Southbound				PENINSULA AUTO BODY Westbound				SAN MATEO AV Northbound				JOHNSTON SUPPLY Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
07:00	0	64	1	65	0	0	0	0	0	74	0	74	0	0	0	0	139
07:15	0	67	0	67	0	0	0	0	0	70	2	72	1	0	0	1	140
07:30	0	73	0	73	0	0	0	0	1	78	2	81	0	0	1	1	155
07:45	1	87	0	88	0	0	0	0	0	68	0	68	0	0	2	2	158
Total	1	291	1	293	0	0	0	0	1	290	4	293	1	0	3	4	592
08:00	0	84	0	84	0	0	1	1	0	88	0	88	0	0	1	1	174
08:15	1	88	0	89	0	0	0	0	0	69	0	69	0	0	1	1	159
08:30	0	78	0	78	0	0	0	0	0	101	0	101	0	0	0	0	179
08:45	0	85	1	86	0	0	0	0	0	94	0	94	0	0	0	0	180
Total	1	335	1	337	0	0	1	1	0	352	0	352	0	0	2	2	692
Grand Total	2	626	2	630	0	0	1	1	1	642	4	647	1	0	5	6	1284
Apprch %	0.3	99.4	0.3		0	0	100		0.2	99.2	0.6		16.7	0	83.3		
Total %	0.2	48.8	0.2	49.1	0	0	0.1	0.1	0.1	50	0.3	50.4	0.1	0	0.4	0.5	

Start Time	SAN MATEO AV Southbound				PENINSULA AUTO BODY Westbound				SAN MATEO AV Northbound				JOHNSTON SUPPLY Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	84	0	84	0	0	1	1	0	88	0	88	0	0	1	1	174
08:15	1	88	0	89	0	0	0	0	0	69	0	69	0	0	1	1	159
08:30	0	78	0	78	0	0	0	0	0	101	0	101	0	0	0	0	179
08:45	0	85	1	86	0	0	0	0	0	94	0	94	0	0	0	0	180
Total Volume	1	335	1	337	0	0	1	1	0	352	0	352	0	0	2	2	692
% App. Total	0.3	99.4	0.3		0	0	100		0	100	0		0	0	100		
PHF	.250	.952	.250	.947	.000	.000	.250	.250	.000	.871	.000	.871	.000	.000	.500	.500	.961



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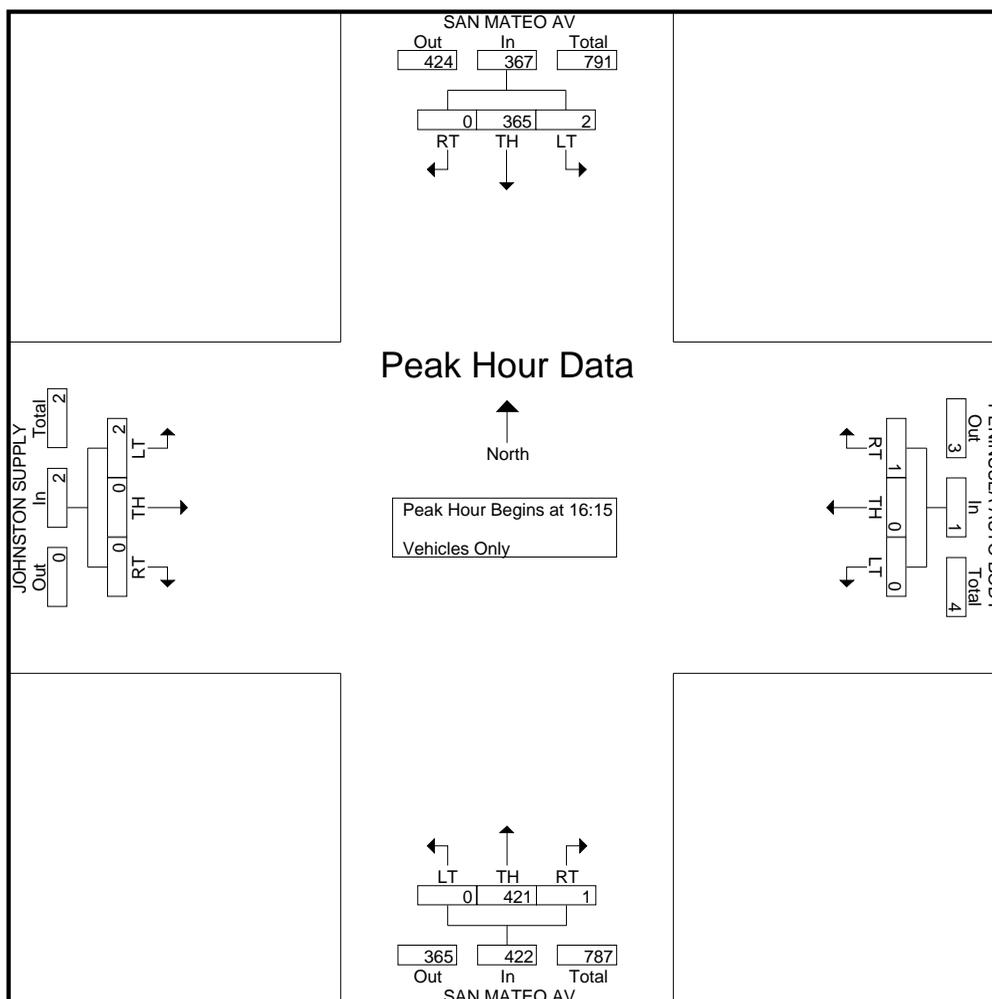
CITY OF SOUTH SAN FRANCISCO

File Name : san mateo-body shop-p
Site Code : 2
Start Date : 9/10/2014
Page No : 1

Groups Printed- Vehicles Only

Start Time	SAN MATEO AV Southbound				PENINSULA AUTO BODY Westbound				SAN MATEO AV Northbound				JOHNSTON SUPPLY Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:00	0	89	0	89	1	0	0	1	0	83	0	83	0	0	0	0	173
16:15	0	82	1	83	0	0	0	0	0	87	0	87	0	0	0	0	170
16:30	0	91	1	92	0	0	0	0	1	94	0	95	0	0	0	0	187
16:45	0	93	0	93	1	0	0	1	0	110	0	110	0	0	1	1	205
Total	0	355	2	357	2	0	0	2	1	374	0	375	0	0	1	1	735
17:00	0	99	0	99	0	0	0	0	0	130	0	130	0	0	1	1	230
17:15	0	81	0	81	1	0	0	1	1	83	0	84	1	0	0	1	167
17:30	0	90	0	90	0	0	1	1	0	95	0	95	0	0	0	0	186
17:45	0	89	0	89	0	0	0	0	0	99	0	99	0	0	0	0	188
Total	0	359	0	359	1	0	1	2	1	407	0	408	1	0	1	2	771
Grand Total	0	714	2	716	3	0	1	4	2	781	0	783	1	0	2	3	1506
Apprch %	0	99.7	0.3		75	0	25		0.3	99.7	0		33.3	0	66.7		
Total %	0	47.4	0.1	47.5	0.2	0	0.1	0.3	0.1	51.9	0	52	0.1	0	0.1	0.2	

Start Time	SAN MATEO AV Southbound				PENINSULA AUTO BODY Westbound				SAN MATEO AV Northbound				JOHNSTON SUPPLY Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	0	82	1	83	0	0	0	0	0	87	0	87	0	0	0	0	170
16:30	0	91	1	92	0	0	0	0	1	94	0	95	0	0	0	0	187
16:45	0	93	0	93	1	0	0	1	0	110	0	110	0	0	1	1	205
17:00	0	99	0	99	0	0	0	0	0	130	0	130	0	0	1	1	230
Total Volume	0	365	2	367	1	0	0	1	1	421	0	422	0	0	2	2	792
% App. Total	0	99.5	0.5		100	0	0		0.2	99.8	0		0	0	100		
PHF	.000	.922	.500	.927	.250	.000	.000	.250	.250	.810	.000	.812	.000	.000	.500	.500	.861



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CITY OF SOUTH SAN FRANCISCO

File Name : san mateo-lowrie-a
Site Code : 1
Start Date : 9/10/2014
Page No : 1

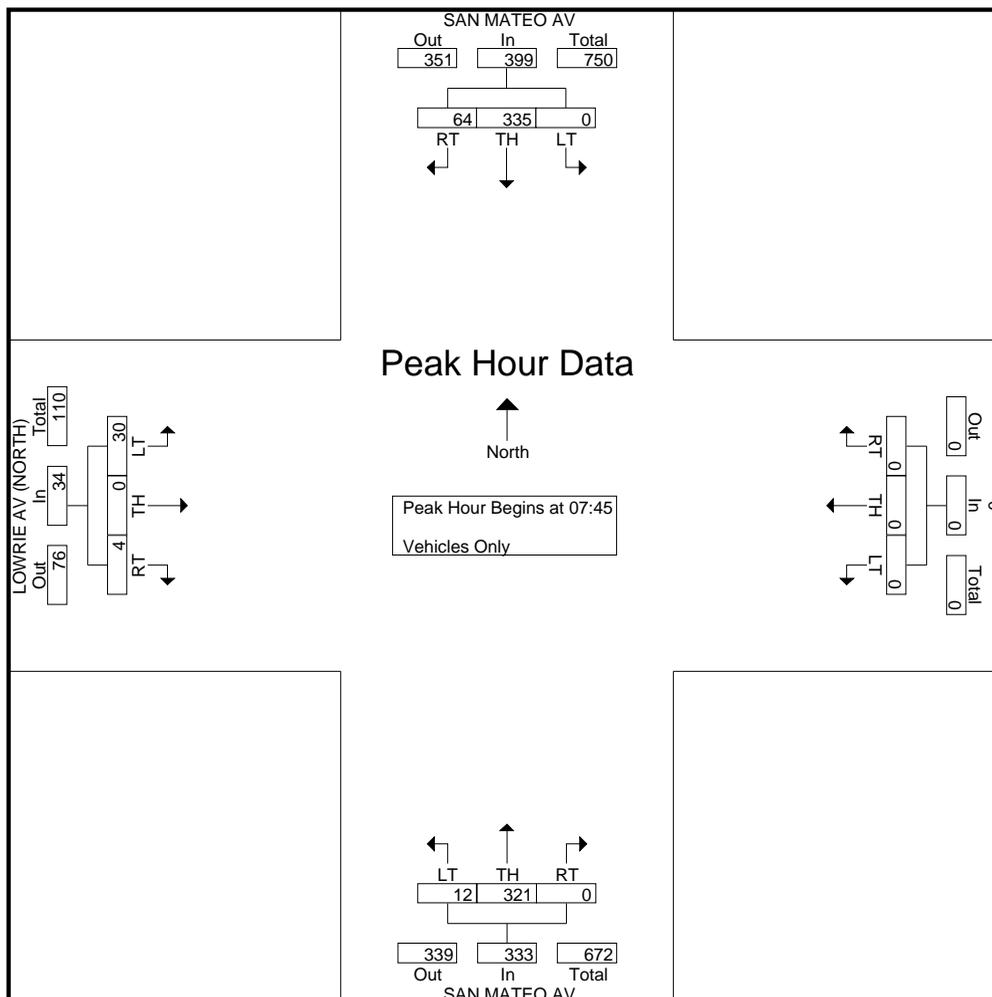
Groups Printed- Vehicles Only

Start Time	SAN MATEO AV Southbound				0 Westbound				SAN MATEO AV Northbound				LOWRIE AV (NORTH) Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
07:00	9	66	0	75	0	0	0	0	0	69	3	72	1	0	2	3	150
07:15	14	68	0	82	0	0	0	0	0	71	1	72	0	0	12	12	166
07:30	11	72	0	83	0	0	0	0	0	77	1	78	0	0	3	3	164
07:45	8	88	0	96	0	0	0	0	0	69	2	71	0	0	6	6	173
Total	42	294	0	336	0	0	0	0	0	286	7	293	1	0	23	24	653
08:00	15	85	0	100	0	0	0	0	0	83	5	88	0	0	8	8	196
08:15	27	85	0	112	0	0	0	0	0	70	2	72	2	0	9	11	195
08:30	14	77	0	91	0	0	0	0	0	99	3	102	2	0	7	9	202
08:45	12	84	0	96	0	0	0	0	0	91	2	93	1	0	6	7	196
Total	68	331	0	399	0	0	0	0	0	343	12	355	5	0	30	35	789
Grand Total	110	625	0	735	0	0	0	0	0	629	19	648	6	0	53	59	1442
Apprch %	15	85	0		0	0	0	0	0	97.1	2.9		10.2	0	89.8		
Total %	7.6	43.3	0	51	0	0	0	0	0	43.6	1.3	44.9	0.4	0	3.7	4.1	

Start Time	SAN MATEO AV Southbound				0 Westbound				SAN MATEO AV Northbound				LOWRIE AV (NORTH) Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
07:45	8	88	0	96	0	0	0	0	0	69	2	71	0	0	6	6	173
08:00	15	85	0	100	0	0	0	0	0	83	5	88	0	0	8	8	196
08:15	27	85	0	112	0	0	0	0	0	70	2	72	2	0	9	11	195
08:30	14	77	0	91	0	0	0	0	0	99	3	102	2	0	7	9	202
Total Volume	64	335	0	399	0	0	0	0	0	321	12	333	4	0	30	34	766
% App. Total	16	84	0		0	0	0	0	0	96.4	3.6		11.8	0	88.2		
PHF	.593	.952	.000	.891	.000	.000	.000	.000	.000	.811	.600	.816	.500	.000	.833	.773	.948

Peak Hour Analysis From 07:00 to 08:30 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45



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CITY OF SOUTH SAN FRANCISCO

File Name : san mateo-lowrie-p
Site Code : 1
Start Date : 9/10/2014
Page No : 1

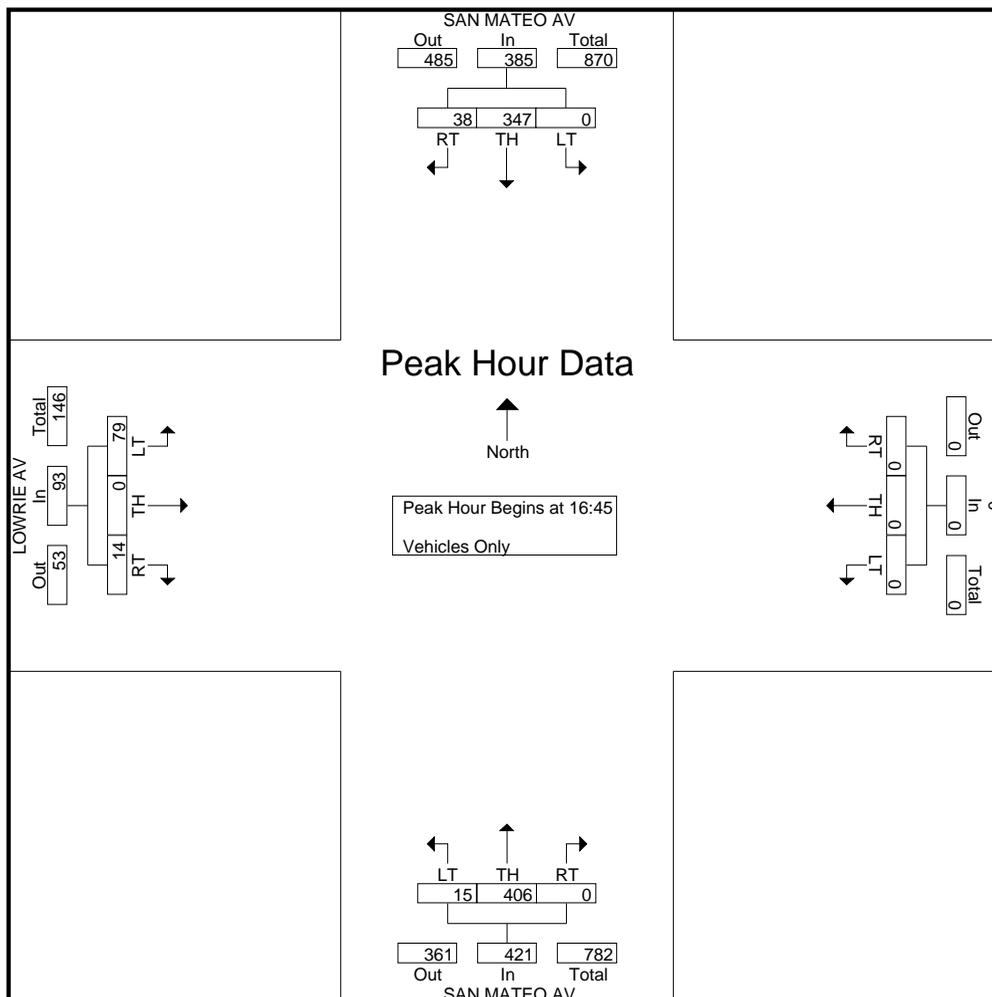
Groups Printed- Vehicles Only

Start Time	SAN MATEO AV Southbound				0 Westbound				SAN MATEO AV Northbound				LOWRIE AV Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:00	7	85	0	92	0	0	0	0	0	83	2	85	5	0	14	19	196
16:15	8	79	0	87	0	0	0	0	0	84	2	86	2	0	11	13	186
16:30	10	89	0	99	0	0	0	0	0	90	3	93	2	0	16	18	210
16:45	10	90	0	100	0	0	0	0	0	107	4	111	3	0	13	16	227
Total	35	343	0	378	0	0	0	0	0	364	11	375	12	0	54	66	819
17:00	5	93	0	98	0	0	0	0	0	127	4	131	6	0	25	31	260
17:15	10	78	0	88	0	0	0	0	0	83	2	85	2	0	17	19	192
17:30	13	86	0	99	0	0	0	0	0	89	5	94	3	0	24	27	220
17:45	6	85	0	91	0	0	0	0	0	96	2	98	3	0	9	12	201
Total	34	342	0	376	0	0	0	0	0	395	13	408	14	0	75	89	873
Grand Total	69	685	0	754	0	0	0	0	0	759	24	783	26	0	129	155	1692
Apprch %	9.2	90.8	0		0	0	0		0	96.9	3.1		16.8	0	83.2		
Total %	4.1	40.5	0	44.6	0	0	0	0	0	44.9	1.4	46.3	1.5	0	7.6	9.2	

Start Time	SAN MATEO AV Southbound				0 Westbound				SAN MATEO AV Northbound				LOWRIE AV Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:45	10	90	0	100	0	0	0	0	0	107	4	111	3	0	13	16	227
17:00	5	93	0	98	0	0	0	0	0	127	4	131	6	0	25	31	260
17:15	10	78	0	88	0	0	0	0	0	83	2	85	2	0	17	19	192
17:30	13	86	0	99	0	0	0	0	0	89	5	94	3	0	24	27	220
Total Volume	38	347	0	385	0	0	0	0	0	406	15	421	14	0	79	93	899
% App. Total	9.9	90.1	0		0	0	0		0	96.4	3.6		15.1	0	84.9		
PHF	.731	.933	.000	.963	.000	.000	.000	.000	.000	.799	.750	.803	.583	.000	.790	.750	.864

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45



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CITY OF SOUTH SAN FRANCISCO
 SAN MATEO AV. S/O LOWRIE AV.
 NORTHBOUND

Site Code: 2
 san mateo-n

Start Time	Wed	10-Sep-14	Hourly Totals		Thu	11-Sep-14	Hourly Totals		Total	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	19	131			*	*			19	131
12:15	13	107			*	*			13	107
12:30	17	103			*	*			17	103
12:45	13	77	62	418	*	*	0	0	13	77
01:00	14	117			*	*			14	117
01:15	3	100			*	*			3	100
01:30	13	115			*	*			13	115
01:45	22	120	52	452	*	*	0	0	22	120
02:00	8	122			*	*			8	122
02:15	15	98			*	*			15	98
02:30	16	92			*	*			16	92
02:45	10	112	49	424	*	*	0	0	10	112
03:00	4	128			*	*			4	128
03:15	16	95			*	*			16	95
03:30	10	101			*	*			10	101
03:45	26	120	56	444	*	*	0	0	26	120
04:00	16	89			*	*			16	89
04:15	26	97			*	*			26	97
04:30	23	105			*	*			23	105
04:45	26	108	91	399	*	*	0	0	26	108
05:00	23	130			*	*			23	130
05:15	38	89			*	*			38	89
05:30	41	105			*	*			41	105
05:45	55	98	157	422	*	*	0	0	55	98
06:00	58	73			*	*			58	73
06:15	55	67			*	*			55	67
06:30	93	67			*	*			93	67
06:45	85	70	291	277	*	*	0	0	85	70
07:00	104	73			*	*			104	73
07:15	97	50			*	*			97	50
07:30	98	63			*	*			98	63
07:45	97	36	396	222	*	*	0	0	97	36
08:00	98	73			*	*			98	73
08:15	85	37			*	*			85	37
08:30	114	47			*	*			114	47
08:45	119	44	416	201	*	*	0	0	119	44
09:00	119	41			*	*			119	41
09:15	93	36			*	*			93	36
09:30	94	59			*	*			94	59
09:45	101	27	407	163	*	*	0	0	101	27
10:00	118	61			*	*			118	61
10:15	91	28			*	*			91	28
10:30	81	30			*	*			81	30
10:45	105	28	395	147	*	*	0	0	105	28
11:00	97	23			*	*			97	23
11:15	109	15			*	*			109	15
11:30	113	24			*	*			113	24
11:45	112	19	431	81	*	*	0	0	112	19
Total	2803	3650			0	0			2803	3650
Day Total	6453				0				6453	
Percent	43.4%	56.6%			0.0%	0.0%			43.4%	56.6%
Peak	08:30	01:15							08:30	01:15
Vol.	445	457							445	457
P.H.F.	0.935	0.936							0.935	0.936

MARKS TRAFFIC DATA
mietekm@comcast.net
916.806.0250

CITY OF SOUTH SAN FRANCISCO
SAN MATEO AV. S/O LOWRIE AV.
SOUTHBOUND

Site Code: 4a
san mateo-s

Start Time	Wed	10-Sep-14	Hourly Totals		Thu	11-Sep-14	Hourly Totals		Total	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	21	102			*	*			21	102
12:15	11	98			*	*			11	98
12:30	20	93			*	*			20	93
12:45	18	97	70	390	*	*	0	0	18	97
01:00	12	101			*	*			12	101
01:15	11	107			*	*			11	107
01:30	6	129			*	*			6	129
01:45	19	104	48	441	*	*	0	0	19	104
02:00	17	102			*	*			17	102
02:15	23	90			*	*			23	90
02:30	21	93			*	*			21	93
02:45	12	107	73	392	*	*	0	0	12	107
03:00	13	95			*	*			13	95
03:15	8	103			*	*			8	103
03:30	6	80			*	*			6	80
03:45	22	86	49	364	*	*	0	0	22	86
04:00	18	88			*	*			18	88
04:15	26	97			*	*			26	97
04:30	27	92			*	*			27	92
04:45	29	101	100	378	*	*	0	0	29	101
05:00	35	99			*	*			35	99
05:15	46	88			*	*			46	88
05:30	48	90			*	*			48	90
05:45	55	93	184	370	*	*	0	0	55	93
06:00	47	80			*	*			47	80
06:15	72	59			*	*			72	59
06:30	65	62			*	*			65	62
06:45	76	84	260	285	*	*	0	0	76	84
07:00	71	54			*	*			71	54
07:15	76	46			*	*			76	46
07:30	81	60			*	*			81	60
07:45	101	59	329	219	*	*	0	0	101	59
08:00	91	34			*	*			91	34
08:15	110	35			*	*			110	35
08:30	85	35			*	*			85	35
08:45	98	51	384	155	*	*	0	0	98	51
09:00	110	28			*	*			110	28
09:15	102	28			*	*			102	28
09:30	97	33			*	*			97	33
09:45	86	26	395	115	*	*	0	0	86	26
10:00	89	39			*	*			89	39
10:15	98	24			*	*			98	24
10:30	117	40			*	*			117	40
10:45	112	24	416	127	*	*	0	0	112	24
11:00	111	16			*	*			111	16
11:15	88	15			*	*			88	15
11:30	113	11			*	*			113	11
11:45	108	16	420	58	*	*	0	0	108	16
Total	2728	3294			0	0			2728	3294
Day Total	6022				0				6022	
Percent	45.3%	54.7%			0.0%	0.0%			45.3%	54.7%
Peak	10:15	01:15							10:15	01:15
Vol.	438	442							438	442
P.H.F.	0.936	0.857							0.936	0.857

MARKS TRAFFIC DATA
mietekm@comcast.net
916.806.0250

CITY OF SOUTH SAN FRANCISCO
PAYLESS CAR RENTAL
DRIVEWAY ON CAROLAN AV.

Site Code: 3
carolan dwy

Start Time	10-Sep-14 Wed	IN		Hour Totals		OUT		Hour Totals		Both Dir. Total	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		0	2			0	1			0	3
12:15		0	7			0	2			0	9
12:30		0	5			0	0			0	5
12:45		0	4	0	18	0	3	0	6	0	7
01:00		0	2			0	0			0	2
01:15		0	6			0	0			0	6
01:30		0	9			0	0			0	9
01:45		0	8	0	25	0	3	0	3	0	11
02:00		0	1			0	3			0	4
02:15		0	3			0	7			0	10
02:30		0	4			0	1			0	5
02:45		0	5	0	13	0	4	0	15	0	9
03:00		0	4			0	3			0	7
03:15		0	6			0	2			0	8
03:30		0	6			0	2			0	8
03:45		0	4	0	20	0	2	0	9	0	6
04:00		0	9			0	0			0	9
04:15		0	4			0	0			0	4
04:30		0	6			0	0			0	6
04:45		0	6	0	25	0	0	0	0	0	6
05:00		0	5			0	0			0	5
05:15		0	4			0	0			0	4
05:30		0	8			0	0			0	8
05:45		0	1	0	18	0	3	0	3	0	4
06:00		0	3			0	3			0	6
06:15		0	3			0	2			0	5
06:30		1	2			0	4			1	6
06:45		0	6	1	14	0	1	0	10	0	7
07:00		0	2			0	0			0	2
07:15		0	2			0	1			0	3
07:30		3	0			0	4			3	4
07:45		1	0	4	4	0	0	0	5	1	0
08:00		1	0			0	3			1	3
08:15		5	2			1	5			6	7
08:30		2	1			0	4			2	5
08:45		3	0	11	3	0	1	1	13	3	1
09:00		0	0			2	4			2	4
09:15		3	1			0	5			3	6
09:30		3	0			0	1			3	1
09:45		1	0	7	1	4	1	6	11	5	1
10:00		0	0			3	1			3	1
10:15		0	0			3	2			3	2
10:30		2	0			5	2			7	2
10:45		6	2	8	2	1	1	12	6	7	3
11:00		4	0			0	2			4	2
11:15		6	0			1	1			7	1
11:30		3	0			0	0			3	0
11:45		7	*	20	0	2	*	3	3	9	*
Total		51	143			22	84			73	227
Day Total			194				106				300
Percent		26.3%	73.7%			20.8%	79.2%			24.3%	75.7%
Peak		11:00	01:00			09:45	02:00			10:30	01:30
Vol.		20	25			15	15			25	34
P.H.F.		0.714	0.694			0.750	0.536			0.893	0.773

MARKS TRAFFIC DATA
 mietekm@comcast.net
 916.806.0250

CITY OF SOUTH SAN FRANCISCO
 PAYLESS CAR RENTAL
 DRIVEWAY ON ROLLINS RD

Site Code: 3
 rollins dwy

Start Time	10-Sep-14 Wed	OUT		Hour Totals		IN		Hour Totals		Both Dir. Total	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		0	4			0	0			0	4
12:15		0	9			0	0			0	9
12:30		0	4			0	0			0	4
12:45		0	7	0	24	0	0	0	0	0	7
01:00		0	2			0	0			0	2
01:15		0	8			0	0			0	8
01:30		0	6			0	0			0	6
01:45		0	6	0	22	0	0	0	0	0	6
02:00		0	9			0	0			0	9
02:15		0	2			0	4			0	6
02:30		0	0			0	5			0	5
02:45		0	1	0	12	0	1	0	10	0	2
03:00		0	6			0	0			0	6
03:15		0	3			0	0			0	3
03:30		0	12			0	0			0	12
03:45		0	7	0	28	0	0	0	0	0	7
04:00		0	5			0	0			0	5
04:15		0	6			0	0			0	6
04:30		0	8			0	0			0	8
04:45		0	3	0	22	0	1	0	1	0	4
05:00		0	0			0	5			0	5
05:15		0	0			0	6			0	6
05:30		1	0			1	5			2	5
05:45		3	0	4	0	1	7	2	23	4	7
06:00		0	0			2	3			2	3
06:15		0	0			1	6			1	6
06:30		0	0			1	6			1	6
06:45		0	0	0	0	1	2	5	17	1	2
07:00		0	0			2	1			2	1
07:15		0	0			3	3			3	3
07:30		0	0			2	2			2	2
07:45		0	0	0	0	2	2	9	8	2	2
08:00		0	0			3	2			3	2
08:15		0	0			1	4			1	4
08:30		0	1			1	1			1	2
08:45		0	1	0	2	5	3	10	10	5	4
09:00		0	0			9	3			9	3
09:15		0	0			0	2			0	2
09:30		0	0			5	0			5	0
09:45		0	0	0	0	6	1	20	6	6	1
10:00		0	0			5	1			5	1
10:15		2	0			5	2			7	2
10:30		0	0			13	0			13	0
10:45		0	1	2	1	6	3	29	6	6	4
11:00		0	2			6	1			6	3
11:15		0	3			7	2			7	5
11:30		0	0			4	1			4	1
11:45		2	0	2	5	0	0	17	4	2	0
Total		8	116			92	85			100	201
Day Total		124				177				301	
Percent		6.5%	93.5%			52.0%	48.0%			33.2%	66.8%
Peak		05:00	03:30			10:30	05:00			10:15	03:30
Vol.		4	30			32	23			32	30
P.H.F.		0.333	0.625			0.615	0.821			0.615	0.625