CITY OF MANHATTAN BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT
MEMORANDUM

DATE: October 14, 2020

TO: Planning Commission

FROM: Carrie Tai, AICP, Director of Community Development

BY: Ted Faturos, Assistant Planner

SUBJECT: Proposed Master Use Permit for a New 162-Room, 81,775 Square-Foot Hotel with Full Alcohol Service for Hotel Patrons and A New 16,348 Square-Foot Retail and Office Building; and Reduced Parking with 158 Parking Spaces at 600 S. Sepulveda Boulevard; and Make an Environmental Determination in Accordance with the California Environmental Quality Act (MB Hotel Partners, LLC)

RECOMMENDATION

Staff recommends that the Planning Commission **CONDUCT** the Public Hearing and **ADOPT** the attached resolution approving the Master Use Permit subject to certain conditions.

APPLICANT

MB Hotel Partners, LLC
1219 Morningside Drive, Suite 201
Manhattan Beach, CA 90266

BACKGROUND

On August 9, 2019, the Community Development Department received an application requesting a Master Use Permit for a new 162-room, 81,775 square-foot, four-story hotel and a separate new 16,348 square-foot two-story retail and office building at 600 S. Sepulveda Boulevard (northeast corner of Sepulveda Boulevard and Tennyson Street). The applicant's Master Use Permit request also asks for a parking reduction, as well as the ability to serve full alcohol (beer, wine, and distilled spirits) to hotel

guests in conjunction with food service. The subject site is located in the "CG-D8" (General Commercial, Sepulveda Boulevard Corridor Overlay) design overlay district in Area District I.

The site is a 65,419 square-foot lot with street frontage along Sepulveda Boulevard, Tennyson Street, and Chabela Drive. Vehicles would access the site from Sepulveda Boulevard and Tennyson Street. An El Torito restaurant with full alcohol service occupied existing 8,500 square-foot restaurant building on the site until vacating the space in late 2018. Skechers has been occupying the site since 2019, using the restaurant building as a corporate cafeteria and meeting space while using the parking lot as overflow parking for Skechers employees impacted by construction at Skechers' new office buildings along Sepulveda Boulevard. The existing restaurant building would be demolished.

PROJECT OVERVIEW

Location:	600 South Sepulveda Boulevard (see Vicinity Map- Attachment C)
Legal Description:	Portions of Lots 6 and 7, Block 2, Amended Map of Seaside Park

LAND USE

General Plan:	General Commercial
Zoning:	CG-D8, General Commercial, Sepulveda Blvd Corridor Overlay
Area District:	I
Land Use:	Hotel, Retail, and Office
Required Parking:	243 Parking Spaces
Provided Parking:	158 Parking Spaces, Deemed Adequate by Parking Evaluation

Neighboring Zoning and Land Uses:

North	CG-D8: Office, Medical Office, Restaurant
South (across Tennyson St.)	CG: Bank/Fitness/Retail/Restaurant
East (across Chabela Dr.)	RS: Single-Family Residential
West (across Sepulveda Blvd)	Commercial (Hermosa Beach)

PROJECT DETAILS

Lot Size- Pre-Dedication:	66,219 square feet
Lot Size- Post-Dedication:	65,419 square feet
Maximum Buildable Floor Area:	98,128 square feet
Proposed Buildable Floor Area:	98,123 square feet

	<u>Hotel Building</u>	<u>Office/Retail Building</u>

Maximum Height:	40 feet	30 feet
Proposed Height:	40 feet	30 feet

Alcohol Details:

Alcohol Service:	Full Alcohol Service
Live Entertainment:	Limited
Hours of Operation:	Monday - Sunday: 7:00 a.m. – 1:00 a.m.

DISCUSSION

The applicant is requesting a Master Use Permit for a new 81,775 square-foot four-story hotel and a separate new 16,348 square-foot two-story retail and office building on a 65,419 square-foot lot. The site has commercial uses on three of its four sides: a large office building with medical/restaurant uses sites to the north, a bank and shopping plaza to the south across Tennyson Street, and a Skechers office building is under construction to the west across Sepulveda Boulevard in the City of Hermosa Beach. Single-family homes are located to the east of the site across Chabela Drive.

The hotel building is L-shaped and located along the northern and eastern portions of the project site. The Manhattan Beach Municipal Code (M.B.M.C) Section 10.44.040 (s) allows hotel uses in the CG-D8 zone to have a maximum building height of 40 feet. Roof mounted mechanical equipment and elevator shafts are allowed to exceed the maximum allowed height limit by up to five feet, so long as they are properly screened and located in an area that would not be visible from or adversely impact the surrounding properties. The height limit for all other non-hotel uses in the CG-D8 zone is 30 feet. The proposed hotel building is 40 feet high with screened roof mounted mechanical equipment exceeding the maximum 40 foot height limit by less than 5 feet. The hotel building complies with the maximum height limit for hotel uses in the CG-D8 zone. The hotel has 162 guest rooms, and guest stays will be limited to a maximum of 30 consecutive days. The applicant describes the hotel as a "select service hotel" with limited amenities for guests including a small fitness center, business center, and meeting room. The applicant further described the "select service" hotel model as offering "patrons of the hotel and their guests only limited menu options for breakfast to complement its buffet-style breakfast service which will be located on the ground floor lobby area. Limited menu options for appetizers, etc. will be available at other times of the day along with beverage service also to be provided on the ground floor. Room service is not provided. This limited level of service is considered an amenity provided to patrons of the hotel." The hotel also incorporates an outdoor terrace on the fourth floor facing Sepulveda Boulevard where alcohol beverages and limited food service like appetizers will be offered to hotel guests. The applicant is requesting that the outdoor terrace be allowed to operate between 7:00 a.m. and 1:00 a.m. seven days a week. The Draft Resolution requires that alcohol service be in conjunction with food service at all times. Limited live entertainment is permitted on the fourth floor outdoor terrace if the entertainment is provided for the enjoyment of the hotel patrons only, the hotel owner obtains an Entertainment Permit per M.BM.C. 4.20.050, and the entertainment ends no later than 9:00 p.m. The applicant is considering returning to the Planning Commission at a later date to classify the downstairs dining and upstairs terrace as a restaurant use.

The separate 16,348 square-foot two-story retail and office building sits in the southwest corner of the project site. The applicant proposes a retail use for the building's ground floor, with the top floor used as an office use. The proposed retail and office building is 30 feet tall and complies with the maximum height limit for non-hotel uses in the CG-D8 zone. The applicant has not identified any prospective retail or office tenants for the building.

Both the hotel and office/retail building incorporate a contemporary architectural style, and use different materials to give texture and visual interest to the buildings. Both buildings incorporate exterior materials that include wood, metal, glass, stone, and brick. The applicant states "the project design and construction is proposed to meet the equivalent of a [US Green Building Council] LEED Silver level or higher for new construction", ensuring that the applicant has taken a sustainable approach to the design. All landscaping on site will have to meet the Municipal Code's landscaping requirements, which include the use of low and medium water use plants with drip or micro spray irrigation systems.

The project includes a surface parking lot with 28 parking spaces and a subterranean parking garage with 130 spaces, including all EV and accessible parking spaces required by the Building Code. The subterranean parking garage is ventilated with light and air along significant portions of the site's perimeter, and landscaping is provided in large raised planting areas along the garage's perimeter between the parking garage's subterranean level and the sidewalk and buildings above. A ramp near Sepulveda Boulevard leads from the surface level parking lot down into the subterranean garage. Vehicular and pedestrian access to the site is provided along Sepulveda Boulevard and Tennyson Street. The applicant will also carve out an eight-foot wide right-turn area extending 100 feet along Sepulveda Boulevard north of Tennyson Street which will provide vehicles heading north-bound on Sepulveda Boulevard space to decelerate and enter the site. The applicant will construct new sidewalks along Chabela Drive, Tennyson Street, and Sepulveda Boulevard, with property walls along Chabela Drive and part of Tennyson Street separating the sidewalk from the raised planting areas along the subterranean garage's perimeter. Sixteen (16) bicycle parking spaces are provided and are distributed evenly between the surface parking area and the subterranean garage.

M.B.M.C Section 10.64.030 requires that 243 parking spaces be provided on the site based on the proposed uses. However, M.B.M.C. Section 10.64.050 (B) allows for a reduction of required parking via the Use Permit process if the applicant can demonstrate that the provided on-site parking satisfies the demand generated by the proposed uses. The applicant has provided a Parking Evaluation by the consulting firm Kimley-Horn (Attachment D) that evaluates "the non-concurrent parking peaks for the hotel, retail, and offices uses; to determine the reduction in parking that can be supported due to shared parking synergies." The report explains how "uses with non-concurrent peak operating characteristics can share a portion of the same parking supply without detriment to the other, rather than each providing their own distinct and complete parking supply. For example, the parking demand for office uses peaks on weekdays during the mid-morning and mid-afternoon hours, while the parking demand for retail uses peaks on weekends, when the office usage is at its lowest; and hotel parking demand peaks in the late night and early morning hours when both retail and office uses are typically closed." Kimley-Horn used parking rates from the Institute of Transportation Engineers' (ITE) *Parking Manual Generation, Fifth Edition* to demonstrate that the provided parking

will meet the parking demand of generated by the proposed uses. The report concludes that the 158 on-site parking spaces exceed the true parking demand of the uses by 41 to 49 parking spaces. The study also notes that "that due to the project's proximity to the Los Angeles Airport (LAX), hotel patrons who fly in and out of LAX may find it convenient to use shuttle, taxi, or ride-hailing services (Uber, Lyft, etc.) to get between the airport and the hotel, and to avoid the cost of renting a car and paying for hotel parking. This analysis does not take into account the potential for a further reduction in parking demand attributable to the use of these other modes of travel, making this a more conservative analysis."

A Use Permit is required for any site over 10,000 square feet in size and/or any building over 5,000 square feet in size in the CG zone. A Use Permit is also required for hotel uses and uses that have alcohol service. A Master Use Permit is required when a site has multiple uses (MBMC 10.84.105). Staff has prepared a Draft Resolution approving a Master Use Permit, with the Draft Resolution incorporating comments from several City departments.

OTHER DEPARTMENT COMMENTS

Various City departments and divisions have reviewed the proposed plans and issued comments to the applicant's architect. The applicant's architect has incorporated these various comments into the design.

The Public Works Department has worked with the applicant to accommodate the necessary dedications along Sepulveda Boulevard and Chabela Drive, as well as a redesign of the site's southwest public right-of-way corners. The Public Works Department has several conditions that have been incorporated into the Draft Resolution, which include requiring the developer to construct new 6-foot wide sidewalks along Chabela Drive and Tennyson Street and an 8-foot wide sidewalk along Sepulveda Boulevard.

The City's Traffic Engineer has reviewed the Traffic Impact Analysis prepared by Kimley-Horn. The City Traffic Engineer supports the findings in the Traffic Impact Analysis that no significant traffic impacts are anticipated on the roadway network as the result of the project. The City's Traffic Engineer has also reviewed the Parking Evaluation prepared by Kimley-Horn, and supports the study's findings that 158 parking spaces are adequate in providing enough parking for the site's uses.

The Police Department has reviewed the applicant's request and has recommended conditions of approval related to public safety that have been incorporated into the Draft Resolution. These conditions of approval include that the applicant install security cameras on the site, that the applicant may be required to hire a private security service, that the management of the property police the site for litter, and other public safety measures.

REQUIRED FINDINGS

Section 10.84.010 of the Manhattan Beach Municipal Code states that "Use Permits are required for use classifications typically having unusual site development features or operating characteristics requiring special consideration so that they may be designed, located, and operated compatibly with uses on adjoining properties and in the surrounding area."

The following findings must be met in order to grant a Master Use Permit. Staff suggests the following findings in support of the Master Use Permit.

1. *The proposed location of the use is in accord with the objectives of this title and the purposes of the district in which the site is located.*

   The project is located in the "CG-D8" (General Commercial, Sepulveda Boulevard Corridor Overlay) design overlay district in Area District I. The Municipal Code stated purpose for the CG General Commercial zone is that the district provides "opportunities for the full range of retail and service businesses deemed suitable for location in Manhattan Beach, including businesses not permitted in other commercial districts because they attract heavy vehicular traffic or have certain adverse impacts; and to provide opportunities for offices and certain limited industrial uses that have impacts comparable to those of permitted retail and service uses to occupy space not in demand for retailing or services." Furthermore, the Municipal Code's stated purpose of the D8- Sepulveda Boulevard Corridor Overlay is to provide "more flexible development standards are needed in order to continue to promote desirable development, uses and economic vitality within the General Commercial (CG) zone." The project takes advantage of the 40-foot height limit allowed for hotel uses in the D8-Sepulveda Boulevard Corridor Overlay zone.

   The proposed location of the project (Sepulveda Boulevard) is in accord with the objectives of the Zoning Code and the purposes of the district in which the site is located because Sepulveda Boulevard is a main commercial thoroughfare and is within a commercial district where the uses will complement a full range of retail and service businesses suitable for Manhattan Beach.

2. *The proposed location of the uses and the proposed conditions under which the uses would be operated or maintained will be consistent with the General Plan; will not be detrimental to the public health, safety or welfare of persons residing or working on the proposed project site or in or adjacent to the neighborhood of such uses; and will not be detrimental to properties or improvements in the vicinity or to the general welfare of the city.*

   The proposed uses are commercial uses consistent with the General Plan's General Commercial land use designation assigned of the project site and lot, as well as neighboring properties. The proposed uses are consistent with neighboring uses, as the neighboring lots have also been developed with commercial uses. The proposed location of the uses and the proposed conditions under which they would be operated and maintained will not be detrimental to the public health, safety or welfare of persons residing or working on the Project site or in the surrounding area because Municipal Code requirements and conditions of approval address security, safety, aesthetics, hours of operation and parking. The Project will not be detrimental to properties or improvements in the vicinity or to the general welfare of the city, in that the area already supports commercial uses, and parking

supplies are adequate. The General Plan recognizes that Sepulveda Boulevard corridor is a "regional-serving commercial district", and the proposed uses can be part of the commercial mix of businesses that help create a dynamic commercial corridor along Sepulveda Boulevard.

3. *The proposed uses will comply with the provisions of the City's Planning and Zoning Title, including any specific condition required for the proposed uses in the district in which they would be located.*

   The proposed uses comply with all provisions of the Manhattan Beach Municipal Code Title 10 Planning and Zoning and any specific conditions imposed.

4. *The uses will not adversely impact or be adversely impacted by nearby properties.*

   The proposed uses are located at a site on the Sepulveda commercial corridor. Most of the surrounding properties are also zoned General Commercial and have uses that serve both residents and the greater South Bay. Any potential impacts associated with the proposed uses are minimized by the physical distance between the use's location and most residents in nearby blocks, with Chabela Drive, Sepulveda Boulevard, and other large commercial structures providing physical separation between the project site and many neighboring structures. The project as conditioned requires hotel and security operation procedures that ensure minimal impacts to nearby properties. The uses will not create demands exceeding the capacity of public services and facilities.

Section 10.64.050 (B) of the Manhattan Beach Municipal Code states:

"A use permit may be approved reducing the number of spaces to less than the number specified in the schedules in Section 10.64.030, provided that the following findings are made:

1. The parking demand will be less than the requirement in Schedule A or B; and

2. The probable long-term occupancy of the building or structure, based on its design, will not generate additional parking demand.

In reaching a decision, the Planning Commission shall consider survey data submitted by an applicant or collected at the applicant's request and expense."

The following findings must be met in order to grant a reduction of parking as part of the Master Use Permit. Staff suggests the following findings in support of the request for a parking reduction.

1. The parking demand will be less than the requirement in Schedule A or B; and

The applicant has provided a parking demand study, prepared by Kimley-Horn and reviewed by the City's Traffic Engineer, that demonstrates that the parking demand generated by the

proposed uses is less than the required parking required under M.B.M.C 10.64.030. Furthermore, the number of parking spaces provided on site significantly exceeds the project's parking demand as projected in Kimley-Horn's analysis.

2. The probable long-term occupancy of the building or structure, based on its design, will not generate additional parking demand.

The conversion of the hotel building to an alternative use with a higher parking demand would be difficult considering the numerous hotel rooms on each floor that would need to be demolished in order to reconfigure each floor space. Furthermore, the Draft Resolution requires that a new parking demand study be conducted if new uses proposed at the site differ from the uses approved by the Master Use Permit.

General

The General Plan encourages uses in the General Commercial (CG) zone that are "intended to meet the needs of local residents and businesses and to provide goods and services for the regional market". The project is specifically consistent with General Plan Policies as follows:

LU-6: Maintain the viability of the commercial areas of Manhattan Beach.

LU-8: Maintain Sepulveda Boulevard as a regional-serving commercial district.

The project helps further the General Plan Policies identified above by providing more overnight accommodation options to people visiting Manhattan Beach and the greater Southern California region. The hotel's guests are likely to support other local businesses during their stay. The project's other new commercial spaces provide opportunities for local and regional businesses looking to locate in new, contemporary buildings.

PUBLIC COMMENT

A public notice for the Master Use Permit was published in The Beach Reporter on October 1, 2020 and mailed to all property owners within a 500-foot radius of the site. The public notice indicated that members of the public would not be allowed in the City Council chambers in order to adhere to social distancing requirements in light of the Covid-19 pandemic. The public notice did include information on how members of the public could comment via email and voicemail prior to the meeting. The notice also indicated that the public would be able to attend the meeting remotely with instructions posted on the City's website and meeting agenda. As of the writing of this report, staff has received one public comment via telephone from a neighbor on Shelley Street who expressed concern about how the hotel's mass will block sunlight and air.

The applicant has also reached out to the residents on Tennyson Street and Shelley Street by distributing an informational flyer prepared by the applicant. The applicant will distribute their informational flyer on October 8 and 9, 2020.

ENVIRONMENTAL DETERMINATION

The Project is Categorically Exempt from the requirements of the California Environmental Quality Act (CEQA), pursuant to State CEQA Guidelines Section 15332 (Infill Development Projects) exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and regulations; occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project.

The applicant hired the engineering firm Kimley-Horn to conduct a Traffic Impact Analysis that shows that the project will have a less-than-significant impact on traffic (included as an appendix in Attachment E). The applicant has also hired an engineer, Barbara L. Hall, P.E., Inc. to conduct a Drainage Technical Report that concluded that the project would produce less than significant impacts related to water quality with implementation of the required Stormwater Pollution Prevention Plan and Low Impact Development best management practices (included as an appendix in Attachment E). Michael Baker International, the City's environmental services consultant, has prepared technical studies on the project's noise and air quality impacts (each technical study included as a separate appendix in Attachment E). These noise and air quality technical studies have concluded that the project will have less than significant noise and air quality impacts. The applicant has also obtained "will serve" letters from Southern California Edison, Southern California Gas Company, and the City's Public Works Division stating that the project could be adequately served by all required utilities and public services (Attachment F).

CONCLUSION

Staff recommends that the Planning Commission conduct the public hearing, discuss the applicant's request, and approve the attached resolution approving the Master Use Permit subject to certain conditions.

Attachments:

A. Draft Resolution No. PC 20-
B. Applicant's Written Documents
C. Vicinity Map
D. Kimley-Horn Parking Evaluation- March 2020
E. Michael Baker International- Class 32 Categorical Exemption Evaluation Report with Appendices- October 2020
F. Will Serve Letters- Southern California Edison, Southern California Gas Company, City of Manhattan Beach Public Works Division
G. Plans- 600 S. Sepulveda Boulevard

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RESOLUTION NO. PC 20-

RESOLUTION OF THE MANHATTAN BEACH PLANNING COMMISSION APPROVING A MASTER USE PERMIT FOR A NEW 162-ROOM, 81,775 SQUARE-FOOT HOTEL WITH FULL ALCOHOL SERVICE FOR HOTEL PATRONS AND A NEW 16,348 SQUARE-FOOT RETAIL AND OFFICE BUILDING; AND REDUCED PARKING WITH 158 PARKING SPACES AT 600 S. SEPULVEDA BOULEVARD (MB HOTEL PARTNERS, LLC)

THE MANHATTAN BEACH PLANNING COMMISSION DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. MB Hotel Partners, LLC ("Applicant") has applied for a Master Use Permit to construct a 162-room, 81,775 square-foot hotel with full alcohol service for hotel patrons and a 16,348 square-foot retail and office building with reduced parking (the "Project"), located at 600 S. Sepulveda Boulevard (the "site"). The property is owned by 600 Sepulveda LLC (the "Owner").

SECTION 2. On October 14, 2020, the Planning Commission conducted a duly noticed public hearing to consider the application. The Commission provided an opportunity for the public to provide evidence and testimony at the public hearing.

SECTION 3. The Project is Categorically Exempt from the requirements of the California Environmental Quality Act (CEQA), pursuant to State CEQA Guidelines Section 15332 (Infill Development Projects) exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and regulations; occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project. The project will neither individually nor cumulatively have an adverse effect on wildlife resources, as defined in California Fish and Game Code Section 711.2.

SECTION 4. The record of the public hearing indicates:

A. The legal description of the site is: Portions of Lots 6 and 7, Block 2, Amended Map of Seaside Park, in the City of Manhattan Beach, County of Los Angeles. The site is located in Area District I and is zoned CG-D8, General Commercial- Sepulveda Boulevard Corridor Overlay. The surrounding properties are zoned CG-D8 to the North, CG General Commercial to the South (across Tennyson Street), RS Single-Family Residential to the East (across Chabela Drive), and commercial to the West (across Sepulveda Boulevard in the City of Hermosa Beach).

B. The uses are permitted in the CG-D8 zone subject to a Master Use Permit and are in compliance with the City's General Plan designation of General Commercial. The General Plan designation for the property is General Commercial. The General Plan encourages businesses in the CG zone that are "intended to meet the needs of local residents and businesses and to provide goods and services for the regional market."

C. The proposed uses are located at a site on the Sepulveda commercial corridor. Any potential impacts associated with the proposed uses are minimized by the physical distance between the use's location and most residents in nearby blocks, with Chabela Drive, Sepulveda Boulevard, other large commercial structures, walls, and landscaping providing physical separation between the project site and many neighboring structures.

D. The site is the former home of an El Torito Restaurant which operated with a full alcohol license.

E. The applicant is requesting to construct a 162-room, 81,775 square-foot hotel and a 16,348 square-foot retail and office building with reduced parking with 158 parking spaces. The hotel includes limited dining options with accompanying full alcohol service that will be limited to hotel patrons only.

F. The project is specifically consistent with General Plan Policies as follows:

LU-6: Maintain the viability of the commercial areas of Manhattan Beach.

LU-8: Maintain Sepulveda Boulevard as a regional-serving commercial district.

The project helps further the General Plan Policies identified above by providing more overnight accommodation options to people visiting Manhattan Beach and the greater Southern California region. The hotel's guests are likely to support other local businesses during their stay. The project's other new commercial spaces provide opportunities for local and regional businesses looking to locate in new, contemporary buildings.

SECTION 5. Based upon substantial evidence in the record, and pursuant to Manhattan Beach Municipal Code Sections 10.64.040 (B) and 10.84.060, the Planning Commission hereby finds:

1. **The parking demand will be less than the requirement in Schedule A or B**;

   The applicant has provided a parking demand study, prepared by Kimley-Horn and reviewed by the City's Traffic Engineer, that demonstrates that the parking demand generated by the proposed uses is less than the required parking required under M.B.M.C 10.64.030. Furthermore, the number of parking spaces provided on site significantly exceeds the project's parking demand as projected in Kimley-Horn's analysis.

2. **The probable long-term occupancy of the building or structure, based on its design, will not generate additional parking demand.**

   The conversion of the hotel building to an alternative use with a higher parking demand would be difficult considering the numerous hotel rooms on each floor that would need to be demolished in order to reconfigure each floor space. Furthermore, the Draft Resolution requires that a new parking demand study be conducted if new uses proposed at the site differ from the uses approved by the Master Use Permit.

3. **The proposed location of the uses are in accord with the objectives of this title and the purposes of the district in which the site is located.**

   The project is located in the "CG-D8" (General Commercial, Sepulveda Boulevard Corridor Overlay) design overlay district in Area District I. The Municipal Code stated purpose for the CG General Commercial zone is that the district provides "opportunities for the full range of retail and service businesses deemed suitable for location in Manhattan Beach, including businesses not permitted in other commercial districts because they attract heavy vehicular traffic or have certain adverse impacts; and to provide opportunities for offices and certain limited industrial uses that have impacts comparable to those of permitted retail and service uses to occupy space not in demand for retailing or services." Furthermore, the Municipal Code's stated purpose of the D8-Sepulveda Boulevard Corridor Overlay is to provide "more flexible development standards are needed in order to continue to promote desirable development, uses and economic vitality within the General Commercial (CG) zone. The project takes advantage of the 40-foot height limit allowed for hotel uses in the D8- Sepulveda Boulevard Corridor Overlay zone.

   The proposed location of the project (Sepulveda Boulevard) is in accord with the objectives of the Zoning Code and the purposes of the district in which the site is located because Sepulveda Boulevard is a main commercial thoroughfare and is within a commercial district where the uses will complement a full range of retail and service businesses suitable for Manhattan Beach.

4. **The proposed location of the uses and the proposed conditions under which the uses would be operated or maintained will be consistent with the General Plan; will not be detrimental to the public health, safety or welfare of persons residing or working on the proposed project site or in or adjacent to the neighborhood of such uses; and will not be detrimental to properties or improvements in the vicinity or to the general welfare of the city**.

   The proposed uses are commercial uses consistent with the General Plan's General Commercial land use designation assigned of the project site and lot, as well as neighboring properties. The proposed uses are consistent with neighboring uses, as the neighboring lots have also been developed with commercial uses. The proposed location of the uses and the proposed conditions under which they would be operated and maintained will not be detrimental to the public health, safety or welfare of persons residing or working on the Project site or in the surrounding area because Municipal Code requirements and conditions of approval address security, safety, aesthetics, hours of operation and parking. The Project will not be detrimental to properties or improvements in the vicinity or to the general welfare of the city, in that the area already supports commercial uses, and parking supplies are adequate. The General Plan recognizes that Sepulveda Boulevard corridor is a "regional-serving commercial district", and the

proposed uses can be part of the commercial mix of businesses that help create a dynamic commercial corridor along Sepulveda Boulevard.

5. The proposed uses will comply with the provisions of the City's Planning and Zoning Title, including any specific condition required for the proposed uses in the district in which they would be located.

The proposed uses comply with all provisions of Municipal Code Title 10 Planning and Zoning and any specific conditions imposed.

6. The uses will not adversely impact or be adversely impacted by nearby properties.

The proposed uses are located at a site on the Sepulveda commercial corridor. Most of the surrounding properties are also zoned General Commercial and have uses that serve both residents and the greater South Bay. Any potential impacts associated with the proposed uses are minimized by the physical distance between the use's location and most residents in nearby blocks, with Chabela Drive, Sepulveda Boulevard, other large commercial structures, fences, and landscaping providing physical separation between the project site and many neighboring structures. The project as conditioned requires hotel and security operation procedures that ensure minimal impacts to nearby properties. The uses will not create demands exceeding the capacity of public services and facilities.

SECTION 6. Based upon the foregoing, the Planning Commission hereby **APPROVES** the Master Use Permit to allow the construction of new commercial buildings and a reduction in parking subject to the following conditions:

1. The project shall be in substantial conformance with the plans and project description submitted to, and approved by the Planning Commission on October 14, 2020 as conditioned. Any substantial deviation from the approved plans and project description, as conditioned, shall require review by the Community Development Director to determine if approval from the Planning Commission is required.

2. Any questions of intent or interpretation of any condition will be reviewed by the Community Development Director to determine if Planning Commission review and action is required.

3. A Construction Management and Parking Plan (CMPP) shall be submitted by the applicant with the submittal of plans to the Building Division. The CMPP shall be reviewed and approved by the City, including but not limited to, the City Traffic Engineer, Planning, Fire, Police and Public Works, prior to permit issuance. The Plan shall include, but not be limited to, provisions for the management of all construction related traffic, parking, staging, materials delivery, materials storage, and buffering of noise and other disruptions. The Plan shall minimize construction-related impacts to the surrounding neighborhood, and shall be implemented in accordance with the requirements of the Plan.

Operation

4. Hotel guests will be limited to a maximum stay of 30 consecutive days.

5. The management of the hotel shall follow M.B.M.C Chapter 8.20 in collecting and remitting to the City all required Transient Occupancy Taxes.

6. The management of the property may be required to employ a private security firm to patrol the site if the Police Department determines that the site's operations are creating a significant number of dispatch calls.

7. Security cameras shall be installed throughout the site.

8. The site's light fixtures shall possess sharp cut-off qualities at all property lines and shielding shall be provided as necessary so that lighting does not shine on adjacent properties.

9. The management of the property shall police the property and all areas adjacent to the business during the hours of operation to keep it free of litter and food debris.

10. The operators of the businesses shall provide adequate management and supervisory techniques to prevent loitering and other security concerns outside the subject businesses.

11. All rooftop mechanical equipment shall be screened from the public right-of-way.

12. Hours of operation for the hotel's limited dining options, including full alcohol service, shall be permitted as follows:

Monday – Sunday	7:00 a.m. – 1:00 a.m.

13. Operation of the hotel's eating and drinking areas shall be in substantial compliance with all restrictions imposed by the California Department of Alcohol Beverage Control (ABC) prior to service of beer, wine, and distilled spirts.

14. Alcohol service shall be conducted only in conjunction with food service during all hours of operation. The hotel's eating and drinking options are for the use of hotel patrons only.

15. Live entertainment is prohibited on the fourth-floor outdoor terrace unless all of the following criteria are met:

    A The live entertainment is provided for the enjoyment of hotel patrons only.

    B. An Entertainment Permit shall be obtained by the hotel management as outlined in M.B.M.C 4.20.050

    C. No live entertainment shall be allowed after 9:00 p.m.

16. Noise emanating from the property shall be within the limitations prescribed by the City's Noise Ordinance and shall not create a nuisance to nearby property owners. Noise shall not be audible beyond the premises.

17. The hotel's management shall control the volume of any background music in the lobby and on the fourth-floor terrace.

18. After its daily closing time, the outdoor terrace shall be closed to all users, with an exception for hotel staff who are actively working

19. At any time in the future, the Planning Commission or City Council may review the Master Use Permit for the purpose of revocation or modification in accordance with the requirements of the MBMC Chapter 10.104. Modification may consist of conditions deemed reasonable to mitigate or alleviate impacts to adjacent land uses.

20. The Community Development Department staff shall be allowed to inspect the site at any time.

Refuse

21. A covered enclosure(s) with adequate capacity for different types of trash for all tenants shall be constructed. This trash enclosure shall be constructed per the latest City standard including drainage to the sanitary sewer system. The enclosure shall be subject to specifications and approval of the Public Works Department, Community Development Department, and the City's waste contractor. A trash and recycling plan shall be required to be submitted to the Public Works Department.

22. The management shall arrange for special on-site pickup as often as necessary to ensure that the refuse area has adequate space to accommodate the needs of the subject business.

23. No refuse generated at the subject site shall be located in the Public Right-of-Way for storage or pickup, including the disposal of refuse in any refuse container established for public use.

Signage

24. The applicant shall obtain a Master Sign Program, and all new signs shall receive permits and shall be in compliance with the City's sign code.

25. A-frame or other sidewalk signs in the public right-of-way shall be prohibited.

26. No temporary banner or other signs shall be placed on the site without City permit and approval.

Parking

27. All compact spaces, electric vehicle charging, and clean air vehicle spaces shall be posted with signs and labeled with stencil markings at the back of each space.

28. No fewer than 158 parking spaces shall be maintained on the site at all times.

29. A change in the site's uses shall require a parking demand study that shall demonstrate the site's existing parking supply is adequate to meet the parking demand of any new uses that differ from the uses approved by this Master Use Permit.

30. Bicycle parking shall be provided at a rate of five percent (5%) of all parking spaces (M.B.M.C. 10.64.80).

31. Height clearance signs and clearance warning bars shall be provided at the top of the parking ramp entrance. If a gate is installed in the subterranean parking area, the gate shall remain open during business hours and automatic gate operation using vehicle detection shall be provided.

32. All surface parking spaces shall remain available for retail, office, and hotel guest check-in parking during retail and office business hours. All employees on the site shall be required to park in the parking structure and shall not be charged for parking. Two-hour free parking shall be provided in the parking structure for retail, office and hotel visitors during retail and office business hours. No changes in parking restrictions or access shall be made without City approval.

33. The parking garage ramp shall be at least 26 feet wide to provide sufficient width inbound and outbound vehicles to pass without crossing vehicle paths on the ramp. Minimum outside turning radius of the vehicles shall be 24 feet (plus one foot when adjacent to a vertical obstruction).

34. Hotel management shall discourage hotel patrons from parking on Tennyson Street and Chabela Drive. A directional and parking sign program shall be implemented in the surrounding neighborhood discouraging hotel parking in the residential neighborhood to the satisfaction of the Community Development Department.

Public Works

35. The applicant shall be required to construct a minimum of six-foot clear sidewalk behind the curb (i.e. 6.5-foot clear from the face of the curb) per City Standard MBSI-112 and MBSI-115, driveway approach per City Standard MBSI-116, and replace any damaged curb and gutter per City Standard MBSI-120 along the property frontage of Tennyson Street and Chabela Drive. Eight-foot clear sidewalks are required along Sepulveda Boulevard. In order to comply with City sidewalk standards MBSI-112 and MBSI-115 additional street rights-of-way dedication may be required. MBSI-115 specifically addresses ADA clearances for sidewalk flaring next to street furniture such as fire hydrants, poles, etc. All sidewalk shall be constructed to comply with the latest ADA requirements including meeting the cross-slope grade of less than 2%.

36. All proposed pedestrian/ADA walkways and stairs/door landing shall conform to the grades proposed in the City's street improvement plans. All of the applicant's off-site street improvement plans, on-site grading plans, on-site drainage plans, landscaping plans and other plans described herein shall be prepared by a registered Civil Engineer in order to be reviewed and approved by the Public Works Department.

37. All Sepulveda Boulevard associated street right-of-way dedications shall be separately processed for dedication to Caltrans or to the City as required by Caltrans encroachment/right-of-way permit.

38. Applicant shall pay for the upsizing of affected water and sanitary sewer mains (including system impacts) and laterals based on projected demands and hydraulics analysis. Applicant shall be required to install a new fire hydrant at the intersection of Tennyson Street and Chabela Drive.

39. All electrical, telephone, cable television system, and similar service wires and cables shall be installed underground to the appropriate utility connections in compliance with all applicable Building and Electrical Codes, safety regulations, and orders, rules of the Public Utilities Commission, the serving utility company, and specifications of the Public Works Department. The applicant shall install City and/or Southern California Edison concrete/marbelite street light poles with LED light fixtures and glare shields to the satisfaction of the Public Works Director.

40. The applicant shall be required to resurface the full width of Tennyson Street and Chabela Drive for the blocks surrounding the project site at the end of project construction.

41. The project shall comply with all provisions of the Municipal NPDES Permit as identified in the M.B.M.C. Chapter 5.84. Erosion and sediment control devices BMPs (Best Management Practices) shall be implemented around the construction site to prevent discharges to the street and adjacent properties. BMPs shall be identified and shown on the plans. Control measures shall also be taken to prevent street surface water entering the site.

42. The curb lane along Sepulveda Boulevard between Tennyson Street and the proposed westerly driveway entrance into the development shall be widened to a minimum of 20 feet wide.

43. The existing street barricade at the intersection of Chabela Drive and Tennyson Street, as well as the existing street barricade at the intersection of Chabela Drive and Shelley Street, shall be replaced with a new design to the satisfaction of the Public Works Director.

44. It shall be the responsibility of the applicant to protect all street signs, hydrants, and other street furniture around the property. If they are damaged, lost or removed, it shall be the responsibility of the applicant/contractor to replace them at their expense.

45. No discharge of construction wastewater, building materials, debris, or sediment from the site shall be permitted. No refuse of any kind generated on a construction site shall be deposited in residential, commercial, or public refuse containers at any time. The utilization of weekly refuse collection service by the city's hauler for any refuse generated at the construction site shall be strictly prohibited. Full documentation of all materials/trash landfilled and recycled shall be submitted to the Permits Division in compliance of the city's Construction and Demolition Recycling Ordinance.

46. All unused driveways shall be reconstructed with curb, gutter and sidewalk.

Procedural

47. Terms and Conditions are Perpetual; Recordation of Covenant. The provisions, terms and conditions set forth herein are perpetual, and are binding on the Owner, its successors-in-interest, and, where applicable, all tenants and lessees of the site. Further, the Owner shall submit the covenant, prepared and approved by the City, indicating its consent to the conditions of approval of this Resolution, and the City shall record the covenant with the Office of the County Clerk/Recorder of Los Angeles. Owner shall deliver the executed covenant, and all required recording and related fees, to the Department of Community Development within 30 days of the adoption of this Resolution. Notwithstanding the foregoing, the Director may, upon a request by Owner, grant an extension to the 30-day time limit. The project approval shall not become effective until recordation of the covenant.

48. *Indemnity, Duty to Defend and Obligation to Pay Judgments and Defense Costs, Including Attorneys' Fees, Incurred by the City.* The Applicant shall defend, indemnify, and hold harmless the City, its elected officials, officers, employees, volunteers, agents, and those City agents serving as independent contractors in the role of City officials (collectively "Indemnitees") from and against any claims, damages, actions, causes of actions, lawsuits, suits, proceedings, losses, judgments, costs, and expenses (including, without limitation, attorneys' fees or court costs) in any manner arising out of or incident to this approval, related entitlements, or the City's environmental review thereof. The Applicant shall pay and satisfy any judgment, award or decree that may be rendered against City or the other Indemnitees in any such suit, action, or other legal proceeding. The City shall promptly notify the Applicant of any claim, action, or proceeding and the City shall reasonably cooperate in the defense. If the City fails to promptly notify the Applicant of any claim, action, or proceeding, or if the City fails to reasonably cooperate in the defense, the Applicant shall not thereafter be responsible to defend, indemnify, or hold harmless the City or the Indemnitees. The City shall have the right to select counsel of its choice. The Applicant shall reimburse the City, and the other Indemnitees, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Nothing in this Section shall be construed to require the Applicant to indemnify Indemnitees for any Claim arising from the sole negligence or willful misconduct of the Indemnitees. In the event such a legal action is filed challenging the City's determinations herein or the issuance of the approval, the City shall estimate its expenses for the litigation. The Applicant shall deposit said amount with the City or enter into an agreement with the City to pay such expenses as they become due.

SECTION 7. The Planning Commission's decision is based upon each of the totally independent and separate grounds stated herein, each of which stands alone as a sufficient basis for its decision.

SECTION 8. This Resolution shall become effective when all time limits for appeal as set forth in MBMC Chapter 10.100 have expired.

SECTION 9. The Secretary of the Planning Commission shall certify to the adoption of this Resolution and shall forward a copy of this Resolution to the Applicant. The Secretary shall make this resolution readily available for public inspection.

SECTION 10. This Master Use Permit shall lapse two years after its date of approval, unless implemented or extended pursuant to 10.84.090 of the Municipal Code.

October 14, 2020

_____
Planning Commission Chair

I hereby certify that the following is a full, true, and correct copy of the Resolution as **ADOPTED** by the Planning Commission at its regular meeting on **October 14, 2020** and that said Resolution was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Carrie Tai, AICP,
Secretary to the Planning Commission

_____
Rosemary Lackow,
Recording Secretary

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PROJECT DESCRIPTION/NARRATIVE – AS ATTACHMENT TO APPLICATION
MANHATTAN BEACH HOTEL- 600 S. Sepulveda Blvd.

Project Overview

Submittal for Use Permit approvals for a mixed-use hotel/office/retail project and related on-site alcohol service (ABC Type 47 on-sale general license) for the hotel rooftop lounge, and for a Vesting Tentative Tract Map for a commercial condominium plan for 20 subdivided air-space units.

- New, select-service hotel facility.
- Four-story hotel with 162 rooms.
- Two-story retail (ground floor) and office (second floor).
- Subterranean parking designed as a significant amenity with its perimeter open to the sky allowing for natural light and ventilation eliminating the feel of an underground closed structure.
- Top floor open deck area fronting on Sepulveda Blvd. with ocean and sunset views and offering limited food service.
- First new hotel to be built in Manhattan Beach in 15 years -
    - Highly desirable and much-needed amenity for the Manhattan Beach community.
    - Desirable destination for local businesses, organizations, residents-visitor/families, events, and leisure travelers.
    - The site is well located in the heart of the South Bay with close proximity to LAX and the Pacific Ocean, on a major commercial arterial highway with access on Sepulveda Boulevard and Tennyson Street.

Developer and Hotel Management

- **Live Oak Properties.** Manhattan Beach based real estate development firm founded by Jan A. Holtze, a Manhattan Beach resident since 1987. Live Oak has 26 years of real estate development and construction experience involving large commercial (hotel, office, industrial) projects spanning the western United States.
- **Stout Street Hospitality.** Denver-based hospitality and management firm founded by Steve Holtze in 1996. Stout Street owns and operates 7 hotels under its exclusive Magnolia Hotels brand.

Project Metrics – Timing and Economic Benefits (Estimated)

- Construction Value: $45 million
- Commencement Date: Q1 2021
- Completion Date: Q2 2022
- Transient Occupancy Tax Revenue: **~$1,000,000 to $1,400,000 per year**
- Incremental Property Tax Revenue (City share): **~$73,000 per year**
- Incremental Sales Tax Revenue to City: **~$25,000 to $35,000 per year**
- Planning Fees Paid: **~$200,000**
- Building and Other Permit Fees: **~$500,000**
- Estimated employment: Hotel approximately 25 full-time and part-time employees. Retail will be 15 to 30 full and part-time employees (depending on the tenant), and office will be 20 to 40 employees (depending upon the tenant).

Property Description

Address:	600 S. Sepulveda Blvd. (formerly El Torito Restaurant site)
Zoning:	CG
Property Size:	66,219 sf. (1.52 acres), subject to required dedications.
FAR:	1.50x
BFA:	99,328 sf

Project Highlights

Hotel:	162 Rooms (4 stories)
Hotel BFA:	81,941 sf
Office/Retail:	16,109 sf (2 stories)
Total SF:	98,050 sf
Parking:	158 (28 surface/130 subterranean)

See submitted plans for all design details and dimensions including BFA areas, parking, landscaping, access, etc.

Design Highlights

- The "architectural vernacular" combines the contemporary sophistication of a select-service class hotel communicating the casual lifestyle of the beach through the use of natural light, large open volumes of space combined with natural materials and colors with materials accents including wood, metal, tile, stone, brick, and smooth stucco finish – see plans for elevations and color renderings**.** Other hotel amenities include two small meeting rooms, business and media center, and fitness/workout center all designated for use by patrons of the hotel.
- The project includes a 4-story hotel building positioned to the north and east sides of the property and a 2-story office/retail building positioned and oriented to the Sepulveda/Tennyson corner. The hotel has an exterior deck area located on the fourth floor and fronting Sepulveda Blvd. that will offer its patrons ocean views. Locating this amenity out front minimizes noise impacts to residential area to the East of Sepulveda and is a minimum 300' from the nearest single-family residence. The hotel's primary entrance is located on Tennyson, and secondary ingress/egress on Sepulveda. The hotel building and office/retail building are situated on the property to maximize visibility from Sepulveda and Tennyson.
- The buildings have generous setbacks far in excess of the zero-foot allowable property-line setbacks allowed in the CG zone. Setbacks range from 8' along Tennyson, 15' on Chabela, 16' along the common property line with the neighbor to the north and up to 50' from Sepulveda for the west elevation of the hotel building.
- Signage will be provided under a separate permit with review and approval by the Community Development Department. The final hotel operator and office/retail tenants will have their own specific design criteria at a later date (TBD).
- The project site has 11% landscaped area (37.5% more than the minimum required 8% landscape area); will have large specimen trees included within the setbacks and open air areas of the subterranean parking area and visible above grade to add an inviting and natural environment for guests at both the ground and underground parking levels.
- The hotel complies with the City's maximum 40' height limit and the 30' maximum height limit for the office/retail building – see plans.

Parking and Traffic

- See attached Parking Demand Analysis (the "PDA"). The PDA demonstrates the project provides sufficient parking to meet all peak demands of the project in combination with accepted shared parking standards, the provision for alternative means of access as well as transportation demand management measures, such as bicycle racks, public transportation, car-pooling, significant use of ride-sharing services, etc. The shared parking analysis demonstrates the proposed parking supply of 158 spaces satisfies the project's peak weekday parking demand of 117 parking spaces and the peak weekend demand of 108 parking spaces. The project parking supply EXCEEDS peak parking weekday demand by 41 spaces, or by more than 35% of the projected peak demand**.**
- Primary ingress/egress located for the project is located on Tennyson with a secondary right-in and right-out only access on Sepulveda. Traffic impacts to the residential neighborhood directly east of Chabela are eliminated entirely by existing permanent street barricades on Tennyson to the east of Chabela and on Shelley to the east of Chabela. Therefore, Tennyson is a short one-block commercial street having a very low traffic volume with only the project frontage on

the north side and commercial uses located on the south side of Tennyson, whose primary access is on Artesia and Sepulveda.

- A preliminary traffic generation and access analysis is attached demonstrating a right turn pocket/deceleration lane on Sepulveda is not warranted based upon applying standards of the County of Los Angeles Department of Public Works *Access Management for Private Development Guidelines Manual* and ITE trip generation rates. However, in consultation with the City and Caltrans, a deceleration lane designed as a widened shoulder will be dedicated and constructed meeting all required design standards.

Public Improvements

- The plans will include any proposed designs and notes referencing conditions of approval for all public improvements provided by or paid for by the applicant for the development per city standards including sidewalks, street lights, street trees, undergrounding of utilities, etc. in conjunction with or required for the issuance of building and public works permits.

Other General Conditions and Operations

- Rooftop/Terrace Hours of Operation and Alcohol Service - The applicant has communicated with the City staff and the Police Department, and will agree to conditions of approval allowing for the operation and serving of limited food and alcoholic beverages from 7am to 1am daily and, if necessary, comply with applicable city ordinances for noise levels, security cameras provided on-site, etc. Applicant will agree to conditions limiting any live entertainment and music after certain hours, if necessary, as it expects the use of the terrace deck area will be used by patrons of the hotel as a place for social gathering and offering a beverage service, a limited light appetizer menu only, TV, and enjoying the view.
- The hotel expects to be considered as a "select service" hotel and not a "full service" hotel, i.e. providing full restaurant, 3-meal table service. Select service offer patrons of the hotel and their guests only limited menu options for breakfast to complement its buffet-style breakfast service which will be located on the ground floor lobby area. Limited menu options for appetizers, etc. will be available at other times of the day along with beverage service also to be provided on the ground floor. Room service is not provided. This limited level of service is considered an amenity provided to patrons of the hotel and is an integral part of its brand identity.
- The terrace area will be situated at the western elevation of the hotel building facing Sepulveda, approximately 300 feet from any residential areas significantly mitigating the noise impact to the neighborhood.
- Property Maintenance and Litter Abatement – As part of running a successful hotel property, property maintenance and cleanliness are paramount to meeting customer expectations. There will be maintenance personnel on property 24 hours a day who are responsible for walking the property at frequent intervals during days and evening to pick up debris such as plates, bottles, cans, trash, along with cleaning leaves, dirt, etc. The operational manual will include a daily requirement to check adjacent properties for any unwanted items left behind by patrons of the hotel.
- Off-Site Parking Discouraged – The hotel will provide a highly desirable amenity to park in a dedicated subterranean parking garage with direct access to the hotel. According to the parking

demand analysis reviewed by the City Traffic Engineer, the project has an excess supply of parking spaces provided of approximately 40 spaces over and above the expected weekday and weekend peak parking demand. Therefore, we would not expect patrons of the hotel to park off-site on the adjacent streets and walk to the property. In addition, there will be 24-hour CCTV monitored security system as a matter of safety for our patrons and employees. As part of that security we can identify visitors to the property who do not use the parking provided on site.

CEQA/Environmental Review

- Zoning and General Plan – The project is consistent with the existing Zoning and General Plan requirements. The proposed commercial uses are allowed in the CG General Commercial zone and the development design is well within the maximum development standards.

- Demolition of 8,483 sf building and all site improvements of existing full-service restaurant (El Torito).

- The project design and construction is proposed to meet the equivalent of a LEED Silver level or higher for new construction. The hotel operator will be required to provide a high standard for "green" operations and product/inventory use for recycling/waste reduction, energy and water efficiency, and general sustainability that will reduce green-house gas emissions and provide other environmental benefits. The project will include vehicle charging stations, bicycle racks and lockers, bicycle/micro mobility rental services availability, and will provide incentives for alternate transportation use. Details can be formalized through conditions of approval if necessary**.**

- CEQA Review/Environmental Impacts – The project site is 1.52 acres qualifies to be eligible for the 5-acre limit for an Urban Infill CEQA Categorical Exemption. The site is an existing developed site for a large restaurant that currently includes both indoor as well as outdoor seating. Utilities are provided to the site, and capacities are expected to be adequate to serve the new project, and where any required new construction permit service fees or utility improvements will be provided by the applicant as may be required. Any impacts are expected to be addressed by the applicant through appropriate design, best management practices such as for construction and water runoff, and any necessary conditions of approval for the project.

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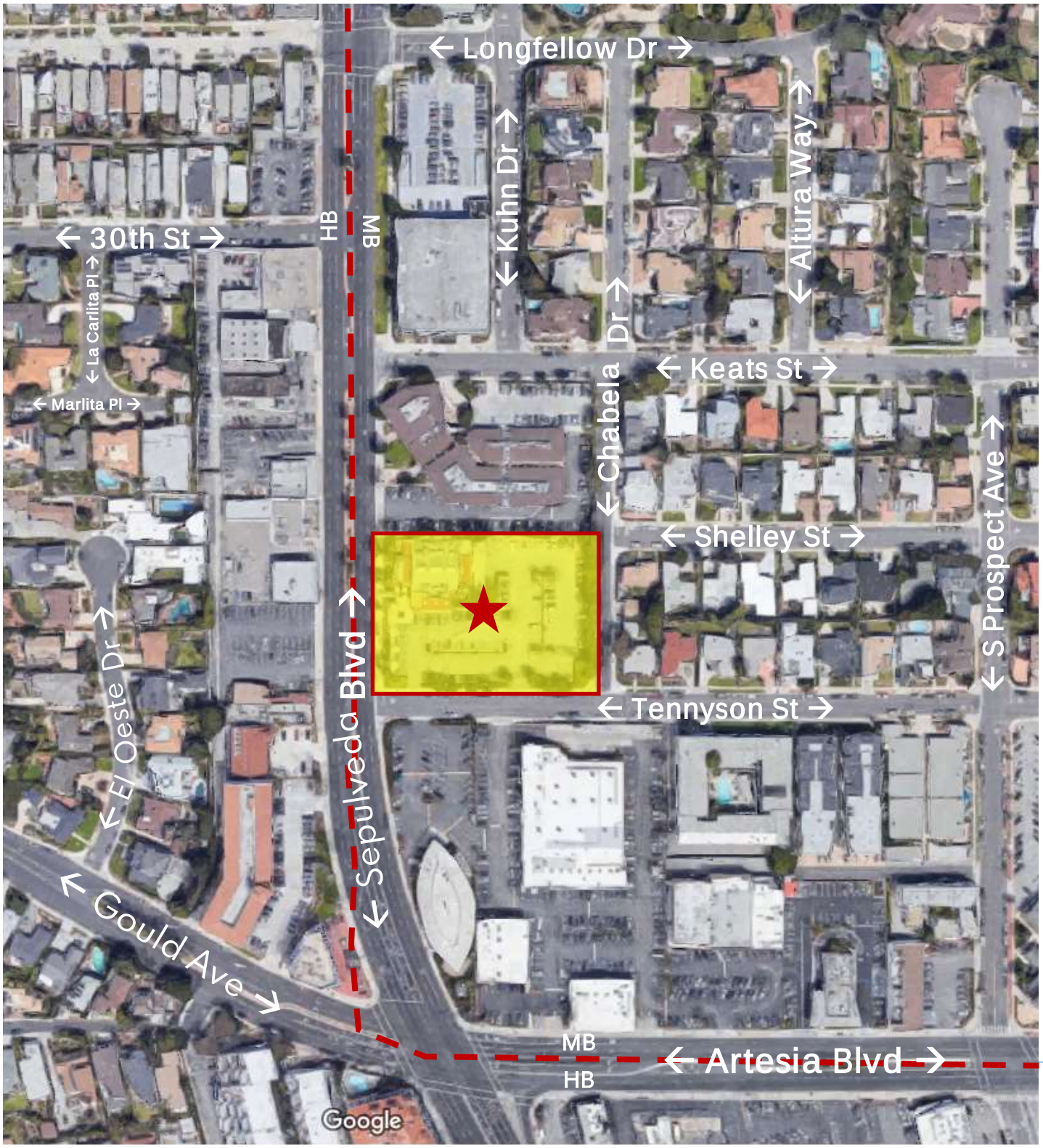
Attachment C

VICINITY MAP



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Kimley»Horn

MEMORANDUM

To: Mr. Jan Holtze

From: Serine Ciandella

Date: March 9, 2020

Re: *Manhattan Beach Hotel Mixed-Use Project Parking Evaluation*

INTRODUCTION

This memorandum has been prepared to provide an evaluation of the proposed parking for the proposed Manhattan Beach Hotel Mixed-use Project in the City of Manhattan Beach. The parking discussion will focus on a proposed reduction in required parking based on shared parking synergies between the different site uses.

PROJECT DESCRIPTION

The project site is located on the northeast corner of the intersection of Sepulveda Boulevard and Tennyson Street in the City of Manhattan Beach. The project is proposed to consist of a 162-room hotel, 6,845 square feet of retail space, and 9,264 square feet of office space. A total of 158 parking spaces would be provided on the site in a combination of surface level and underground parking. Access to the site would consist of a right-in/right-out only driveway on Sepulveda Boulevard and a full-movement driveway on Tennyson Street.

PARKING EVALUATION

City Parking Requirements

A summary of the parking requirements for the project, based on the City of Manhattan Beach Municipal Code – Chapter 10.64, is provided on Table 1.

Based on the City's Municipal Code parking requirements, the project would require:

- 32 spaces for the retail,
- 31 spaces for the office, and
- 178 spaces for the hotel,
- -36 spaces (15% reduction allowed by MBMC 10.64.040),
- for a total of 205 spaces.

The project proposes a parking supply of 158 parking spaces. While this represents a parking shortfall of 47 parking spaces when compared to the City's parking code, the following shared parking analysis will show that the project will have an excess of parking when shared parking factors are taken into account.

Shared Parking Evaluation

This shared parking analysis has been prepared to determine the actual anticipated parking needs for the project, taking into account the non-concurrent parking peaks for the hotel, retail, and office uses; and to determine the reduction in parking that can be supported due to shared parking synergies.

The shared parking methodology is a multi-step process that, first, establishes the stand-alone peak parking needed for various uses, such as office, retail, and hotel uses. The methodology then applies a percentage to the peak parking for each use, for each hour of the day, reflecting the fact that the parking demand for each use fluctuates throughout the course of the day. The shared parking process also identifies weekday vs. weekend variations in parking demand.

Beneficial shared parking synergies exist between different uses whose peak operating times occur at different times of the day. Uses with non-concurrent peak operating characteristics can share a portion of the same parking supply without detriment to the other, rather than each providing their own distinct and complete parking supply. For example, the parking demand for office uses peaks on weekdays during the mid-morning and mid-afternoon hours, while the parking demand for retail uses peaks on weekends, when the office usage is at its lowest; and hotel parking demand peaks in the late night and early morning hours when both retail and office uses are typically closed.

This shared parking analysis has been conducted using the weekday/weekend parking rates and the time-of-day usage factors published in the Institute of Transportation Engineers (ITE) Parking Generation Manual (5th Edition, January 2019). The weekday and weekend peak parking needs for each of the site uses are shown on Table 2 and Table 3, respectively.

The following summarizes the resulting parking patterns for the site:

WEEKDAY PEAK PARKING DEMANDS		
For this land use:	The peak parking demand would be:	And the peak demand would occur at:
Retail	13 spaces	12 Noon – 2:00 PM
Office	22 spaces	10:00 AM – 12 Noon
Hotel	117 spaces	12 Midnight– 7:00 AM

WEEKEND PEAK PARKING DEMANDS		
For this land use:	The peak parking demand would be:	And the peak demand would occur at:
Retail	20 spaces	1:00 PM – 3:00 PM
Office	3 spaces	10:00 AM – 12:00 Noon
Hotel	105 spaces	Midnight – 6:00 AM

The summary charts above demonstrate that the parking demand for the three different site uses would not peak at the same time, which would allow for a portion of the parking supply needed for each of the uses to be shared at different times of the day with the other uses.

Based on the ITE data, using the hour-by-hour parking demand variations for hotel, retail, and office uses, the actual peak parking demand for the overall project is estimated to be 117 parking spaces, which would occur at 6:00 AM on a weekday; and 108 parking spaces, at 8:00 AM on a weekend day. The detailed hour-by-hour shared parking worksheets are provided as *Attachment A* to this report.

The proposed parking supply of 158 spaces would satisfy the project's *peak weekday parking need of 117 parking spaces, with **a** surplus of 41 spaces at the peak time;* and the *peak weekend parking need of 108 parking spaces, with **a** surplus of 50 spaces at the peak time* when the shared parking factors are taken into account.

It should be noted that due to the project's proximity to the Los Angeles Airport (LAX), hotel patrons who fly in and out of LAX may find it convenient to use shuttle, taxi, or ride-hailing services (Uber, Lyft, etc.) to get between the airport and the hotel, and to avoid the cost of renting a car and paying for hotel parking. This analysis does not take into account the potential for a further reduction in parking demand attributable to the use of these other modes of travel, making this a more conservative analysis.

TABLE 1

MANHATTAN BEACH HOTEL MIXED-USE PROJECT
SUMMARY OF PARKING REQUIREMENTS
BASED ON CITY OF MANHATTAN BEACH MUNICIPAL CODE

Building / Use	Unit	Quantity	Parking Rates [1]		Required Parking
Retail	KSF	6.845	5.0	1st 5 KSF	25
			4.0	KSF over 5 KSF	7
Office	KSF	9.264	3.3		31
Hotel	Room	162	1.1		178
				15% Mixed-use Reduction [2]	(36)
				TOTAL Parking Required per City Code	*205*
				TOTAL Parking Provided On-site	158
				Parking Excess (Shortfall)	(47)

[1] Source: City of Manhattan Beach Municipal Code; Chapter 10.64
[2] Source: City of Manhattan Beach Municipal Code; Chapter 10.64 Section .040

TABLE 2

MANHATTAN BEACH HOTEL MIXED-USE PROJECT
SHARED PARKING ANALYSIS - WEEKDAY
BASED ON ITE PARKING GENERATION MANUAL - 5th EDITION

Building / Use	Unit	Quantity	Parking Rate (1)	Peak Demand	Parking Peak Occurs (2)
Retail	KSF	6.845	1.95	13	12 Noon - 2 PM
Office	KSF	9.264	2.39	22	10 AM - 12 Noon
Hotel	Room	162	0.72	117	Midnight - 6 AM
Sum of Individual Parking Requirements				*152*	
Parking Reduction based on Shared Parking (2)				(35)	
TOTAL Projected Shared Parking Demand				*117*	
TOTAL Parking Provided On-site				158	
Parking Excess (Shortfall)				*41*	

(1) Source: ITE Parking Generation Manual - 5th Edition (Jan 2019)

(2) Source: ITE Parking Generation Manual - 5th Edition (Jan 2019)

See Shared Parking worksheets in Attachment A

TABLE 3

MANHATTAN BEACH HOTEL MIXED-USE PROJECT
SHARED PARKING ANALYSIS - WEEKEND
BASED ON ITE PARKING GENERATION MANUAL - 5th EDITION

Building / Use	Unit	Quantity	Parking Rate [1]	Peak Demand	Parking Peak Occurs [2]
Retail	KSF	6.845	2.91	20	1 PM - 3 PM
Office	KSF	9.264	0.28	3	10 AM - 12 Noon
Hotel	Room	162	0.64	104	Midnight - 6 AM
Sum of Individual Parking Requirements				*127*	
Parking Reduction based on Shared Parking [2]				(18)	
TOTAL Projected Shared Parking Demand				*109*	
TOTAL Parking Provided On-site				158	
Parking Excess (Shortfall)				49	

[1] Source: ITE Parking Generation Manual - 5th Edition (Jan 2019)

[2] Source: ITE Parking Generation Manual - 5th Edition (Jan 2019)

See Shared Parking worksheets in Attachment A

TABLE A-1
SHARED PARKING ANALYSIS

PARKING RATES AND TIME-OF-DAY FACTORS: ITE PARKING GENERATION MANUAL (5th Edition)

WEEKDAY PARKING DEMAND

PROJECT:	MANHATTAN BEACH HOTEL / OFFICE / RETAIL										
			MED.	RESTAURANT				HOTEL			
LAND USE:	OFFICE	RETAIL	OFFICE	QUAL	Family	F FOOD	THEATER	ROOM	REST.	CONF.	CONV.
UNIT:	KSF	KSF	KSF	KSF	KSF	KSF	SEAT	ROOM	KSF	KSF	KSF
QUANTITY:	9.264	6.845	0.000	0.000	0.00	0.000	0	162	0.000	0.000	0.000
RATE: (ITE)	2.39	1.95	0	0	0	0	0	0.72	0	0	0
REQ'D PRKG	22	13	0	0	0	0	0	117	0	0	0
Mode Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Seasonal Factor	1.00	1.00	1.00	0.96	0.96	0.96	0.41	1.00	1.00	0.50	1.00

TOTAL
152
JUN

SCENARIO: 162-ROOM HOTEL, 6,845 SF RETAIL, 9,264 SF OFFICE

OFFICE	9.264	KSF	
RETAIL	6.845	KSF	
REST. - QUAL	0.000	KSF	
REST. - Family	0.000	KSF	
REST. - F FOOD	0.000	KSF	
THEATER	0.000	KSF	(SEATS:)
HOTEL	78.640	KSF	(ROOMS: 162)
TOTAL	94.7	KSF	

PERCENTAGE OF PEAK DEMAND BY HOUR OF DAY

TIME OF DAY	OFFICE	RETAIL	MED. OFFICE	RESTAURANT QUAL	RESTAURANT Family	RESTAURANT F FOOD	THEATER	HOTEL ROOM	HOTEL REST.	HOTEL CONF.	HOTEL CONV.
6:00 AM	0%	0%	0%	0%	16%	7%	0%	100%	0%	0%	0%
7:00 AM	13%	0%	0%	0%	32%	12%	0%	89%	10%	0%	0%
8:00 AM	48%	15%	80%	8%	51%	22%	0%	64%	30%	30%	50%
9:00 AM	88%	32%	93%	11%	73%	32%	0%	56%	10%	60%	100%
10:00 AM	100%	54%	100%	26%	91%	58%	0%	49%	10%	60%	100%
11:00 AM	100%	71%	100%	48%	91%	87%	0%	45%	5%	60%	100%
12:00 AM	85%	99%	53%	77%	100%	100%	20%	45%	100%	65%	100%
1:00 PM	84%	100%	93%	77%	87%	100%	45%	41%	100%	65%	100%
2:00 PM	93%	90%	100%	69%	70%	91%	55%	39%	33%	65%	100%
3:00 PM	94%	83%	100%	45%	45%	62%	55%	39%	10%	65%	100%
4:00 PM	85%	81%	93%	54%	49%	56%	55%	44%	10%	65%	100%
5:00 PM	56%	84%	87%	79%	65%	62%	60%	48%	30%	100%	100%
6:00 PM	20%	86%	67%	96%	74%	86%	60%	51%	55%	100%	50%
7:00 PM	11%	80%	30%	100%	74%	82%	80%	54%	60%	100%	30%
8:00 PM	0%	63%	15%	100%	69%	52%	100%	62%	70%	100%	30%
9:00 PM	0%	42%	0%	100%	37%	32%	100%	72%	67%	100%	10%
10:00 PM	0%	15%	0%	96%	31%	22%	80%	86%	60%	50%	0%
11:00 PM	0%	0%	0%	77%	22%	12%	65%	93%	40%	0%	0%
12:00 PM	0%	0%	0%	27%	26%	7%	40%	100%	30%	0%	0%

PROJECTED PARKING DEMAND BY HOUR OF DAY

TIME OF DAY	OFFICE	RETAIL	MED. OFFICE	RESTAURANT QUAL	RESTAURANT Family	RESTAURANT F FOOD	THEATER	HOTEL ROOM	HOTEL REST.	HOTEL CONF.	HOTEL CONV.	TOTAL
6:00 AM	0	0	0	0	0	0	0	117	0	0	0	117
7:00 AM	3	0	0	0	0	0	0	104	0	0	0	107
8:00 AM	11	2	0	0	0	0	0	75	0	0	0	87
9:00 AM	19	4	0	0	0	0	0	65	0	0	0	89
10:00 AM	22	7	0	0	0	0	0	57	0	0	0	87
11:00 AM	22	9	0	0	0	0	0	52	0	0	0	84
12:00 AM	19	13	0	0	0	0	0	52	0	0	0	85
1:00 PM	19	13	0	0	0	0	0	48	0	0	0	80
2:00 PM	21	12	0	0	0	0	0	45	0	0	0	78
3:00 PM	21	11	0	0	0	0	0	45	0	0	0	77
4:00 PM	19	11	0	0	0	0	0	51	0	0	0	81
5:00 PM	12	11	0	0	0	0	0	56	0	0	0	80
6:00 PM	4	11	0	0	0	0	0	59	0	0	0	75
7:00 PM	2	11	0	0	0	0	0	63	0	0	0	76
8:00 PM	0	8	0	0	0	0	0	72	0	0	0	81
9:00 PM	0	6	0	0	0	0	0	84	0	0	0	90
10:00 PM	0	2	0	0	0	0	0	100	0	0	0	102
11:00 PM	0	0	0	0	0	0	0	108	0	0	0	108
12:00 PM	0	0	0	0	0	0	0	117	0	0	0	117

(a) Source: ULI Shared Parking (2nd Edition) Table 2-5 - Percentages shown are the weighted averages of the employee and customer / visitor Time of Day Factors.

WEEKDAY PROJECTED PEAK PARKING DEMAND = 117 AT 6:00 AM
WEEKDAY UNADJUSTED PEAK PARKING DEMAND = 152
WEEKDAY PARKING ADJUSTMENT DUE TO SHARED PARKING = 35 23%

08-Mar-20

TABLE A-2
SHARED PARKING ANALYSIS

PARKING RATES AND TIME-OF-DAY FACTORS: ITE PARKING GENERATION MANUAL (5th Edition)

WEEKEND PARKING DEMAND

PROJECT:	MANHATTAN BEACH HOTEL / OFFICE / RETAIL												SCENARIO: 162-ROOM HOTEL, 6,845 SF RETAIL, 9,264 SF OFFICE											
			MED.	RESTAURANT				HOTEL																
LAND USE:	OFFICE	RETAIL	OFFICE	QUAL	Family	F FOOD	THEATER	ROOM	REST.	CONF.	CONV.													
UNIT:	KSF	DU	KSF	KSF	KSF	KSF	SEAT	ROOM	KSF	KSF	KSF													
QUANTITY:	9.264	6.845	0.000	0.000	0.00	0.000	0	162	0.00	0.00	0.00													
RATE: (ITE)	0.28	2.91	0	0	10	0	0	0.64	0	0	0	TOTAL												
REQ'D PRKG	3	20	0	0	0	0	0	104	0	0	0	126												
Mode Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00													
Seasonal Factor	1.00	1.00	1.00	0.96	0.96	0.96	0.82	1.00	1.00	1.00	0.50	JUN												

OFFICE	9.264	KSF	
RETAIL	6.845	KSF	
REST. - QUAL	0.000	KSF	
REST. - Family	0.000	KSF	
REST. - F FOOD	0.000	KSF	
THEATER	0.000	KSF	(SEATS: 0)
HOTEL	78.640	KSF	(ROOMS: 162)
TOTAL	94.7	KSF	

TIME OF DAY	PERCENTAGE OF PEAK DEMAND BY HOUR OF DAY											PROJECTED PARKING DEMAND BY HOUR OF DAY											
			MED.	RESTAURANT				HOTEL						MED.	RESTAURANT				HOTEL				
	OFFICE	RETAIL	OFFICE	QUAL	Family	F FOOD	THEATER	ROOM	REST.	CONF.	CONV.	OFFICE	RETAIL	OFFICE	QUAL	Family	F FOOD	THEATER	ROOM	REST.	CONF.	CONV.	TOTAL
6:00 AM	0%	0%	79%	0%	29%	7%	0%	82%	0%	0%	0%	0	0	0	0	0	0	0	85	0	0	0	85
7:00 AM	13%	0%	45%	0%	54%	12%	0%	96%	10%	0%	0%	0	0	0	0	0	0	0	100	0	0	0	100
8:00 AM	48%	27%	36%	8%	64%	22%	0%	98%	30%	30%	50%	1	5	0	0	0	0	0	102	0	0	0	108
9:00 AM	88%	46%	50%	11%	77%	32%	0%	87%	10%	60%	100%	2	9	0	0	0	0	0	90	0	0	0	102
10:00 AM	100%	67%	36%	26%	87%	58%	0%	74%	10%	60%	100%	3	13	0	0	0	0	0	77	0	0	0	93
11:00 AM	100%	85%	50%	48%	91%	87%	0%	64%	5%	60%	100%	3	17	0	0	0	0	0	66	0	0	0	86
12:00 AM	85%	95%	50%	77%	100%	100%	20%	56%	100%	65%	100%	2	19	0	0	0	0	0	58	0	0	0	79
1:00 PM	84%	100%	31%	77%	91%	100%	45%	48%	100%	65%	100%	2	20	0	0	0	0	0	50	0	0	0	72
2:00 PM	93%	98%	26%	69%	57%	91%	55%	44%	33%	65%	100%	2	20	0	0	0	0	0	46	0	0	0	68
3:00 PM	94%	92%	31%	45%	49%	62%	55%	40%	10%	65%	100%	2	18	0	0	0	0	0	41	0	0	0	62
4:00 PM	85%	86%	56%	54%	49%	56%	55%	46%	10%	65%	100%	2	17	0	0	0	0	0	48	0	0	0	67
5:00 PM	56%	79%	100%	79%	78%	62%	60%	48%	30%	100%	100%	1	16	0	0	0	0	0	50	0	0	0	67
6:00 PM	20%	71%	95%	96%	82%	86%	60%	55%	55%	100%	50%	1	14	0	0	0	0	0	57	0	0	0	72
7:00 PM	11%	69%	61%	100%	82%	82%	80%	60%	60%	100%	30%	0	14	0	0	0	0	0	62	0	0	0	76
8:00 PM	0%	60%	31%	100%	82%	52%	100%	64%	70%	100%	30%	0	12	0	0	0	0	0	66	0	0	0	78
9:00 PM	0%	51%	10%	100%	63%	32%	100%	67%	67%	100%	10%	0	10	0	0	0	0	0	69	0	0	0	80
10:00 PM	0%	38%	2%	96%	56%	22%	100%	81%	60%	50%	0%	0	8	0	0	0	0	0	84	0	0	0	92
11:00 PM	0%	0%	2%	77%	52%	12%	80%	88%	10%	0%	0%	0	0	0	0	0	0	0	91	0	0	0	91
12:00 PM	0%	0%	0%	27%	26%	7%	50%	100%	30%	0%	0%	0	0	0	0	0	0	0	104	0	0	0	104

0

WEEKEND PROJECTED PEAK PARKING DEMAND = 108 AT 8:00 AM

WEEKEND UNADJUSTED PEAK PARKING DEMAND = 126

WEEKEND PARKING ADJUSTMENT DUE TO SHARED PARKING = 18 14%

08-Mar-20

Attachment E

CITY OF MANHATTAN BEACH

CLASS 32 CATEGORICAL EXEMPTION EVALUATION REPORT

Manhattan Beach Hotel Project

600 S. Sepulveda Boulevard, Manhattan Beach, CA 90254

October 7, 2020

This Class 32 Categorical Exemption Evaluation Report (CE Evaluation) documents the eligibility of the proposed Manhattan Beach Hotel Project in the City of Manhattan Beach (City) for a Categorical Exemption from the California Environmental Quality Act (CEQA).

Project Description and Location

The 1.52-acre Project Site is the former El Torito restaurant site located at the northeast corner of the intersection of Sepulveda Boulevard and Tennyson Street, in Manhattan Beach, Los Angeles County, California. The Project Site is bound by Chabela Drive to the east, South Sepulveda Boulevard to the west, a commercial development to the north, and Tennyson Street to the south. See **Figures 1** and **2** for the Regional Location Map and the Project Location Map.

Proposed Project

The Proposed Project is a mixed-use commercial development consisting of two buildings containing hotel, office, and retail uses that would replace a vacant restaurant building (formerly El Torito) and associated surface parking lot. A two-story commercial building would be constructed on the southwestern corner of the Project Site. An L-shaped, four-story hotel would be constructed along the north and east property lines of the Project Site. See **Figure 3** for the Conceptual Site Plan. Maximum building heights would not exceed 40 feet for the hotel or 30 feet for the commercial building based on the Project Site's average grade. Both buildings would be constructed in the contemporary vernacular style featuring large open volumes of space and natural light. Materials used would include glass, wood, metal, tile, stone, brick, and stucco. See **Figure 4** for a Conceptual Rendering.

The proposed 16,348-square-foot commercial building would contain approximately 6,893 square feet of retail uses on the ground floor and approximately 9,455 square feet of office uses on Level 2. As shown in **Figure 3**, entrances to this building would be provided on both the north and south elevations. The proposed 81,775-square-foot select-service hotel would contain a total of 162 hotel rooms and associated hotel amenities. A canopied drop-off area and main entrance is located along the south elevation of the hotel, as shown in **Figure 3**. The ground floor of the hotel would include the hotel lobby, lounge area, a bar and dining area, and 39 guest rooms. Back of house uses and 41 guest rooms would be located on Level 2. Level 3 would include back of house uses; 41 guest rooms; and amenities such as a library area, a fitness room, and meeting rooms for hotel guest use. Level 4 would contain back of house uses, 41 guest rooms, and a rooftop bar and lounge with limited food service and an expansive outdoor deck fronting on Sepulveda Boulevard and offering an ocean view. Although intended primarily for hotel guest use, the rooftop bar, lounge, and deck would be open to the public. Upon completion, the Proposed Project would result in 98,123 square feet of total floor area and a floor area ratio (FAR) of approximately 1.5:1.

The Proposed Project would provide 28 surface parking spaces and 130 parking spaces within a one-level subterranean parking garage, for a total of 158 on-site vehicle parking spaces. Of the 130 subterranean parking spaces, one would be for electric vehicle (EV) charging only. The perimeter of the parking garage would be open to the sky to allow for natural light and ventilation. Access to the parking garage would be provided from a ramp and entrance located to the west of the hotel building. The Proposed Project would also offer 16 bicycle parking spaces both in the parking garage and at grade adjacent to the hotel and commercial building.

Primary vehicular access to the Project Site would be provided via a primary ingress and egress driveway on Tennyson Street, which leads to the hotel's porte-cochere/drop-off area and the ramp to the subterranean parking garage. A secondary right-in and right-out-only driveway would be located on Sepulveda Boulevard. Pedestrian access to the Project Site would be provided from both Sepulveda Boulevard and Tennyson Street.

The Proposed Project would be designed to meet the equivalent of U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver level or higher for new construction and would include design features for recycling/waste reduction, energy and water efficiency, and general sustainability, including EV charging stations and bicycle racks and lockers.

Construction of the Proposed Project is projected to begin in January 2021, with anticipated Project completion in June 2022. Project construction (including demolition of 8,483 square feet of existing building space, site preparation, and construction) would result in approximately 26,787 cubic yards of soil export and 2,466 tons of demolition materials. Excavation of up to 25 feet below ground surface may be required to construct the subterranean parking level.

The Proposed Project would require the following discretionary approvals from the City of Manhattan Beach:

- Master Use Permit
- Vesting Tentative Tract Map for a commercial condominium plan for 20 subdivided air-space units

Existing Conditions

The Project Site is currently developed with a commercial building (formerly El Torito restaurant) on the northwest corner surrounded by surface parking. Landscaping consists of trees and shrubs around the perimeter of the Project Site and within the parking medians.

The Project Site is designated for General Commercial land uses in the City of Manhattan Beach General Plan (General Plan) and zoned CG-D8 (General Commercial, Sepulveda Boulevard Corridor Overlay).

Surrounding uses include a commercial office plaza with medical office, retail, and restaurant uses to the north; a commercial plaza to the south across Tennyson Street; a single-family residential neighborhood to the east across Chabela Drive; and the City of Hermosa Beach to the west across South Sepulveda Boulevard with commercial uses fronting Sepulveda Boulevard and residential uses farther west.

Categorical Exemption

CEQA and the State CEQA Guidelines require the preparation of environmental documents to assess and report the environmental impacts of certain types of projects that could result in adverse effects on the environment. Pursuant to CEQA Section 21084, the CEQA Guidelines

(Section 15300 et seq.) also define classes of projects that are found by the Secretary of the California Natural Resources Agency to not have a significant effect on the environment and thus are declared to be categorically exempt from the requirement for the preparation of environmental documents. These types of projects are exempt from CEQA, provided that none of the exceptions to the use of categorical exemptions apply (CEQA Guidelines Section 15300.2).

Among the list of categorically exempt classes of projects is Class 32 In-Fill Development Projects, as defined in CEQA Guidelines Section 15332. Class 32 projects consist of those characterized as infill development meeting the following conditions identified in Section 15332:

> (a) the project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
>
> (b) the proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;
>
> (c) the project site has no habitat for endangered, rare, or threatened species;
>
> (d) approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
>
> (e) the site can be adequately served by all required utilities and public services.

The paragraphs below evaluate the Project's satisfaction of these criteria.

Consistency with General Plan Designation and Policies and Zoning Designation and Regulations

As discussed above, the Proposed Project is a mixed-use commercial development consisting of two buildings containing hotel, office, and retail uses. The Project Site is located along Sepulveda Boulevard and is designated in the General Plan as General Commercial. According to the City of Manhattan Beach Zoning Map, the zoning for the Project Site is CG-D8 (General Commercial, Sepulveda Boulevard Corridor Overlay).[1]

General Plan Designation & Policies

As established in the General Plan Land Use Element, the General Commercial land use designation is intended for a broad range of retail, service commercial, and professional office uses. Further, the Land Use Element states that General Commercial designations have a permissible FAR of 1.5:1. The proposed 16,348-square-foot office and retail building and 81,775-square-foot hotel would result in a total floor area of 98,123 square feet upon completion and a FAR of approximately 1.5:1, which is consistent with the maximum FAR for the General Commercial land use designation.[2] During the City's plan check and design review processes, the applicant must demonstrate that the Proposed Project would have a FAR of less than or equal to 1.5:1, as verified by the City's Planning staff.[3]

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[1] City of Manhattan Beach, City of Manhattan Beach Mapping, accessed August 14, 2020, https://permitmaps.citymb.info/Html5Viewer/index.html?viewer=mbca&_ga=2.102174465.1060542043.1597681828-347548808.1597440385.

[2] The FAR is calculated by totaling the proposed buildings' square footage and dividing by the total buildable square footage ((16,348 sf + 81,775 sf)/65,419 sf = 1.5).

[3] City of Manhattan Beach, General Plan Land Use Element, 2003.

In addition to the land use designation and FAR, the Land Use Element identifies several policies which act as guides for the City's future development. Among these policies is Policy LU-3.1, which encourages quality design in new construction. The Land Use Element specifies that quality design along Sepulveda Boulevard is especially important to ensure safety, access, compatibility, and aesthetic. As shown in **Figure 4**, the Proposed Project would construct two new buildings on the Project Site in the contemporary vernacular style utilizing high-quality materials to create large open volumes of space and natural light, consistent with Policy LU-3.1. The Proposed Project would also be consistent with Policy LU-3.2, which promotes the use of design guidelines for Sepulveda Boulevard. Consistent with the Sepulveda Boulevard Development Guide, the proposed buildings would be oriented toward Sepulveda Boulevard, parking and trash areas would not be prominent as viewed from Sepulveda Boulevard, and a minimum of 8 percent landscaping would be provided. Furthermore, the Proposed Project would be consistent with Policy LU-6.2, which encourages a diverse mix of businesses that support the local tax base by developing new hotel, retail, and office uses on an infill site along Sepulveda Boulevard, a major commercial corridor in the City. Therefore, the Project is consistent with the General Plan vision for the Project area and the relevant General Plan policies.

Zoning Designation and Regulations

In accordance with Manhattan Beach Municipal Code (MBMC) Section 10.16.020, the proposed retail and offices uses are permitted within the CG district. MBMC Section 10.16.020 also allows for hotel uses with the approval of a use permit. MBMC Section 10.16.030 specifies development regulations for the CG district, including a minimum lot area of 5,000 square feet, minimum lot width of 50 feet, maximum building height of 30 feet, maximum FAR of 1.5:1, and minimum site landscaping of 8 percent. The Project Site is also within the Sepulveda Boulevard Corridor Overlay (D8 Overlay), which provides modified development standards for site and lot area, building height, and roof design as established in MBMC Section 10.44.040. As specified in Note S of MBMC Section 10.44.040, the maximum height for buildings containing hotel uses in the D8 Overlay is 40 feet. In addition, there is no minimum roof pitch or structure parking at or below the ground level required, and roof-mounted mechanical equipment and elevator shafts are allowed to exceed the maximum allowed height limit by up to 5 feet, so long as they are properly screened and located in an area that would not be visible from or adversely impact the surrounding properties. The Project Site has a gross lot area of 66,219 square feet and a lot width that exceeds the 50-foot minimum requirement. As stated above, the Proposed Project would have a FAR of approximately 1.5:1 and maximum building heights would not exceed 30 feet for the commercial building or 40 feet for the hotel based on the Project Site's average grade. In addition, 11 percent of the Project Site would be landscaped, As such, the Proposed Project would be consistent with the development regulations set forth in MBMC Sections 10.16.020 and 10.44.040.

Additionally, MBMC Section 10.64.030 governs off-street parking requirements. **Table 1**, below, demonstrates that the Proposed Project would be required to provide a total of 208 parking spaces in accordance with MBMC Section 10.64.030. However, MBMC Section 10.64.050 allows for a reduced number of parking spaces with the approval of a use permit so long as the applicant can demonstrate that the parking demand would be less than the requirements in Section 10.64.030 and that the proposed building(s) would not generate additional parking demand long term. A shared parking analysis was conducted by Kimley-Horn for the Proposed Project to demonstrate that the overall peak demand for parking on the Project Site would be less than the

158 parking spaces that would be provided.[4] As such, with the allowed reduction in parking spaces through the use permit process, the Proposed Project would be consistent with the parking requirements of the MBMC.

Table 1 – Off-Street Parking Requirements

Use Classification	Off-Street Parking Spaces Rate[1]	Proposed Project	Total Required Off-Street Parking Spaces
Hotels	1.1 per guest room	162 rooms	178
Commercial Retail	5 spaces per 1,000 sf	6,893 sf	34.5
Commercial Offices	1 per 300 sf	9,455 sf	31.5
		Subtotal	*244*
		15% reduction under MBMC 10.64.040	-36
		Total	**208**

Note:
sf = square feet
1. Rates derived from City of Manhattan Beach Municipal Code Section 10.64.030

Summary

As discussed above, the Proposed Project is consistent with the General Commercial land use designation and relevant policies in the General Plan. With the allowed hotel use and reduction in parking spaces through the use permit process, the Proposed Project would also be consistent with the uses and development regulations specified in the MBMC for the CG-D8 zone.

Project Location within City Limits on a Site No More than 5 Acres Substantially Surrounded by Urban Uses

The Project Site is in an urbanized and developed area of the City of Manhattan Beach. The approximately 1.52-acre site is surrounded by single-family residences to the east across Chabela Drive, and commercial uses to the north, to the south across Tennyson Street, and to the west across Sepulveda Boulevard. Farther west across Sepulveda Boulevard are commercial uses located within the boundaries of the City of Hermosa Beach. As such, the Project Site is within the Manhattan Beach city limits, is located on a site that is less than 5 acres in size, and is substantially surrounded by urban land uses. Therefore, the Project is consistent with this criterion.

Habitat for Endangered, Rare, or Threatened Species

As stated above, the Project Site is in a highly urbanized area and completely surrounded by development. Landscaping consists of ornamental trees and shrubs around the perimeter of the Project Site and within the parking medians. The Project Site does not contain any vegetation that constitutes a natural community or any habitat that is biologically sensitive and there are no protected trees on the Project Site. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) shows that there have been endangered, rare, or threatened species identified in the Redondo Beach Quadrangle (where the Project Site is be

[4] Kimley-Horn, Manhattan Beach Hotel Mixed-Use Project Parking Evaluation, March 9, 2020. Since the completion of this parking evaluation, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the findings and conclusions in this parking evaluation remain the same.

located).[5] However, the Project Site does not contain any Critical Habitat, as delineated by the US Fish and Wildlife Service, nor does it contain the habitat necessary to support any of the listed species.[6] Further, the Project Site does not contain any wetland or riparian habitat as identified by the National Wetlands Inventory.[7]

Because Project-related demolition and construction activities would take place on a site that has been disturbed by existing commercial uses and past construction activities, and because the Project Site is located within a fully urbanized environment that is surrounded by disturbed areas (such as sidewalks, residential homes, commercial uses, overhead powerlines and streetlights, and major arterial streets), implementation of the Proposed Project would not result in loss of habitat utilized by endangered, rare, or threatened species.

Effects Relating to Traffic, Noise, Air Quality, or Water Quality

Traffic

The analysis in this section is derived from the Traffic Impact Study (TIS) prepared for the Proposed Project, available as **Appendix A** of this CE Evaluation.[8] The TIS was prepared in accordance with the traffic impact study requirements of the current Los Angeles County Congestion Management Program (LA County CMP) and evaluates the AM and PM peak hour intersection operations for four scenarios:

- Existing Conditions
- Existing Plus Project
- Opening Year 2022
- Opening Year 2022 Plus Project

The following five study intersections were identified and analyzed in the TIS:

1. Sepulveda Boulevard at Manhattan Beach Boulevard (signalized)
2. Sepulveda Boulevard at 2nd Street (signalized)
3. Sepulveda Boulevard at Longfellow Drive (signalized)
4. Sepulveda Boulevard at Tennyson Street (unsignalized)
5. Sepulveda Boulevard at Artesia Boulevard/Gould Avenue (signalized)

Peak hour operating conditions at signalized intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology, in accordance with the LA County CMP requirements. The ICU methodology calculates the volume-to-capacity (V/C) ratio, which translates into a corresponding level of service (LOS) measure, ranging from LOS A, representing uncongested, free-flowing conditions, to LOS F, representing severely congested, over-capacity conditions. Peak hour operating conditions at unsignalized intersections were evaluated using the Highway

[5] California Department of Fish and Wildlife, CNDDB Quad Species List, Redondo Beach Quadrangle, accessed August 14, 2020.

[6] US Fish and Wildlife Service, Critical Habitat for Threatened and Endangered Species Mapper, accessed August 14, 2020.

[7] US Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, accessed August 14, 2020.

[8] Kimley-Horn, Traffic Impact Study for Manhattan Beach Hotel Project in the City of Manhattan Beach, August 2020. Since the completion of the TIS, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the impact conclusions in the TIS remain the same.

Capacity Manual (HCM) methodology. Study intersections under California Department of Transportation (Caltrans) jurisdiction are to be analyzed using the HCM delay methodology in accordance with the *Caltrans Guide for the Preparation of Traffic Impact Studies*. Since Sepulveda Boulevard is a Caltrans facility, all study intersections were also analyzed using the HCM methodology. The HCM methodology estimates the average delay (in average seconds per vehicle), which also translates to a LOS designation, ranging from LOS A to LOS F.

Based on the LA County CMP, the minimum acceptable LOS for signalized intersections is LOS E. The impact at an intersection would be considered significant if the project increases traffic demand by 2 percent of capacity (V/C ≥ 0.02), causing LOS F (V/C >1.00). The same significance criteria apply for intersections already operating at LOS F. For Caltrans facilities, the *Caltrans Guide for Preparation of Traffic Impact Studies* states that "Caltrans endeavors to maintain a target Level of Service at the transition between LOS C and LOS D on State highway facilities. If an existing State highway facility is operating at less than the target Level of Service, the existing Level of Service is to be maintained." The impact to a Caltrans intersection would be considered significant if the project's traffic results in a change in LOS from LOS D or better to LOS E or F.

An intersection LOS analysis was conducted for the AM and PM peak hours under existing conditions. Based on the analysis, all study intersections currently operate at an acceptable LOS during the AM and PM peak hours under existing conditions, except for the following intersections:

- ICU Methodology
  - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
  - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
  - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

Daily, AM, and PM peak hour trips for the Proposed Project were estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th edition) trip generation rates for All Suites Hotel (ITE Land Use 311), Shopping Center (ITE Land Use 820), and General Office Building (ITE Land Use 710). Pass-by reduction factors were applied based on the ITE *Trip Generation Handbook* (3rd edition) and input from City staff. After applying pass-by reduction factors, the Project is estimated to generate approximately 983 vehicle trips daily, with 70 trips in the AM peak hour and 87 trips in the PM peak hour.

The Project-generated trips were added to the existing traffic volumes and an intersection LOS analysis was conducted for the AM and PM peak hours under Existing Plus Project conditions. The results of the intersection analysis indicate that the following study intersections would operate at an unacceptable LOS:

- ICU Methodology
  - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM – LOS F (change in V/C = 0.004), PM – LOS F (change in V/C = 0.011)
  - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F (change in V/C = 0.008)

- HCM Methodology
  - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

An ambient growth factor of 0.505 per year for a total of two years and cumulative projects were added to the existing traffic volumes to develop the Opening Year 2022 volumes. With the

addition of ambient growth and cumulative projects, the following study intersections would continue to operate at an unacceptable LOS under Opening Year 2022 conditions:

- ICU Methodology
  - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
  - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
  - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

Project-related traffic was added to Opening Year 2022 traffic volumes to develop Opening Year 2022 Plus Project traffic forecasts. With the addition of Project traffic, all study intersections would continue to operate at an acceptable LOS during the AM and PM peak hours, except for the following intersections:

- ICU Methodology
  - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM – LOS F (change in V/C = 0.003), PM – LOS F (change in V/C = 0.012)
  - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F (change in V/C = 0.008)

- HCM Methodology
  - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

The unsignalized intersection of Sepulveda Boulevard at Tennyson Street (Intersection #4) would operate at an unacceptable LOS under Existing Plus Project and Opening Year Plus Project conditions. A traffic signal warrant analysis was completed for this intersection, which indicated that this intersection did not meet the requirements for the installation of a traffic control signal.

The TIS also included an analysis of two driveway intersections: Sepulveda Boulevard at the Project driveway 1 and Tennyson Street at the Project driveway 2 (Proposed). Based on this analysis, Sepulveda Boulevard at Project driveway 1 would operate at LOS F during the AM peak hour under both Existing Plus Project and Opening Year Plus Project conditions. However, while the driveway would operate at a deficient LOS based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the driveway is contained on-site and does not impact the progression of traffic on Sepulveda Boulevard. Guests of the Project Site would be encouraged to exit from driveway 1 during peak hours due to the existing delay on Tennyson Street at intersection 4. This would result in a queue of 2 vehicles during the AM peak hour, assuming 22 feet per vehicle. The queue is expected to be maintained on-site without impacting on-site operations.

Based on the above and the TIS included in Appendix A, the vehicle trips generated by the Proposed Project would not increase traffic demand by 2 percent of capacity (V/C ≥ 0.02), causing LOS F (V/C >1.00) at any of the study intersections, or result in a change in LOS from LOS D or better to LOS E or F at any Caltrans intersections. As such, impacts would be less than significant.

In compliance with Senate Bill 743, which requires that vehicle miles traveled (VMT) replace LOS as the primary measure of transportation impacts, the TIS also included a VMT analysis. Since Manhattan Beach has yet to adopt VMT-based guidelines, a qualitative VMT analysis was provided in the TIS based on the Project Site's proximity to transit, the Governor's Office of Planning and Research(OPR) screening thresholds for land use projects, and Project trip types.

- **Proximity to Transit:** The Project Site is within a half-mile of transit service provided by Metro Line 232 and Metro Line 130. Therefore, it is expected that the Proposed Project's proximity to existing transit service would likely reduce Project VMT.
- **OPR Screening Thresholds:** Based on the OPR Technical Advisory, projects that generate or add 110 or fewer daily trips could be considered not to lead to a significant impact. The Project Site was previously occupied by an 8,392-square-foot restaurant that was estimated to have generated approximately 941 daily gross trips based on ITE *Trip Generation Manual* (10th edition). The Proposed Project would generate approximately 1,071 daily gross trips (not accounting for the pass-by trip reductions). This would equate to approximately 130 net daily trips, which is only nominally higher than the screening threshold of 110 daily trips. Furthermore, the proposed hotel, retail, and office uses would result in internal capture of trips between complementary uses, which would potentially reduce the number of daily trips to less than the VMT screening threshold. As such, the Proposed Project is not likely to lead to a significant VMT impact.
- **Project Trip Types:** The Proposed Project would generate employee commute trips, guest trips related to hotel use, and other trips. Based on Southern California Association of Governments (SCAG) data, it is estimated that approximately 88.5 percent of Manhattan Beach residents commute outside the City for work. The Proposed Project would increase local employment opportunities, which would reduce the average commuter trip lengths of residents, resulting in a net decrease to regional net VMT. The proposed hotel is expected to meet existing demand, rather than generate new demand that would result in guests traveling to the region. In addition, proximity to transit and potential use of shuttle services would likely reduce hotel guest single occupancy vehicle trips. Other trips—e.g., employee lunches off-site, maintenance teams for on-site infrastructure, supply deliveries—are often minimal and short distance. Thus, their impact to the overall VMT of the Project Site is likely insignificant.

The Proposed Project is not expected to be the principal catalyst for new trips. Rather, the Proposed Project would be developed to meet the existing demand for hotel, retail, and office uses in the region. Thus, based on the above, it is anticipated that this development of the Project Site with hotel, retail, and office uses would not result in a significant increase in VMT.

Noise

The following analysis summarizes the Noise Technical Memorandum (Noise Memo) prepared for the Proposed Project, available as **Appendix B** of this CE Evaluation.[9] Sensitive receptors surrounding the Project Site include residential uses as close as 40 feet to the east of the Project Site, which may be exposed to elevated noise levels generated by the Proposed Project during construction and operation.

Construction activities would occur over approximately 18 months and would include the following phases: demolition, grading, building construction, paving, and architectural coating.

[9] Michael Baker International, Manhattan Beach Hotel Mixed-Use Project – Noise Technical Memorandum, September 21, 2020. Since the completion of the Noise Memo, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the impact conclusions in the Noise Memo remain the same.

As shown in Table 6 of the Noise Memo, these residential uses could be exposed to noise levels of approximately 91 dBA if a scraper is used during Project construction. The MBMC establishes allowable hours of construction rather than quantitative construction noise standards. Per MBMC Section 9.44.030, construction activities are restricted to the hours between 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 6:00 p.m. on Saturdays. Construction activities are prohibited on Sundays and City-recognized holidays. Consistent with the MBMC, Project construction would only occur during the established allowable construction hours. In addition, according to the City's General Plan Noise Element, the Project Site lies within the 70 dBA CNEL contour zone. Thus, construction noise at the nearest sensitive receptors would be largely masked by traffic noise in the Project vicinity. Furthermore, a 6-foot concrete wall and Chabela Drive separate the Project Site and the nearby sensitive receptors, which would further minimize short-term construction noise. As such, construction noise impacts would be less than significant.

During Project operation, the Proposed Project would generate additional vehicle traffic on adjacent roadways, which would increase traffic noise in the Project vicinity. The most prominent source of mobile traffic noise in the Project vicinity is along Sepulveda Boulevard. The 2016 peak hour traffic volumes on northbound Sepulveda Boulevard in 2016 were 2,943 AM peak hour trips and 1,297 PM peak hour trips.[10] The Project would generate a maximum of 2,200 average daily trips, including 121 AM peak hour trips and 178 PM peak hour trips.[11] Conservatively assuming all Project-generated daily trips would be added to the northbound Sepulveda Boulevard traffic volumes, the Proposed Project would increase the AM peak hour trips by 4 percent and the PM peak hour trips by 14 percent. Caltrans states that a doubling of traffic (100 percent increase) on a roadway would be required to result in a perceptible increase in traffic noise levels (approximately 3 dBA).[12] Therefore, the Project's 4 percent and 14 percent maximum increases in AM and PM peak hour traffic, respectively, compared to existing traffic conditions on the surrounding roadways would be much less than the 100 percent threshold. Thus, the Project would result in a less than significant impact related to traffic noise.

Project operation would also generate stationary noise associated with the operation of mechanical equipment, parking lot activities, and outdoor gathering areas. The Noise Memo prepared for the Proposed Project states that noise generated by heating, ventilation, and air conditioning equipment would be 42 dBA at the nearest sensitive receptor and would not exceed MBMC Section 5.48.160 threshold of 50 dBA during the daytime and 45 dBA during the nighttime. In addition, the Noise Memo found that the highest parking lot noise level would be approximately 44 dBA L_{eq} at the closest sensitive receptor, which would not exceed the City's exterior noise

[10] Kimley-Horn, Manhattan Beach Hotel Mixed-Use Project Access Evaluation, March 2020. Since the completion of this access evaluation, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the findings and conclusions in this access evaluation remain the same.

[11] Note that the trip generation utilized in the Noise Memo differs from the trip generation reported in the Proposed Project's *Traffic Impact Study*, prepared in August 2020 by Kimley-Horn, which applied the trip generation rates from the 10th edition of the ITE *Trip Generation Manual* and considered pass-by trips for the proposed retail uses. The trip generation analyzed in the Noise Memo is based on Kimley-Horn's *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, dated March 8, 2020, which utilized trip generation rates from ITE's 9th edition manual and did not account for pass-by trips, resulting in a greater number of trips. Thus, the analysis in the Noise Memo is more conservative.

[12] California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.

threshold of 50 dBA during the daytime and 45 dBA during the nighttime. As previously described, the Proposed Project includes a rooftop bar and lounge with an outdoor deck fronting on Sepulveda Boulevard. Crowd noise generated from this area would be reduced to approximately 23 dBA at the closest sensitive receptor due to distance (approximately 300 feet) and the attenuation provided by the hotel structure, which would not exceed the City's exterior noise threshold of 50 dBA during the daytime and 45 dBA during the nighttime. Based on the above, Project operation would not generate stationary noise that would exceed the City's noise standards at the closest sensitive receptors and impacts would be less than significant.

Lastly, Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of some heavy-duty construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source; however, these vibrations can have effects on nearby structures. The Federal Transit Administration (FTA) has established an architectural damage criterion for continuous vibrations of 0.2 inches per second (in/sec). Using FTA data, the Noise Memo prepared for the Proposed Project determined that vibration velocities from typical heavy construction equipment operations would range from 0.003 to 0.089 in/sec peak particle velocity (PPV) at 25 feet and 0.001 to 0.044 in/sec PPV at 40 feet from the source of activity. The nearest structures are a commercial building approximately 40 feet north and residential buildings approximately 40 feet east of the Project Site. Since vibration velocities resulting from the use of construction equipment at 40 feet would be under FTA's 0.2 in/sec PPV significance threshold, impacts would be less than significant impact.

Air Quality

The following analysis summarizes the Air Quality Technical Memorandum (AQ Memo) prepared for the Proposed Project, included as **Appendix C** of this CE Evaluation.[13] The Project is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) has jurisdiction in the Basin, which has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. The Basin does not meet the ambient air quality standards for ozone or particulate matter (PM_{10} and $PM_{2.5}$) and is therefore classified as a nonattainment area for these pollutants. In order to reduce emissions pursuant to the federal Clean Air Act, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP), which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and federal air quality standards. The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) produced by SCAG, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The SCAQMD considers projects that are consistent with the AQMP to have less than significant cumulative air quality impacts.

[13] Michael Baker International, Manhattan Beach Hotel Mixed-Use Project – Air Quality Technical Memorandum, September 21, 2020. Since the completion of the AQ Memo, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the impact conclusions in the AQ Memo remain the same.

The SCAQMD established two criteria for determining consistency with the AQMP. The first criterion considers whether a project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay attainment of air quality standards. The second criterion considers whether a project would be consistent with the population, housing, and employment growth projections utilized by the AQMP. For determining consistency with AQMP consistency criterion 1, **Table 2** and **Table 3,** below, show Project-related emissions for construction and operation, as well as the SCAQMD thresholds for determining a significant impact.

In the short term, Project-related emissions would be generated by construction equipment, fugitive dust, worker vehicle exhaust, and applications of asphalt and surface coatings. In accordance with the SCAQMD Guidelines, the AQ Memo utilized CalEEMod to model construction emissions for reactive organic gases (ROG), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), PM_{10}, and $PM_{2.5}$, which are shown in **Table 2**, below. As indicated in **Table 2**, criteria pollutant emissions during construction of the Proposed Project would not exceed the SCAQMD significance thresholds. Thus, total construction-related air emissions would be less than significant.

Table 2 – Project Construction Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG[2]	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1						
Construction Related Emissions[3]	4.60	61.12	30.82	0.16	6.94	3.33
Year 2						
Construction Related Emissions[3]	11.84	15.09	16.66	0.04	1.5	0.82
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns.

Notes:

1. Emissions were calculated using CalEEMod, version 2016.3.2, as recommended by SCAQMD. Winter emissions represent worst-case scenario.
2. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are ozone precursors. As required, all architectural coatings for the Proposed Project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coatings. Rule 1113 provides specifications on painting practices as well as regulating the ROG content of paint.
3. Modeling assumptions include compliance with SCAQMD Rule 403 which requires the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Source: Michael Baker International, Air Quality Technical Memorandum, September 21, 2020.

Long-term operational emissions would be generated by the Proposed Project via area source emissions (e.g., consumer products, architectural coatings, and landscaping equipment), energy emissions (e.g., electricity and natural gas usage), and mobile source emissions (e.g., motor vehicles). Operational pollutant emissions are shown in **Table 3**, below.

As indicated in **Table 3**, criteria pollutant emissions during operation of the Proposed Project would not exceed the SCAQMD significance thresholds. Thus, operation-related air emissions would be less than significant. As such, because the Proposed Project would result in long-term and short-

term emissions below the SCAQMD thresholds, the Project would not have the potential to cause a violation of the ambient air quality standards.

Table 3 – Long-Term Operational Air Emissions

Emissions Source	Pollutant (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project Summer Emissions						
Area Source Emissions	2.09	<0.01	0.03	0.00	<0.01	<0.01
Energy Emissions	0.09	0.78	0.66	<0.01	0.06	0.06
Mobile Emissions[3]	5.22	9.25	46.43	0.12	11.25	3.08
Total Emissions[4]	**7.40**	**10.03**	**47.11**	**0.12**	**11.31**	**3.14**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Proposed Project Winter Emissions[2]						
Area Source Emissions	2.09	<0.01	0.03	0.00	<0.01	<0.01
Energy Emissions	0.05	0.44	0.37	<0.01	0.03	0.03
Mobile Emissions[3]	5.38	9.81	45.14	0.12	11.25	3.09
Total Emissions[4]	**7.52**	**10.24**	**45.54**	**0.12**	**11.28**	**3.12**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, version 2016.3.2 and the California Air Resources Board, Emission FACtor (EMFAC 2017) web database.
2. Winter emissions represent the worst-case scenario for long-term operational emissions; refer to Appendix A of the Air Quality Technical Memorandum for detailed model input/output data.
3. The mobile source emissions were calculated using the trip generation data provided in the Kimley-Horn report, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.
4. The numbers in this table may not add exactly to the totals due to rounding.

Source: Michael Baker International, Air Quality Technical Memorandum, September 21, 2020.

Because AQMP consistency criterion 1 pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the Project's pollutant emissions relative to localized pollutant concentrations is also used for evaluating Project consistency. As stated in the AQ Memo prepared for this Project, localized significance thresholds (LSTs) only apply to the operational phase of a project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). Since the Project does not include such uses, a localized analysis is not necessary for Project operation. However, Project construction would result in on-site emissions, including off-road construction equipment emissions and fugitive dust. **Table 4**, below, displays the localized significance of construction emissions for the Proposed Project, as well as the SCAQMD LST screening thresholds for determining significance.

As seen in **Table 4**, emissions would not exceed the LST screening thresholds for source receptor area 3 (SRA 3), which includes the Project Site, and localized construction emissions impacts would be less than significant. Therefore, because both Project-related emissions of criteria pollutants and construction-related localized pollutant emissions would be less than significant, the Proposed Project would be consistent with criterion 1 of the SCAQMD's AQMP consistency evaluation process.

Table 4 – Localized Significance of Construction Emissions

Maximum Emissions	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions (on-site)[1,2]	19.70	14.49	2.57	1.57
LST Screening Thresholds[3]	91	664	5	3
Screening Thresholds Exceeded?	***No***	***No***	***No***	***No***

Notes:

1. The maximum daily construction emissions includes fugitive dust control measures required by SCAQMD Rule 403, which includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
2. The demolition phase emissions would present the worst-case scenario for NO_x and CO, and the grading phase emissions present the worst-case scenario for PM_{10} and $PM_{2.5}$, during Project construction.
3. The LST screening thresholds were determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The screening thresholds are based on the anticipated daily acreage disturbance for construction (the thresholds for 1 acre were used), the distance to sensitive receptors (25 meters), and the source receptor area (SRA 3).

Source: Michael Baker International, Air Quality Technical Memorandum, September 21, 2020.

As stated above, the second AQMP consistency criterion considers whether a project would be consistent with the population, housing, and employment growth projections, as well as land use strategies utilized by the AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the City of Manhattan Beach General Plan, SCAG's regional growth forecast, and the SCAG RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. As stated above, the Project Site is designated in the General Plan as General Commercial and zoned CG-D8 (General Commercial – Sepulveda Boulevard Corridor Overlay). The General Commercial land use designation accommodates a broad range of retail and service commercial and professional office uses intended to meet the needs of local residents and businesses. The CG zone permits retail and office uses and allows hotel uses with the approval of a use permit. The Proposed Project would not differ from the current General Plan land use and zoning designations. Therefore, the Proposed Project would be consistent with the General Plan and with the types, intensity, and patterns of land use envisioned for the Project vicinity. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the Proposed Project would be consistent with the projections. In addition, as discussed above, the Proposed Project would result in less than significant air quality impacts and would not require mitigation. The Proposed Project would also comply with all applicable SCAQMD rules and regulations, including Rule 403, which requires excessive fugitive dust emissions controlled by regular watering or other dust prevention measures, and Rule 1113, which regulates the ROG content of paint. As such, the Proposed Project would be consistent with criterion 2 of the AQMP consistency evaluation process.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The closest sensitive receptors are single-family residences located approximately 40 feet east of the Project Site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction impacts (on-site emissions only) and

operations impacts (only if the project includes stationary sources or attracts idling vehicles). As discussed above, construction-related emissions would not exceed the LSTs established by the SCAQMD and Project operations do not include stationary sources or attract idling vehicles. Therefore, LST impacts would be less than significant.

As concluded in the AQ Memo, CO hotspots are unlikely to occur near the Project Site due to the low traffic volume generated by the Proposed Project. Therefore, localized mobile source impacts would be less than significant.

Finally, the Proposed Project would not cause any significant odor impacts. Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project would not include any of these uses. While construction activities may generate detectable odors from heavy-duty equipment exhaust and architectural coatings, construction-related odors would be short term in nature and would cease upon Project completion. Further, existing state and regional regulations, such as state codes limiting idling time of construction equipment and SCAQMD's Rule 1113, which minimizes odor impacts from architectural coatings, would ensure that any odor impacts associated with the Proposed Project would be less than significant.

Water Quality

The following analysis is based on the Drainage Technical Report prepared for the Proposed Project, which is included as **Appendix D** of this CE Evaluation.[14] The Project Site is located within an urban setting and is currently occupied by an existing commercial building surrounded by surface parking. The Project Site's topography slopes from the northeast to the southwest, generally toward Tennyson Street and Sepulveda Boulevard. Runoff from the parking area drains south and west via sheet flow to the south driveways, then out to Tennyson Street through sidewalk drains. Runoff from the existing building drains via scuppers and downspouts to the parking and planter areas on the east and west sides of the building. An existing public catch basin is located on Sepulveda Boulevard, at Tennyson Street.

The Proposed Project would maintain the existing drainage patterns and the amount of impervious surfaces on the Project Site would increase from 84 percent pre-development to 87.4 percent post-development. Stormwater quality would be managed through compliance with local and regional controls. Specifically, the Proposed Project would comply with MBMC Chapter 5.84, which includes implementation of effective best management practices (BMPs) in accordance with the County of Los Angeles's National Pollutant Discharge Elimination System permit since the Proposed Project would disturb an area greater than 1 acre during construction. The Proposed Project would also comply with the State Water Resources Control Board's Construction General Permit requirement to develop a Stormwater Pollution Prevention Plan (SWPPP). During construction, temporary stormwater BMPs would be installed to minimize erosion and restrict sedimentation of the storm drain downstream.

[14] Barbara L. Hall, P.E., Inc., Drainage Technical Report for Manhattan Hotel 600 South Sepulveda Manhattan Beach, CA, July 24, 2020. Since the completion of this drainage report, there have been minor changes to the square-footage calculations for the proposed hotel and commercial building. However, these changes are nominal and would not increase the overall building envelope or intensity of the proposed uses. Therefore, the findings and impact conclusions in this drainage report remain the same.

Once occupied, the Project Site would be covered by either impervious surfaces or managed landscaped areas, and thus would not be susceptible to erosion or siltation. In addition, to comply with the County of Los Angeles's Municipal Separate Storm Sewer System permit, the Project would be required to develop a low-impact development (LID) plan, to be approved by the City of Manhattan Beach before Project construction permits can be issued. The LID plan requires projects to retain on-site stormwater runoff generated by the 85th percentile storm, or 0.76 inches per hour, through site design and use of BMPs such as rainwater capture or biofiltration systems.[15] Therefore, because the Project would be required to comply with existing local and regional water requirements, the Project would result in less than significant impacts related to water quality with implementation of the required SWPPP and LID BMPs.

Utilities and Public Services

The Project Site is currently served by electric, natural gas, trash, water, and wastewater services. The Proposed Project would require new service connections for electricity, water, wastewater, and natural gas services, which would be undertaken during the construction period and could occur within the Project Site. Water and wastewater services to the Proposed Project would be provided by the City of Manhattan Beach Department of Public Works. The Proposed Project is expected to generate a total water demand of approximately 16,125 gallons per day (gpd).[16] The City's latest Urban Water Management Plan (UWMP) uses the General Plan's planned growth and development in the City as well as population projections from SCAG.[17] As the Project would be consistent with its underlying zoning and General Plan designation, and since the UWMP demonstrates adequate water supply for all normal and dry year scenarios through the plan's horizon year (2040), the Project's water demand could be adequately served by the City.

For wastewater services, the City of Manhattan Beach operates and maintains its own sanitary sewer system, which consists of a network of gravity sewers, pump stations, and force mains that convey approximately 3 million gpd of untreated wastewater to the Los Angeles County Sanitation Districts' trunk sewer system.[18] The Project's wastewater would be conveyed through the sewer system to the Sanitation Districts' system of water reclamation plants, including the Joint Water Pollution Control Plant in the City of Carson, which treats an average of 260 million gpd of wastewater and has a design capacity of 400 million gpd.[19] This plant is located approximately 8 miles southeast of the Project Site. The Proposed Project would generate approximately 14,659 gpd of wastewater.[20] The Project's estimated wastewater generation would be a small fraction of the Sanitation Districts' existing capacity. Further, because the City's General Plan is used to assist with long-term sewer infrastructure planning efforts, the Project's consistency with the General Plan would ensure that the City's sewer infrastructure has sufficient capacity to serve the Proposed Project.

[15] Los Angeles County Department of Public Works, Low Impact Development Standards Manual, 2004.

[16] City of Manhattan Beach Department of Public Works, Will Serve Letter for 600 S. Sepulveda Boulevard, July 13, 2020. Note that this water demand estimate is conservative because it accounts for 164 hotel guest rooms rather than the 162 hotel guest rooms proposed.

[17] City of Manhattan Beach, 2015 Urban Water Management Plan, January 2017.

[18] AKM Consulting Engineers, City of Manhattan Beach Wastewater Master Plan, 2020, Section 5, p. 5-6.

[19] Los Angeles County Sanitation Districts, Joint Water Pollution Control Plant, accessed August 14, 2020, https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp.

[20] City of Manhattan Beach Department of Public Works, Will Serve Letter for 600 S. Sepulveda Boulevard, July 13, 2020.

Electricity service is provided to the Project Site by Southern California Edison (SCE), whose existing portfolio of resources includes renewable energy (36 percent), large hydroelectric (4 percent), natural gas (17 percent), nuclear (6 percent), and unspecified power sources (37 percent).[21] This mix of resources enhances electrical system resilience by not relying on a single transmission source. SCE's Integrated Resource Plan (IRP) has a primary objective that includes system reliability, as well as establishing SCE's planned procurement of energy to meet demands through 2030.[22] Therefore, SCE's long-term forecasts for electricity demand within its service area, which includes the Project Site, would account for Project-related electricity demand. Further, SCE has issued a Will Serve Letter for the Proposed Project indicating that SCE will serve the Project's electrical requirements.[23] Based on the information in the IRP and SCE's Will Serve Letter, SCE has sufficient capacity to serve the Proposed Project.

Natural gas service is provided to the Project Site by Southern California Gas Company (SoCalGas), which is the principal distributor of natural gas in Southern California. SoCalGas projects that total natural gas demand will decline at an annual rate of 0.74 percent from 2018 to 2035 due to aggressive energy efficiency standards; further, SoCalGas is anticipated to meet a projected demand of 2,753 million cubic feet of natural gas per day in 2022 through a combination of withdrawals from underground storage facilities and flowing pipeline supplies.[24] Additionally, SoCalGas has provided a Will Serve Letter confirming its capability to supply natural gas for the Proposed Project. Due to SoCalGas's large service area and natural gas supplies, the decreasing natural gas demand, and SoCalGas's own indication through the Will Serve Letter, SoCalGas would have adequate capacity to support the Project.

The City of Manhattan Beach contracts with Waste Management for solid waste collection. As identified on the City's website, waste collected throughout the City is taken to El Sobrante Landfill.[25] According to CalRecycle's Solid Waste Information System facility database, this landfill has 143,977,170 cubic yards of remaining capacity as of 2018.[26] As such, with the franchised Waste Management collectors and existing capacity at nearby landfills, there is adequate solid waste service capacity to serve the Proposed Project.

The Project would also incrementally increase the demand for public services, such as fire protection and emergency medical services, police protection, and other public services (e.g., parks and libraries). Because there is no permanent residential component to the Project, it would not have any impact on area schools. The Manhattan Beach Fire Department (MBFD) would provide fire protection and emergency medical services. Project building plans would be reviewed by the MBFD for compliance with applicable safety and emergency access standards, such as circulation standards and ensuring the facility has adequate fire flow and fire hydrant placement. The MBFD has two fire stations consisting of thirty career firefighters and five part-time personnel. The nearest station is Station 2, located at 1400 Manhattan Beach Boulevard, which is

[21] Southern California Edison, 2018 Power Content Label, accessed August 18, 2020, https://www.sce.com/sites/default/files/inline-files/2018SCEPCL.pdf.
[22] Southern California Edison, 2017-2018 Integrated Resource Plan, August 1, 2018.
[23] Southern California Edison, Will Serve Letter for 600 S. Sepulveda Boulevard, July 7, 2020.
[24] California Gas and Electric Utilities, California Gas Report, 2018.
[25] City of Manhattan Beach, Solid Waste and Recycling Programs, accessed August 19, 2020, https://www.citymb.info/departments/public-works/environmental-programs/solid-waste-and-recycling-programs.
[26] CalRecycle, Solid Waste Information System, El Sobrante Landfill (33-AA-0217), accessed August 19, 2020, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402.

less than a mile from the Project Site. The Manhattan Beach Police Department (MBPD) would provide law enforcement services to the Project. The MBPD's service covers the entirety of the City of Manhattan Beach and includes patrol, investigations, records, parking enforcement, animal control, and more. The Project would adhere to all City impact fee requirements associated with public services provided by the police and fire departments in order to offset the Project's service requirements. Further, because the Project would be consistent with the Project Site's zoning and General Plan designation, the level of growth associated with the Project would be consistent with the City's long-term growth planning.

Based on the above, the Project would result in less than significant impacts related to utilities and public services and the Project Site can be adequately served by all required utilities and public services.

Considerations of Exceptions to the Use of a Categorical Exemption

Section 15300.2 of the CEQA Guidelines identifies the following exceptions to the use of a categorical exemption:

a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located—a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including, but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

As evaluated below, none of these exceptions apply to the Proposed Project. Therefore, the lead agency (the City of Manhattan Beach) is not precluded from categorically exempting the Proposed Project from CEQA.

Location

The location exception does not apply to the Class 32 categorical exemption. Regardless, the Project site is not within a particularly sensitive environment and there are no designated

environmental resources of hazardous or critical concern on the site or in the vicinity. The Project Site is a developed urban lot that is surrounded by commercial and single-family residential development.

Cumulative Impact

The Proposed Project would involve demolition of the existing restaurant building and construction of a two-story building containing retail and office uses and a four-story building containing hotel uses, which would generate noise and air pollutants. As stated above, the Project's construction- and operation-related noise would not generate noise levels that would exceed the City's noise standards at the closest sensitive receptors. In addition, the Project's vehicle trips would not cause an audible increase in roadway noise. With regard to air quality, the SCAQMD considers projects that are consistent with the AQMP to have less than significant cumulative air quality impacts. As stated above, and as further described in the AQ Memo prepared for this Project, the Project would be consistent with the AQMP. As such, the Project would not result in cumulatively considerable air quality or noise impacts.

The TIS prepared for the Proposed Project included an analysis of Opening Year 2022 Plus Project conditions which included an ambient growth factor of 0.505 per year for a total of two years and traffic generated by cumulative projects. Based on the analysis in the TIS, traffic impacts under Opening Year 2022 Plus Project conditions would be less than significant. As such, the Proposed Project's traffic impacts would not be cumulatively considerable, and impacts would be less than significant.

Based on the analysis herein, the Project would not considerably contribute to any significant impacts resulting from successive projects of the same type in the same place over time.

Significant Effect Due to Unusual Circumstances

There are no features that distinguish this Proposed Project from others in the exempt class; therefore, there are no unusual circumstances. The proposed hotel, office, and retail uses are encouraged within the General Commercial land use designation per the City's General Plan. Further, the Project Site is located within an urbanized area and has been disturbed by past uses. Given that the Project would be constructed on a site that has been previously developed, that the Project would be consistent with the development pattern in the area, and that the City regularly considers applications for commercial development projects as a normal course of business, there are no unusual circumstances.

Scenic Highways

There are no state scenic highways that traverse the City of Manhattan Beach.[27] Therefore, the Project Site does not contain, nor would it have any impact on, any scenic resources that contribute to views from a scenic highway.

Hazardous Waste Sites

An update to a previously prepared Phase I Environmental Site Assessment (ESA) report was prepared for the Project Site by Certified Environmental Consultants, Inc. (CEC), included as

[27] California Department of Transportation, List of Designated and Eligible State Scenic Highways, 2017.

Appendix E of this CE Evaluation.[28] Based on the Phase I ESA, neither the Project Site nor any of the adjacent properties appear on any of the various enforcement or permit-based regulatory listings, or on any of the business type-based historical listings (e.g., the Cortese List as specified in Government Code Section 65962.5). The Phase I ESA did not find any indication of large-scale or recurring chemical storage, leakage, or spillage and no hazardous waste facilities, such as aboveground tanks, dry wells, clarifiers, or underground storage tanks, at the Project Site during site reconnaissance. In addition, the Phase I ESA could find no indication of historical contamination due to past operations. Given the findings in the Phase I ESA and the fact that the Project is not listed on the hazardous waste/substances site list compiled under Government Code Section 65962.5, this exception does not apply to the Project.

Historical Resources

Section 15300.2 of the CEQA Guidelines states that a categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. CEQA Section 15064.5(b) states:

> A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.
>
> (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
>
> (2) The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code; … or
>
> (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.
>
> (3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings … shall be considered as mitigated to a level of less than a significant impact on the historical resource.

[28] Certified Environmental Consultants, Inc., Update for Previous Phase I Environmental Site Assessment Report, for a Commercial Property Located at 600-612 South Sepulveda Boulevard, Manhattan Beach, California, May 16, 2019.

The Project Site currently contains a vacant restaurant building surrounded by asphalt surface parking and landscaping. The restaurant building, most recently an El Torito restaurant, was constructed in 1995 and is approximately 8,483 square feet. The building is characterized by painted stucco, glass, and multiple awnings with a large sign along the frontage to Sepulveda Boulevard. Considering the building's age, its former use as a chain restaurant, and the lack of any distinctive characteristics, there are no resources on the Project Site that are eligible for designation as a local historical resource, for listing on the California Register of Historical Resources, or for listing on the National Register of Historic Places. Therefore, the Project would not cause a substantial adverse change in the significance of a historical resource.

Conclusion

As described above, the Proposed Project meets the requirements of Class 32 exemption, as it meets the definition of infill development; would be consistent with the applicable General Plan designation and all applicable General Plan policies as well as with the applicable zoning designation and regulations; occurs within City limits on a Project Site of no more than 5 acres substantially surrounded by urban uses; would be located on a site that has no habitat for endangered, rare, or threatened species; would not result in any significant effects relating to traffic, noise, air quality, or water quality; and could be adequately served by all required utilities and public services. Further, none of the exceptions to the use of a categorical exemption apply to the Project. Therefore, the Proposed Project is categorically exempt from CEQA pursuant to Section 15332 of the State CEQA Guidelines—Class 32, In-Fill Development Projects.

Figure 1
Regional Location Map

Michael Baker
INTERNATIONAL

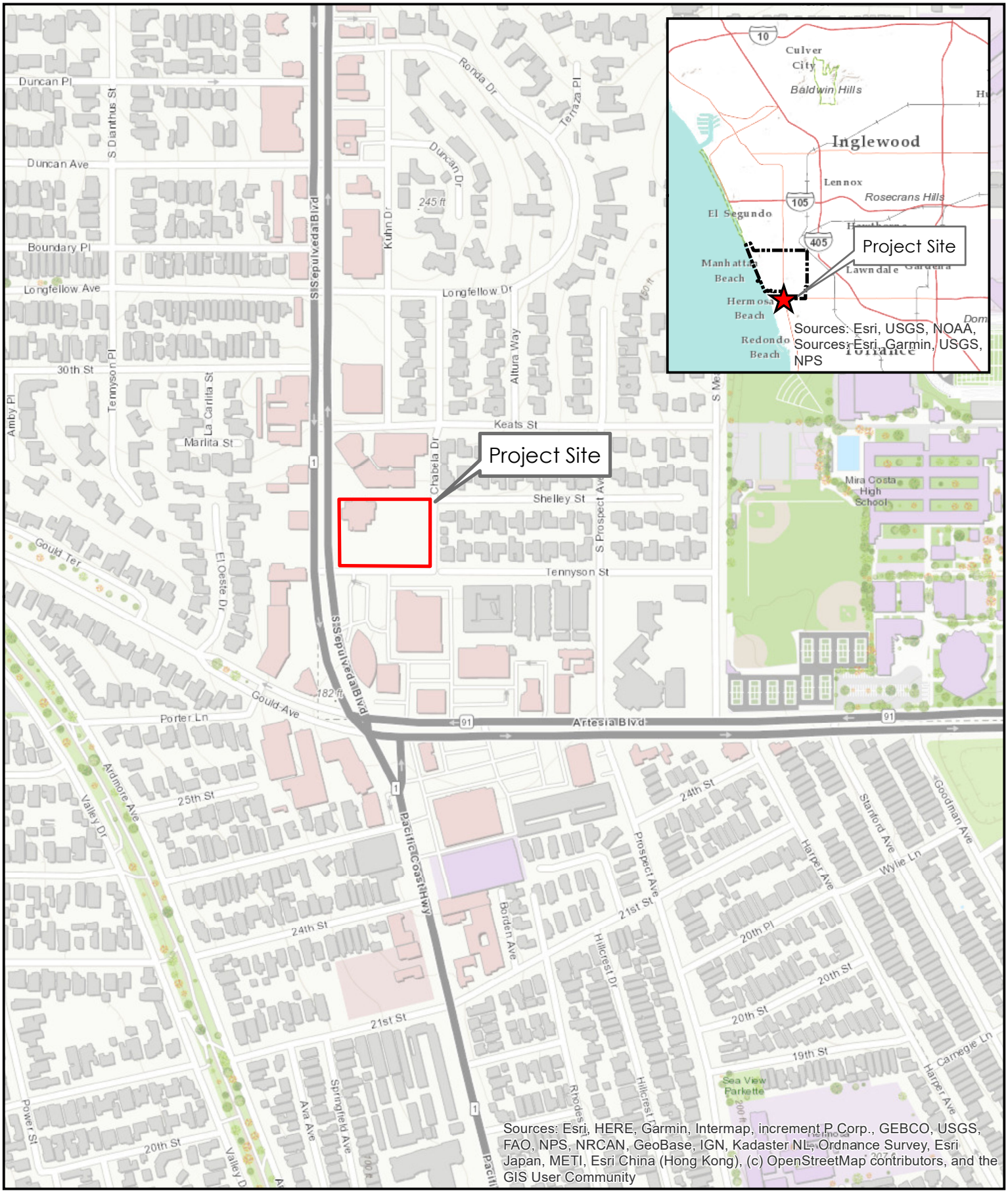
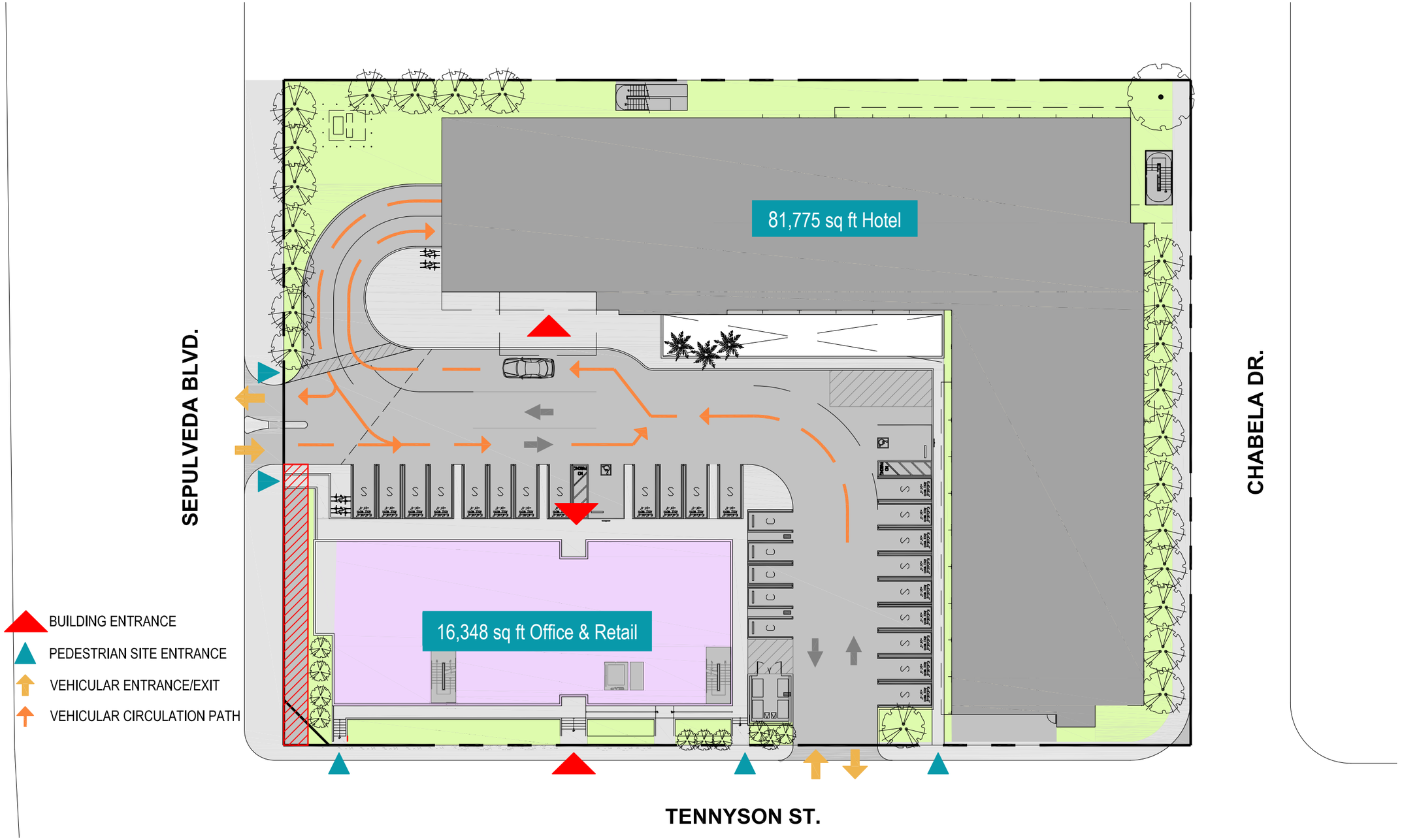


Figure 2
Project Location Map

Michael Baker
INTERNATIONAL



Michael Baker INTERNATIONAL

Source: AXIS/GFA Architecture and Design

Figure 3

Conceptual Site Plan

Michael Baker INTERNATIONAL

Source: Integ AXIS/GFA Architecture and Design

Figure 4

Conceptual Rendering - Approach from Sepulveda Boulevard

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Appendix A:
Traffic Impact Study

Traffic Impact Study

for:

Manhattan Beach Hotel Project

In the City of Manhattan Beach

August 2020

Kimley»Horn

TRAFFIC IMPACT STUDY
FOR THE MANHATTAN BEACH HOTEL PROJECT
IN THE CITY OF MANHATTAN BEACH

Prepared by:

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August 2020

TRAFFIC IMPACT STUDY
FOR THE MANHATTAN BEACH HOTEL
IN THE CITY OF MANHATTAN BEACH

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TRAFFIC IMPACT ANALYSIS
FOR THE MANHATTAN BEACH HOTEL PROJECT
IN THE CITY OF MANHATTAN BEACH

INTRODUCTION

This traffic impact study has been prepared to evaluate the project-related traffic impacts associated with the proposed Manhattan Beach Hotel project in the City of Manhattan Beach. This report has been prepared in accordance with the traffic impact study requirements of the current Los Angeles County Congestion Management Program (LA County CMP) for Traffic Impact Analyses.

The project location is shown in its regional setting on Figure 1.

PROJECT DESCRIPTION

The project site is located at 600 S. Sepulveda Boulevard in the City of Manhattan Beach, California. The site is bounded by S. Sepulveda Boulevard to the west, Chabela Drive to the east, Tennyson Street to the south, and a commercial building to the north. The project site is currently occupied by an approximately 10,000 square-foot vacant restaurant building and parking lot.

The applicant proposes to demolish the existing building and develop a 98,050-square-foot mixed-use development consisting of a 162-room hotel, 6,845 square feet of retail space, and 9,264 square feet of office space. The proposed site plan is shown on Figure 2. As shown on the site plan, the retail and office space would be located on the northeast corner of the intersection of S Sepulveda Boulevard and Tennyson Street. The hotel would be located along Chabela Drive and the northern boundary of the site. Access to the project would be provided by one right-in-right-out (RIRO) only driveway on S. Sepulveda Boulevard and one full movement driveway on Tennyson Street. Both project driveways would be unsignalized.

ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

This traffic analysis provides an evaluation of morning and evening peak hour intersection operations for the following scenarios:

- Existing Conditions
- Existing Plus Project
- Opening Year 2022
- Opening Year 2022 Plus Project

NOT TO SCALE

FIGURE 1
VICINITY MAP

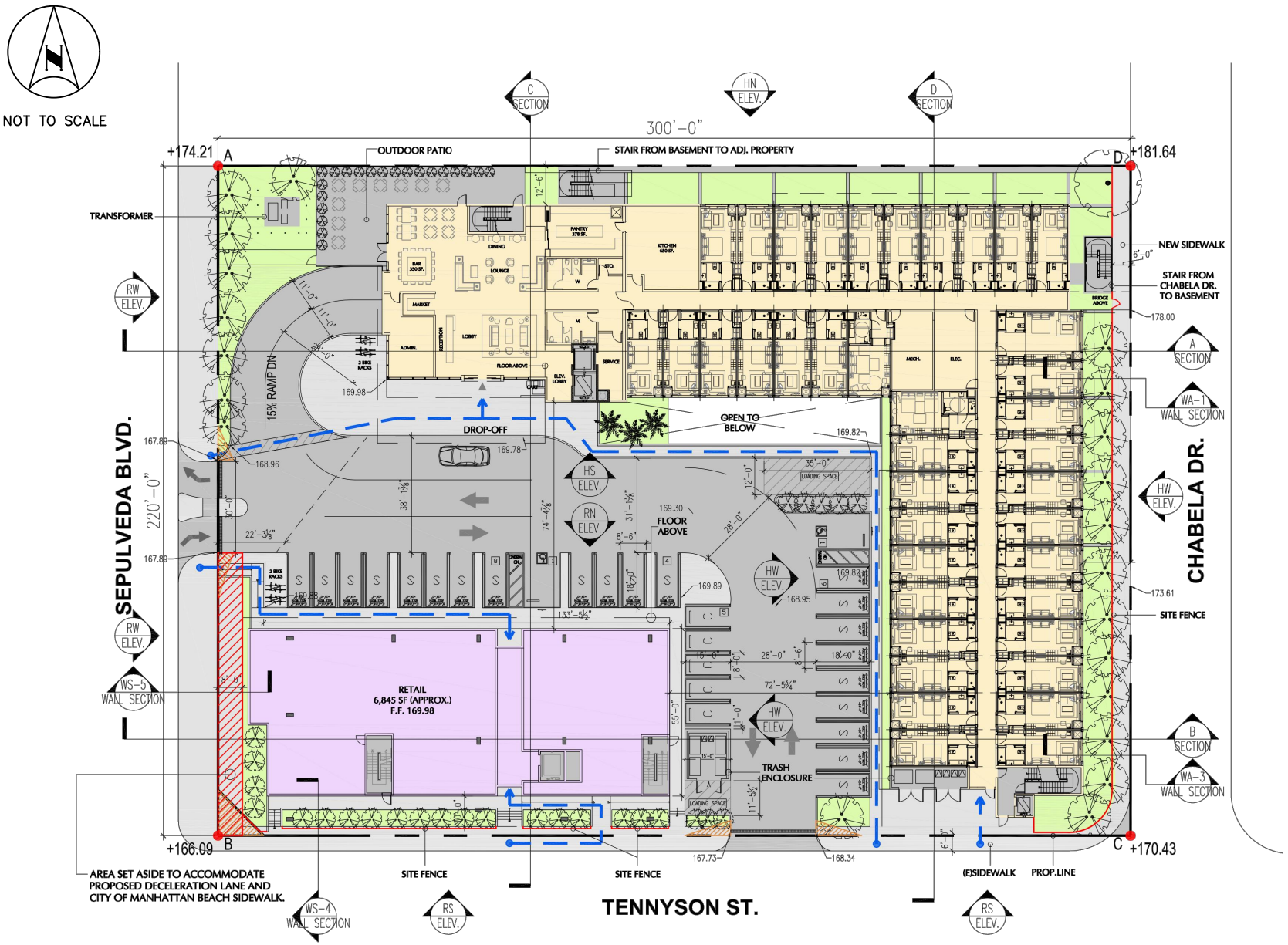


FIGURE 2
SITE PLAN

Study Locations

This traffic impact study includes documentation of existing conditions, analysis of future traffic conditions, and identification of project-related impacts, if any, at the following study intersections:

Study Intersections:

1. Sepulveda Boulevard at Manhattan Beach Boulevard
2. Sepulveda Boulevard at 2nd Street
3. Sepulveda Boulevard at Longfellow Drive
4. Sepulveda Boulevard at Tennyson Street
5. Sepulveda Boulevard at Artesia Boulevard/Gould Avenue

D1. Sepulveda Boulevard at the Project Driveway

D2. Tennyson Street at the Project Driveway (Proposed)

The study locations were established in consultation with City staff through the Scoping Agreement process. A copy of the approved Scoping Agreement is provided in *Appendix A*.

Intersection Capacity Utilization (ICU) Methodology

All the study intersections for this analysis are signalized, except the intersection of Sepulveda Boulevard at Tennyson Street, at the southwest corner of the project site. Peak hour operating conditions at signalized intersections are evaluated using the Intersection Capacity Utilization (ICU) methodology, in accordance with the LA County CMP requirements. The ICU methodology provides a comparison of the number of vehicles passing through an intersection to the theoretical hourly vehicle capacity of that intersection during a given hour.

The ICU calculation assumes a per-lane capacity of 1,600 vehicles per hour (vph) for each travel lane (through or turning lane) through the intersection. A separate "unofficial" de facto right-turn lane is assumed where there is no separately striped right-turn lane, if the width of the outside lane is 19 feet or more, and parking is prohibited during the peak period. A clearance factor of 0.10 (10%) of the total intersection capacity is included in the ICU calculation to account for the effect of the yellow and all-red phases of the signal cycle

The ICU calculation returns a volume-to-capacity (V/C) ratio, which translates into a corresponding Level of Service (LOS) measure, ranging from LOS A, representing uncongested, free-flowing conditions; to LOS F, representing severely congested, over-capacity conditions. A summary of the description of each Level of Service and the corresponding V/C ratio is provided on the chart on the following page.

LEVEL OF SERVICE DESCRIPTIONS ICU METHODOLOGY		
LOS	Volume to Capacity (V/C) Ratio	Description
A	0.00-0.60	At LOS A, there are no cycles that are fully loaded, and few are even close to loaded. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find intersection freedom.
B	>0.60-0.70	LOS B represents stable operation. An occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles.
C	>0.70-0.80	In LOS C stable operation continues. Full signal cycle loading intermittent, but more frequent. Occasionally drivers may have to wait through more than one red signal indication, and back-ups may develop behind turning vehicles.
D	>0.80-0.90	LOS D encompasses a zone of increasing restriction, approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, this preventing excessive back-ups.
E	>0.90-1.00	LOS E represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C = 1.00) there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).
F	>1.00	LOS F represents jammed conditions. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration, hence, volumes carried are not predictable. V/C values are highly variable because full utilization of the approach may be prevented by outside conditions.

Peak hour operating conditions at unsignalized intersections are evaluated using the Highway Capacity Manual (HCM) methodology.

Highway Capacity Manual (HCM) Methodology

Study intersections under Caltrans jurisdiction are also analyzed per Caltrans requirements using the Highway Capacity Manual (HCM) delay methodology in accordance with the Caltrans *Guide for the Preparation of Traffic Impact Studies*. Sepulveda Boulevard is a Caltrans facility; therefore, any study intersection along Sepulveda Boulevard will also be analyzed using the HCM methodology.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including the number of lanes, volume of traffic, and the signal timing phasing.

For unsignalized intersections, the HCM methodology analysis determines the average total delay for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

The HCM delay forecast translates to a Level of Service designation, ranging from LOS A to LOS F. a summary of each Level of Service and the corresponding delay is provided in the following chart.

LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized	Unsignalized	
A	< 10.0	< 10.0	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	> 10.0 - 20.0	> 10.0 - 15.0	LOS B represents stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	> 20.0 - 35.0	> 15.0 - 25.0	LOS C is in the range of stable flow but marks the beginning of operation in which individual users become affected by interaction with others in the traffic stream.
D	> 35.0 - 55.0	> 25.0 - 35.0	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are restricted, and the driver experiences a generally poor level of comfort and convenience.
E	> 55.0 - 80.0	> 35.0 - 50.0	LOS E represents operating conditions at or near the capacity of the intersection. All speeds are reduced to a low, but relatively uniform level. Small increases in flow will cause breakdowns in traffic movement.
F	> 80.0	> 50.0	LOS F represents forced, or breakdown flow. This condition occurs when the amount of traffic approaching the intersection exceeds the volume which can pass through the intersection, resulting in queues and congestion.

Performance Criteria

The minimum acceptable Level of Service for signalized intersections is LOS E, per the LA County CMP.

For Caltrans facilities, Level of Service standards and impact criteria specified by Caltrans will apply. The Caltrans Guide for Preparation of Traffic Impact Studies states that "Caltrans endeavors to maintain a target Level of Service at the transition between LOS C and LOS D on State highway facilities. If an existing State highway facility is operating at less than the target Level of Service, the existing Level of Service is to be maintained."

Significance Thresholds

Per the LA County CMP, the project impact at an intersection would be considered significant if the project increases traffic demand by 2% of capacity (V/C ≥ 0.02), causing LOS F (V/C >1.00). The same significance criteria applies for intersections already operating at LOS F.

For State-controlled intersections, the project impact at an intersection would be considered significant if the project's traffic results in a change in Level of Service from LOS D or better to LOS E of F. Improvements are required for locations that operate at an acceptable Level of Service without the project, but which operate at an unacceptable Level of Service with the project.

EXISTING TRAFFIC ENVIRONMENT / AREA CONDITIONS

Existing Transportation System

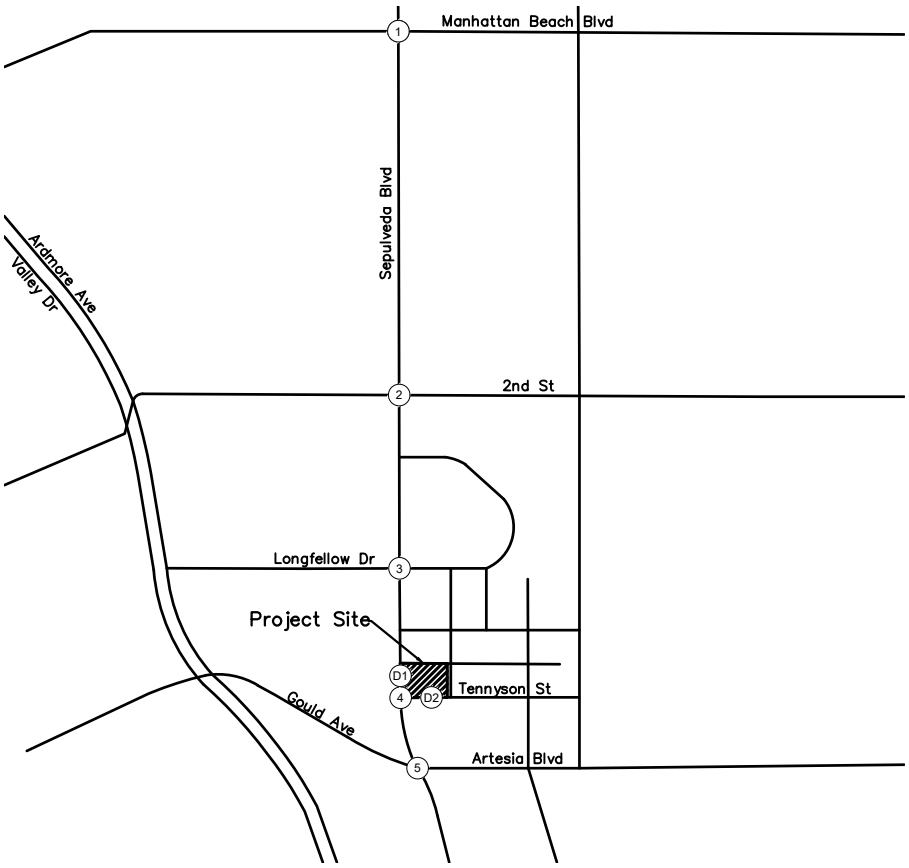
Regional access to the site is provided by S. Sepulveda Boulevard/State Route 1 (SR-1) and Artesia Boulevard/Gould Avenue which turns into State Route 91 (SR 91) to the east. The SR-1 Highway borders the west side of the project site. Artesia Boulevard turns into SR 91 Freeway approximately 6 miles east of the project site.

Existing lane configurations and traffic controls of the study intersections are shown on Figure 3. Local access to the project vicinity is provided by the following roadways:

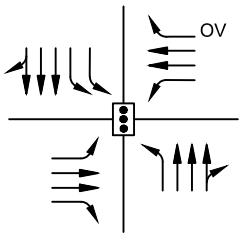
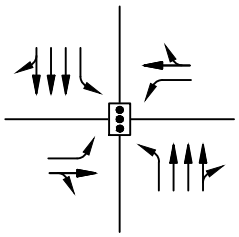
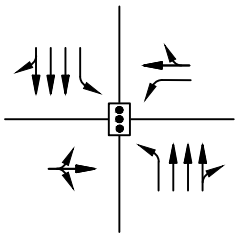
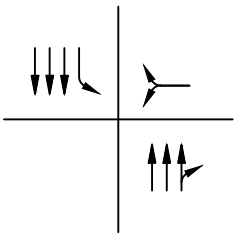
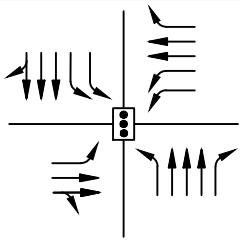
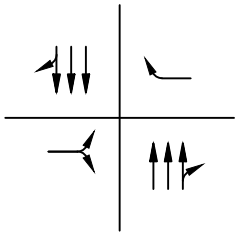
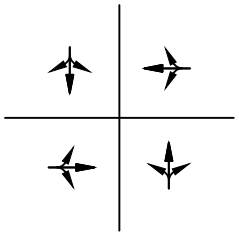
S. Sepulveda Boulevard (State Highway 1) is a north-south roadway that forms the western boundary of the project site. It provides three travel lanes in each direction. North of Artesia Boulevard, S. Sepulveda Boulevard is separated by a raised median, the posted speed limit is 35 miles per hour (mph), and on-street parking is prohibited on both sides of the street. South of Artesia Boulevard, S Sepulveda Boulevard is separated by a two-way left-turn lane (TWLTL) and provides three lanes in both directions during non-peak hours. S Sepulveda Boulevard restricts one lane to allow parking from 3 PM to 7 PM in the southbound direction and from 6:30 AM to 9 AM in the northbound direction. S. Sepulveda Boulevard is classified as a Regional Arterial in the City of Manhattan Beach General Plan and provides direct access to the project site via a RIRO movement driveway.

Artesia Boulevard is an east-west roadway that provides two travel lanes in each direction, separated by a raised median along the length of the study corridor. The posted speed limit is 40 mph and on-street parking is prohibited on both sides of the street within the study area. Artesia Boulevard is classified as a Major Arterial in the City of Manhattan Beach General Plan.

Tennyson Street is an east-west local roadway that forms the southern boundary of the project site and provides one travel lane in each direction. On-street parking is provided on both sides of the street. Tennyson Street provides direct access to the project site via a full movement driveway. However, southbound right-turns from the driveway to Tennyson St are proposed to be restricted during peak hours.



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
			
5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2	
			

LEGEND:

X = Study Intersection

= Turn or Through Lane

= Signal

OV = Right Turn Overlap

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

Transit Service

Public transit service in the project vicinity is provided by the Los Angeles County Metropolitan Transportation Authority (LA Metro), Beach Cities Transit (BCT) and Los Angeles Department of Transportation Transit (LADOT Transit). Bus stops near the project site are currently located:

- On the northeast and southwest corners of the intersection of S. Sepulveda Boulevard and Artesia Boulevard
- On the northwest corner of the intersection of S. Sepulveda Boulevard and Longfellow Avenue

The following discussion provides a brief description of the LA Metro and LADOT transit routes that operate on the roadways serving the project site.

LA Metro Line 130

LA Metro Line 130 operates along Artesia Boulevard within the project vicinity. On weekdays, Line 130 operates from 6:14 AM to 10:27 PM, with approximately 60-minute headways throughout the day. On Saturdays, Sundays, and Holidays, Line 130 operates from 6:55 AM to 10 PM, with approximate 60-minute headways throughout the day.

LA Metro Line 232

LA Metro Line 232 operates along S. Sepulveda Boulevard/SR 1 within the project vicinity. On weekdays Line 232 operates from 4:38 AM to 1:03 AM, with approximate 30-minute headways throughout the day. On Saturdays, Sundays and holidays, Line 232 operates from approximately 4:38 AM to 1:01 AM, with 30-minute headways throughout the day.

Beach Cities Transit Line 109

Beach Cities Transit Line 109 operates along Hermosa Avenue and Manhattan Avenue less than a mile west of the project. On weekdays, Line 109 operates from approximately 6 AM to 10 PM, with 30 to 60-minute headways throughout the day. On Saturdays and Sundays, Line 109 operates from approximately 6:45 AM to 10 PM, with approximate 60-minute headways throughout the day.

LADOT Commuter Express Route 438

LADOT Commuter Express Route 438 operates along Hermosa Avenue and Manhattan Avenue less than a mile west of the project. Route 438 operates on weekdays from approximately 6 AM to 7:30 PM, with 15 to 60-minute headways throughout the day.

Existing Traffic Volumes

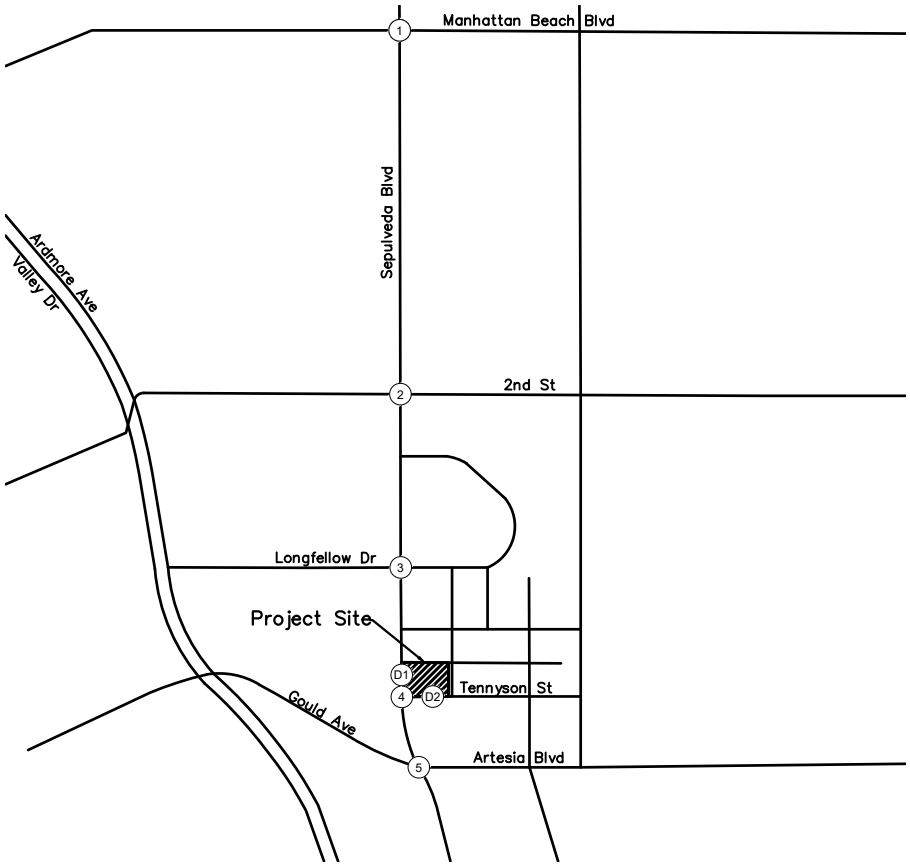
Existing morning and evening peak hour turning movement counts for the study intersections were used from traffic studies for other projects. Existing counts were not collected due to the sudden shutdown of schools and businesses amid the COVID-19 pandemic. For counts that are more than a year old, an ambient growth rate of 1.0% was applied. Morning and evening peak hour traffic volumes are shown on Figure 4. Copies of the traffic count data worksheets are provided in *Appendix B* to this report.

Existing Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. A summary of the intersection Level of Service is presented in Table 1. Intersection analysis worksheets are provided in *Appendix C* of this report. Review of the table shows that all study intersections currently operate at an acceptable Level of Service during the midday and evening peak hours, except for the following intersections:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #2 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM - LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
130/95 ↙ 931/2322 ↓ 108/205 ↘ 183/145 ← 524/451 ← 120/193 ↖ 174/174 → 445/483 → 178/152 ↘ 108/165 ↑ 2774/1142 ↑ 85/160 ↑	68/28 ↙ 1018/2384 ↓ 45/36 ↘ 67/34 ← 97/54 ← 41/41 ↖ 57/72 → 112/80 → 16/71 ↘ 21/23 ↑ 3019/1423 ↑ 18/27 ↑	11/14 ↙ 1002/2494 ↓ 49/21 ↘ 49/27 ← 19/18 ← 16/41 ↖ 11/14 → 26/15 → 10/16 ↘ 7/25 ↑ 3160/1392 ↑ 22/22 ↑	992/2545 ← 35/60 ↘ 41/52 ↖ 0/7 ↖ 3061/1349 → 6/18 ↑

5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
47/68 ↙ 731/1962 ↓ 182/496 ↘ 614/281 ← 526/360 ← 293/279 ↖ 96/70 → 378/420 → 72/55 ↘ 48/42 ↑ 2388/1026 ↑ 160/276 ↑	FUTURE INTERSECTION	FUTURE INTERSECTION

LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 4
EXISTING TRAFFIC VOLUMES

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

ICU Methodology

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			V/C	LOS	V/C	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	S	1.084	**F**	1.054	**F**
2	Sepulveda Blvd at 2nd St	S	0.969	E	0.792	C
3	Sepulveda Blvd at Longfellow Dr	S	0.908	E	0.743	C
4	Sepulveda Blvd at Tennyson St	U	--	--	--	--
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	S	1.123	**F**	0.855	D

HCM Methodology

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	S	69.8	E	51.0	D
2	Sepulveda Blvd at 2nd St	S	23.3	C	13.6	B
3	Sepulveda Blvd at Longfellow Dr	S	10.5	B	6.7	A
4	Sepulveda Blvd at Tennyson St	U	>100	**F**	>100	**F**
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	S	57.5	E	34.5	C

LOS shown in Bold indicates unacceptable Level of Service.
ICU = Intersection Capacity Utilization
HCM = Highway Capacity Manual
LOS = Level of Service
Intersection operation is expressed in volume-to-capacity (v/c) ratio for ICU methodology.
Intersection operation is expressed in average seconds of delay (del/veh) for HCM methodology.

PROJECT TRAFFIC

Project Trip Generation

Daily, morning peak hour, and evening peak hour trips for the project were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) trip rates for All Suites Hotel (ITE Land Use 311), Shopping Center (ITE Land Use 820), and General Office Building (ITE Land Use 710). Pass-by reduction factors were applied to the proposed land use based on the ITE Trip Generation Handbook (3rd Edition) and input from City staff.

The trip rates and the estimated project trip generation are shown on Table 2. After applying pass-by reduction factors, the project is estimated to generate approximately 983 vehicle trips daily, with 70 trips in the morning peak hour and 87 trips in the evening peak hour.

Project Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed based on the location and configuration of site access points in relation to the surrounding street system, the site's proximity to local and regional transportation facilities, and the suggested regional trip distribution factors provided in the LA County CMP. Trip distribution assumptions are shown on Figures 5. Based on the trip distribution and assignment assumptions, the project trips to be added to the street system by the proposed project were calculated and are shown on Figure 6. On-site trip distribution was rerouted to encourage guests to exit from Driveway 1 during peak hours, due to existing delay on the minor street at Intersection 4.

Existing Plus Project Conditions

Project-related traffic was added to the Existing traffic volumes, and the resulting traffic volumes at the study locations are shown on Figure 7.

Intersection Level of Service analysis was conducted for the midday and evening peak hours for the Existing Plus Project condition. The results of the intersection analysis are shown on Table 3. Intersection analysis worksheets for this scenario are provided in *Appendix C*. Review of this table indicates that the following study intersections would operate at an unacceptable Level of Service:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F
    - D1 – Sepulveda Blvd at Driveway 1: AM – LOS F

The Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the westbound approach for Driveway 1 (vehicles leaving the site). The driveway traffic will experience delay during the peak hours while waiting for an acceptable gap in traffic on Sepulveda Boulevard. While the driveway operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the driveway is contained on site and does not impact the progression of traffic on the main arterial.

As previously discussed, guests will be encouraged to exit from Driveway 1 during peak hours due to the existing delay on the minor street at intersection 4. This will result in a queue of 2 vehicles during the AM peak hour, assuming 22 feet per vehicle. The queue is expected to be maintained on site without impacting on-site operations.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION
MANHATTAN BEACH HOTEL

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
All Suites Hotel	311	Room	4.46	0.18	0.16	0.34	0.173	0.187	0.36
Shopping Center	820	KSF	37.75	0.583	0.357	0.94	1.829	1.981	3.81
General Office Building	710	KSF	9.74	0.998	0.162	1.16	0.184	0.966	1.15

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
All Suites Hotel	162.000	Room	723	29	26	55	28	30	58
Shopping Center	6.845	KSF	258	4	2	6	13	14	27
Pass-by Trips (50% PM) [2]			*-88*	*-1*	*-1*	*-2*	*-4*	*-5*	*-9*
Net Trips			*170*	*3*	*1*	*4*	*9*	*9*	*18*
General Office Building	9.264	KSF	90	9	2	11	2	9	11
Total Project Trips			983	41	29	70	39	48	87

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook, 3rd Edition

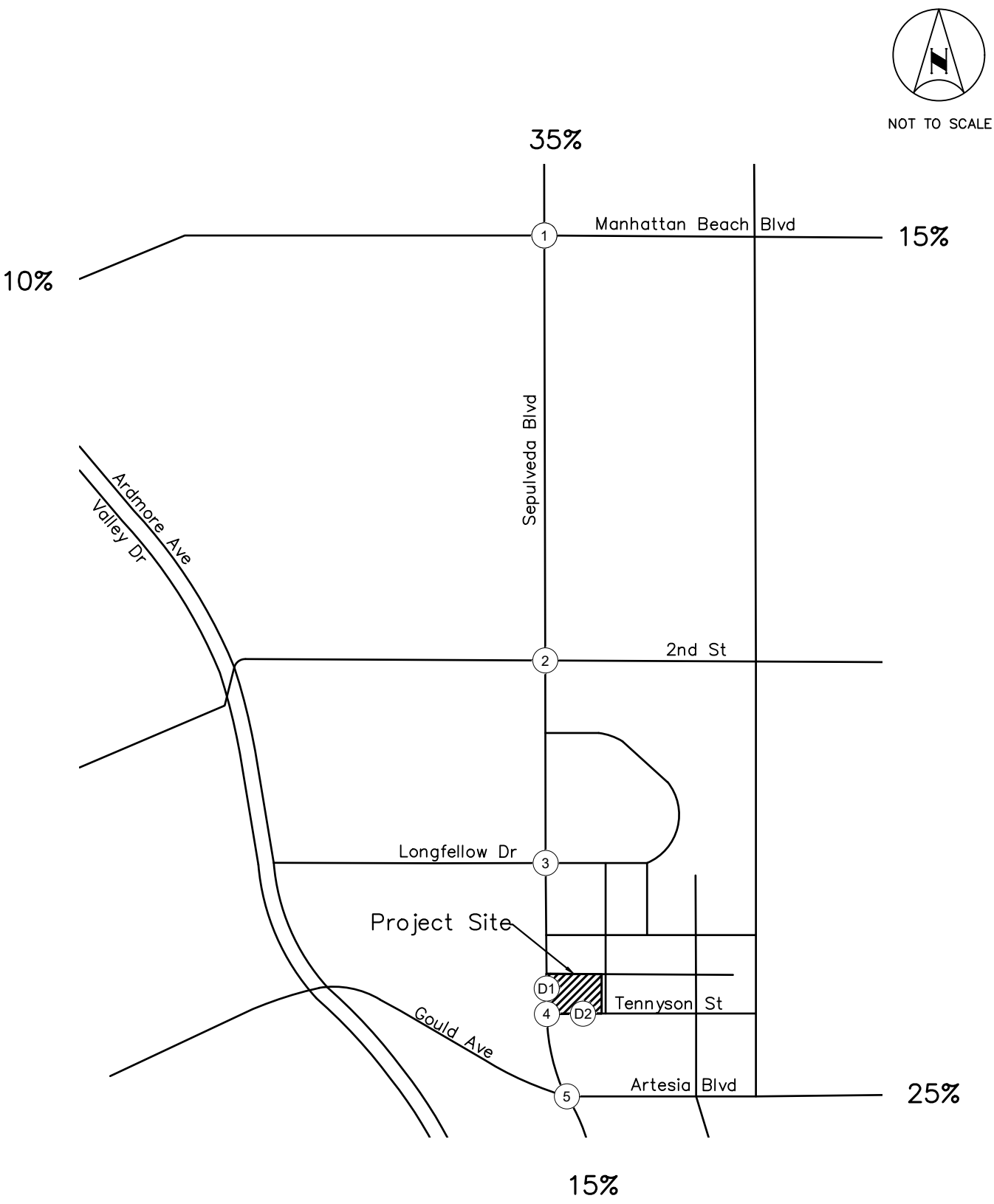
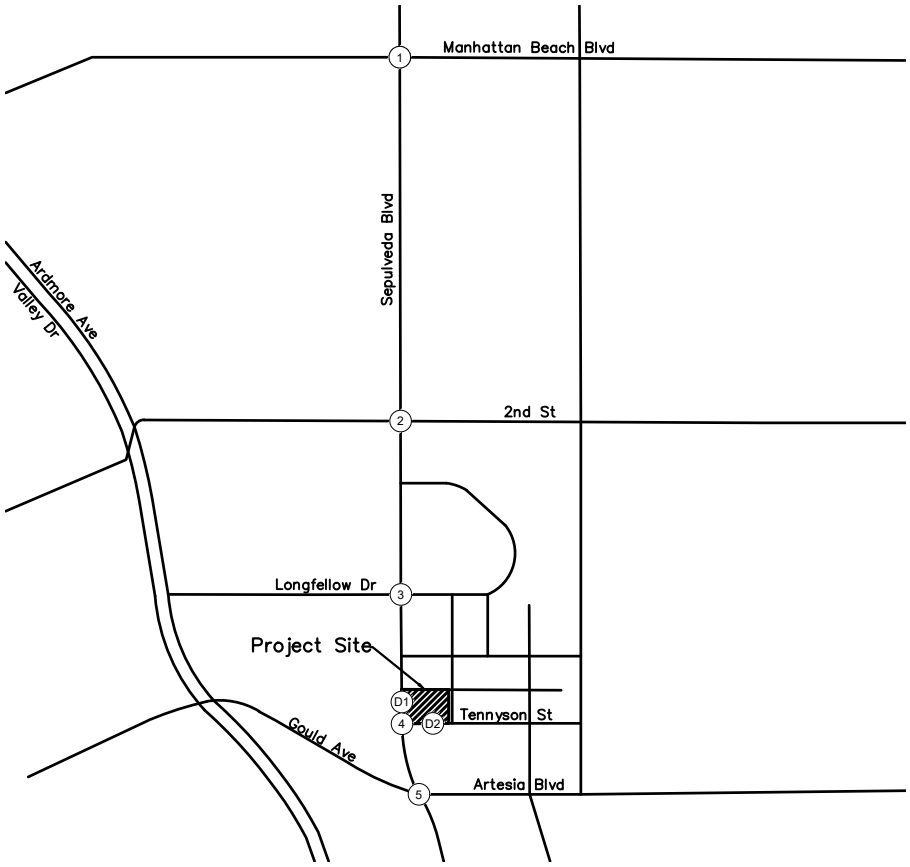


FIGURE 5
PROJECT TRIP DISTRIBUTION



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
14/14 ↓, 6/6 ↖, 4/4 ↘, 3/5 ↰, 11/17 ↑, 4/7 ↱	24/24 ↓, 11/19 ↰, 18/29 →	35/43 ↓, 29/48 →	11/19 ↓, 24/24 ↘, 16/16 →

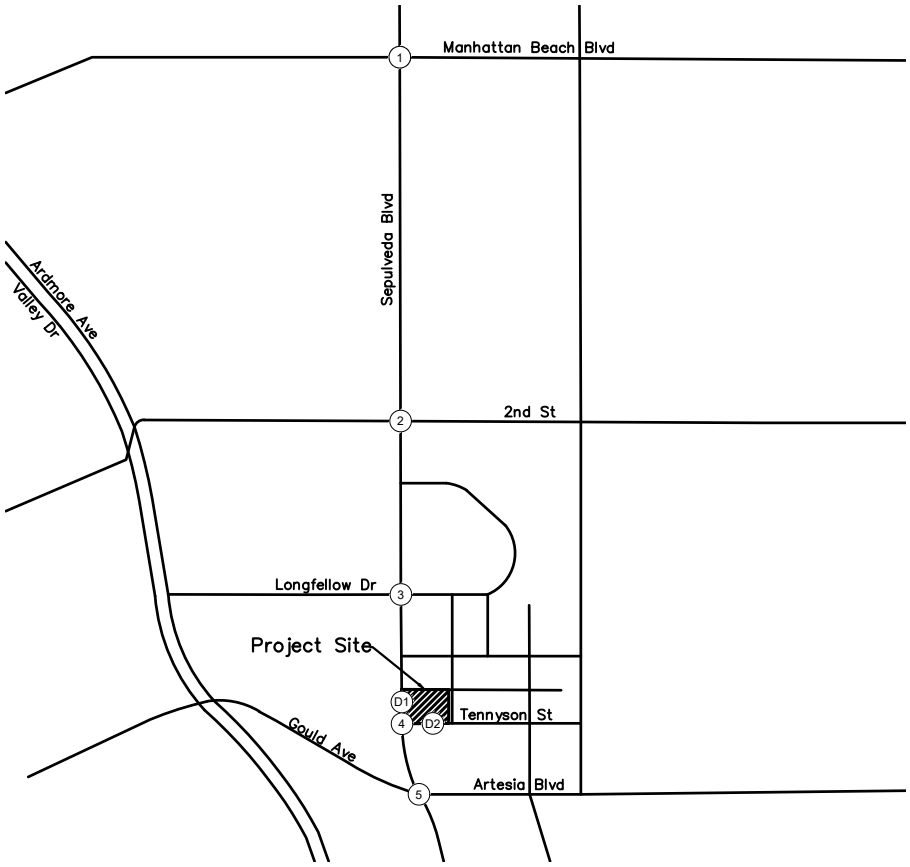
5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
4/7 ↓, 7/12 ↘, 10/10 ↖, 6/6 →	35/43 ↓, 29/48 ↖, 16/16 →	24/24 ↗

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 6
PROJECT RELATED TRAFFIC VOLUMES



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
130/95 ↙ 945/2336 ↓ 108/205 ↘ 183/145 ← 524/451 ← 126/199 ↖ 174/174 ↗ 445/483 → 182/156 ↘ 111/170 ↑ 2785/1159 ↑ 89/167 ↗	68/28 ↙ 1042/2408 ↓ 45/36 ↘ 67/34 ← 97/54 ← 41/41 ↖ 57/72 ↗ 112/80 → 16/71 ↘ 11/19 ↑ 21/23 ↑ 3037/1452 ↑ 18/27 ↗	11/14 ↙ 1037/2537 ↓ 49/21 ↘ 49/27 ← 19/18 ← 16/41 ↖ 11/14 ↗ 26/15 → 10/16 ↘ 7/25 ↑ 3189/1440 ↑ 22/22 ↗	1003/2564 ↙ 59/84 ↘ 41/52 ↖ 0/7 ↖ 3077/1365 ↑ 6/18 ↗

5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
47/68 ↙ 735/1969 ↓ 189/508 ↘ 624/291 ← 526/360 ← 293/279 ↖ 96/70 ↗ 378/420 → 72/55 ↘ 48/42 ↑ 2394/1032 ↑ 160/276 ↗	1063/2594 ↙ 29/48 ↖ 3102/1401 ↑ 16/16 ↗	41/59 ← 24/24 ↗ 41/78 →

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 7
EXISTING PLUS PROJECT TRAFFIC VOLUMES

TABLE 3
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT CONDITIONS

ICU Methodology

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project	Impact	Without Project		With Project		Project	Impact
		V/C	LOS	V/C	LOS	Impact	Sig?	V/C	LOS	V/C	LOS	Impact	Sig?
1	Sepulveda Blvd at Manhattan Beach Blvd	1.084	**F**	1.088	**F**	0.004	No	1.054	**F**	1.065	**F**	0.011	No
2	Sepulveda Blvd at 2nd St	0.969	E	0.973	E	0.004	No	0.792	C	0.798	C	0.006	No
3	Sepulveda Blvd at Longfellow Dr	0.908	E	0.914	E	0.006	No	0.743	C	0.753	C	0.010	No
4	Sepulveda Blvd at Tennyson St	--	--	--	--	--	--	--	--	--	--	--	--
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	1.123	**F**	1.131	**F**	0.008	No	0.855	D	0.857	D	0.002	No
D1	Sepulveda Blvd at Dwy 1	--	--	--	--	--	--	--	--	--	--	--	--
D2	Tennyson St at Dwy 2	--	--	--	--	--	--	--	--	--	--	--	--

HCM Methodology

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project	Impact	Without Project		With Project		Project	Impact
		Delay	LOS	Delay	LOS	Impact	Sig?	Delay	LOS	Delay	LOS	Impact	Sig?
1	Sepulveda Blvd at Manhattan Beach Blvd	69.8	E	71.2	E	--	--	51.0	D	52.7	D	--	--
2	Sepulveda Blvd at 2nd St	23.3	C	23.9	C	--	--	13.6	B	14.3	B	--	--
3	Sepulveda Blvd at Longfellow Dr	10.5	B	10.7	B	--	--	6.7	A	6.8	A	--	--
4	Sepulveda Blvd at Tennyson St	>100	**F**	>100	**F**	N/A	No	>100	**F**	>100	**F**	N/A	No
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	57.5	E	59.1	E	--	--	34.5	C	35.5	D	--	--
D1	Sepulveda Blvd at Dwy 1	-	-	66.1	**F**	-	-	-	-	18.1	C	-	-
D2	Tennyson St at Dwy 2	-	-	7.3	A	-	-	-	-	7.5	A	-	-

LOS shown in Bold indicates unacceptable Level of Service.
ICU = Intersection Capacity Utilization
HCM = Highway Capacity Manual
LOS = Level of Service
Intersection operation is expressed in volume-to-capacity (v/c) ratio for ICU methodology.
Intersection operation is expressed in average seconds of delay (del/veh) ratio for HCM methodology.

FUTURE CONDITIONS

Project completion is estimated to occur in Year 2022. Future year forecasts for Opening Year 2022 were developed using the "build-up" forecasting process, starting with adding a background growth factor of .505 per year, for a total of two years, to existing traffic volumes.

Opening Year 2022 Conditions

The ambient growth and cumulative projects were added to the existing traffic volumes to develop Opening Year 2022 volumes. The resulting traffic volumes are shown on Figure 8.

A summary of the resulting intersection Level of Service is provided on Table 4. Intersection analysis worksheets are provided in *Appendix C*. With the addition of ambient growth and cumulative projects, the following study intersections would continue to operate at an unacceptable Level of Service:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

Opening Year 2022 Plus Project

Project-related traffic was added to Opening Year 2022 Without Project volumes to develop Opening Year 2022 With Project traffic forecasts. The resulting traffic volumes are shown on Figure 9.

A summary of the resulting intersection Level of Service is provided on Table 5. Intersection analysis worksheets are provided in *Appendix C*. With the addition of project traffic, all study intersections would continue to operate at an acceptable Level of Service in the midday and evening peak hours, except for the following intersections:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F
    - D1 – Sepulveda Blvd at Driveway 1: AM – LOS F

TABLE 4
SUMMARY OF CUMULATIVE PROJECTS

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
						AM Peak Hour			PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
1	Manhattan Village Shopping Center - 3200-3600 N. Sepulveda Blvd	Shopping Center	55.00	KSF	2,076	32	20	52	101	109	210
2	1133 Artesia Boulevard	Supermarket	12.00	KSF	1,281	28	18	46	57	54	111
3	865 Manhattan Beach Boulevard	General Office Building	15.70	KSF	153	16	3	19	3	15	18
4	1000 N. Sepulveda Boulevard	Medical-Dental Office Building	25.44	KSF	885	55	16	71	25	63	88
5	Gelson's Market Plaza - 707 N. Sepulveda Blvd	Walk-In Bank *	7.00	KSF	85	0	0	0	37	48	85
6	1800 Manhattan Beach Boulevard	General Office Building	3.00	KSF	29	3	0	3	1	3	4
7	2205 N. Sepulveda Boulevard	General Office Building	4.70	KSF	46	5	1	6	1	5	6
8	1762 Manhattan Beach Boulevard	Medical-Dental Office Building	1.80	KSF	63	4	1	5	2	4	6
		Multifamily Housing (Low-Rise)	1	DU	7	0	0	0	0	0	0
9	1129 N. Sepulveda Boulevard	Shopping Center	2.00	KSF	76	1	1	2	4	4	8
10	1100 Manhattan Beach Boulevard	Shopping Center	13.00	KSF	491	8	5	13	24	26	50
11	516 N Sepulveda Boulevard	General Office Building	10.90	KSF	106	11	2	13	2	11	13
12	Sunrise Senior Facility - 250-400 N. Sepulveda Blvd	Senior Adult Housing-Detached	111	DU	474	9	18	27	20	13	33
13	1701 Artesia Boulevard	Multifamily Housing (Low-Rise)	7	DU	51	1	2	3	2	1	3
		Medical-Dental Office Building	3.00	KSF	104	7	2	9	3	7	10
14	Chocolate Factory - 326 13th Street	Shopping Center	2.25	KSF	85	1	1	2	4	4	8
15	Sketchers Site - 305 S. Sepulveda Blvd	General Office Building	97.17	KSF	946	97	16	113	18	94	112
16	Sketchers Site - 330 S. Sepulveda Blvd	General Office Building	20.33	KSF	198	20	3	23	4	20	24
		Automated Car Wash	2.53	KSF	412	14	8	22	18	18	36
17	Clash Hotel - 1429 Hermosa Ave	Hotel	30.00	Room	251	8	6	14	9	9	18
18	2101 Pacific Coast Highway	General Office Building	10.12	KSF	99	10	2	12	2	10	12
19	906 Hermosa Avenue	General Office Building	8.78	KSF	86	9	1	10	2	8	10
20	824 1st Street	General Office Building	3.00	KSF	29	3	0	3	1	3	4
21	Strand & Pier Hotel Mixed-Use NE Corner of the Strand/Pier Avenue	Hotel	100.00	Room	836	28	19	47	31	29	60
		Shopping Center	5.41	KSF	204	3	2	5	10	11	21
		Fast Casual Restaurant	8.21	KSF	2,588	9	8	17	72	44	116
22	2420 Pacific Coast Highway	Church	32.19	KSF	224	6	4	10	7	9	16
		Supermarket	30.08	KSF	3,212	69	46	115	142	136	278
23	OTO Development Hotel Beach Drive/11th Street	Hotel	100.00	Room	836	28	19	47	31	29	60
24	Sketchers Site - 2851, 2901, 3001, & 3125 Pacific Coast Highway	General Office Building	120.51	KSF	1,174	120	20	140	22	116	138
Total Project Trips					12,712	474	187	661	469	662	1,131

DU = Dwelling Unit, KSF = 1,000 square feet, FP = Fueling Position

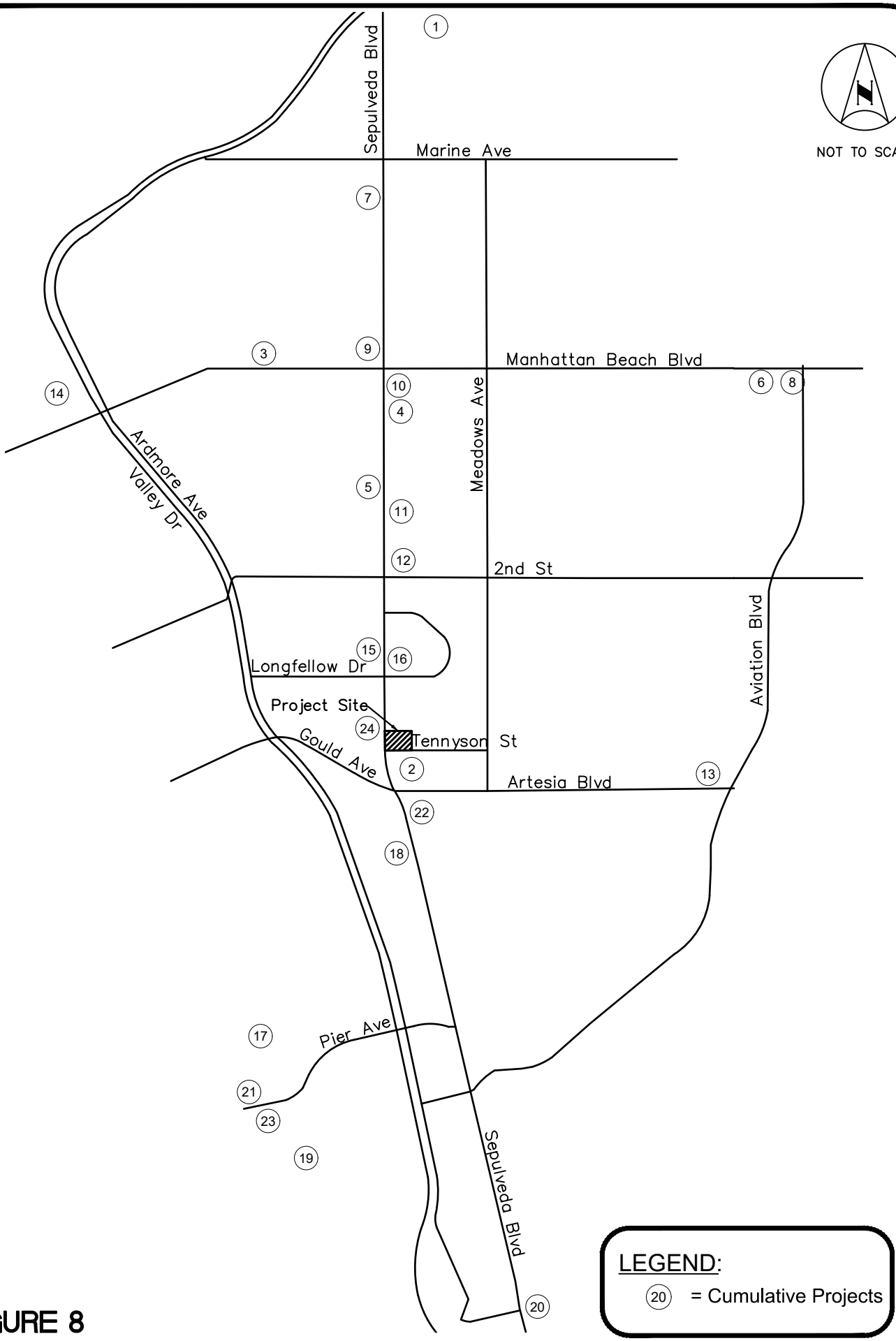
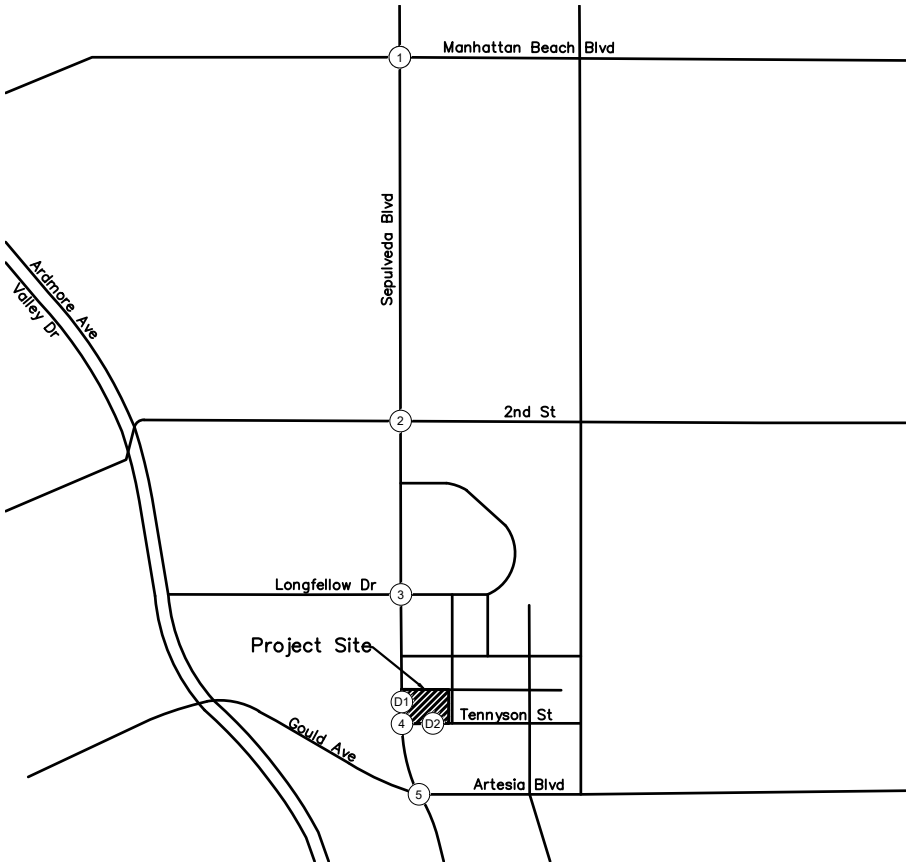


FIGURE 8
CUMULATIVE PROJECT LOCATIONS



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
3/7 ← 152/151 ← 2/11 ← 4/10 2/1 31/14 3/7 → 1/2 → 4/2 ↘ 3/9 ↑ 56/218 ↑ 7/36	1/4 ← 174/190 ← 1/4 ← 1/3 1/3 → 3/0 ↘ 1/5 ↑ 81/237 ↑	125/239 ← 12/0 ← 1/1 0/7 2/0 → 123/214 ↑ 11/0 ↑	76/288 ← 17/79 ← 5/16 2/5 197/148 ↑ 3/6 ↑

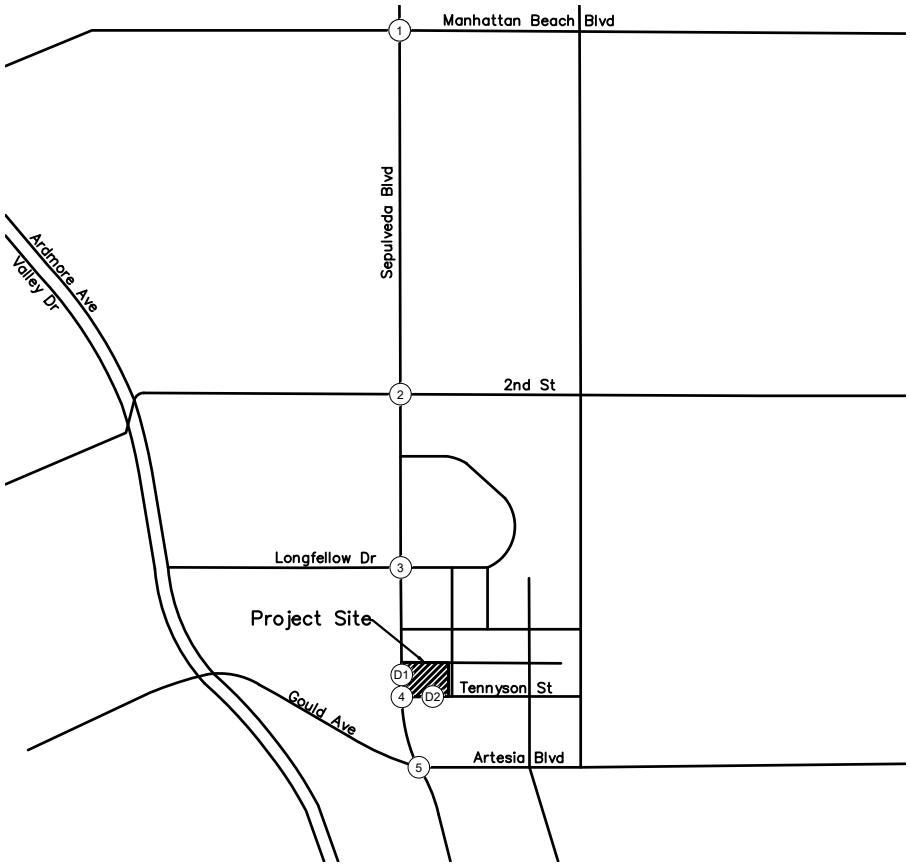
5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
1/10 ← 65/214 ← 13/70 ← 65/21 13/26 135/133 ↑ 11/27 ↑		

LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 9
CUMULATIVE PROJECT TRAFFIC VOLUMES



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
134/103 ← 1092/2496 ← 111/218 → 189/156 ← 531/457 ← 152/209 179/183 → 450/490 → 184/156 ↘ ↗ 112/176 ↑ 2858/1371 ↑ 93/198	70/32 ← 1202/2598 ← 46/40 → 69/37 ← 98/55 ← 41/41 59/76 → 113/81 → 19/72 ↘ ↗ 22/28 ↑ 3130/1674 ↑ 18/27	11/14 ← 1137/2758 ← 61/21 → 50/28 ← 19/18 ← 16/48 11/14 → 28/15 → 10/16 ↘ ↗ 7/25 ↑ 3315/1620 ↑ 33/22	1078/2858 ← 52/140 → 46/69 ← 2/12 ↗ 3289/1510 ↑ 9/24

5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
48/79 ← 803/2196 ← 197/571 → 685/305 ← 531/364 ← 309/308 97/71 → 382/424 → 73/56 ↘ ↗ 48/42 ↑ 2547/1169 ↑ 173/306	FUTURE INTERSECTION	FUTURE INTERSECTION

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 10
OPENING YEAR 2022 TRAFFIC VOLUMES

TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2022 CONDITIONS

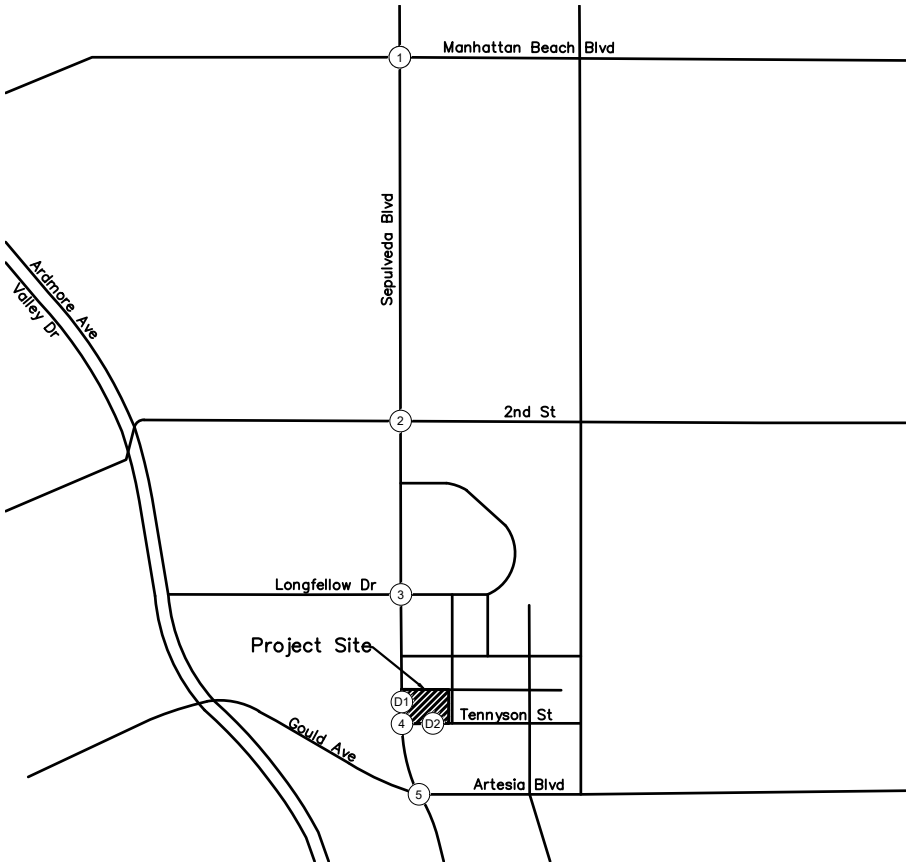
ICU Methodology

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	1.113	F	1.116	F
2	Sepulveda Blvd at 2nd St	0.998	E	0.846	D
3	Sepulveda Blvd at Longfellow Dr	0.954	E	0.807	D
4	Sepulveda Blvd at Tennyson St	--	--	--	--
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	1.208	F	0.923	E

HCM Methodology

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	71.9	E	73.2	E
2	Sepulveda Blvd at 2nd St	27.4	C	14.8	B
3	Sepulveda Blvd at Longfellow Dr	12.7	B	7.4	A
4	Sepulveda Blvd at Tennyson St	>100	F	>100	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	76.2	E	45.3	D

LOS shown in Bold indicates unacceptable Level of Service.
ICU = Intersection Capacity Utilization
HCM = Highway Capacity Manual
LOS = Level of Service
Intersection operation is expressed in volume-to-capacity (v/c) ratio for ICU methodology.
Intersection operation is expressed in average seconds of delay (del/veh) for HCM methodology.



NOT TO SCALE

1. Sepulveda Blvd at Manhattan Beach Blvd	2. Sepulveda Blvd at 2nd St	3. Sepulveda Blvd at Longfellow Dr	4. Sepulveda Blvd at Tennyson St
134/103 ← 1106/2510 ← 111/218 → 189/156 ← 531/457 ← 158/215 179/183 → 450/490 → 188/160 → 115/181 ↑ 2869/1388 ↑ 97/205 ↑	70/32 ← 1226/2622 ← 46/40 → 69/37 ← 98/55 ← 41/41 57/72 → 112/80 → 16/71 → 11/19 ↑ 22/28 ↑ 3148/1703 ↑ 18/27 ↑	11/14 ← 1172/2801 ← 61/21 → 50/28 ← 19/18 ← 16/48 11/14 → 28/15 → 10/16 → 7/25 ↑ 3344/1668 ↑ 33/22 ↑	1089/2877 ← 76/164 → 46/69 → 2/12 3305/1526 ↑ 9/24 ↑

5. Sepulveda Blvd at Artesia Blvd/Gould Ave	D1. Sepulveda Blvd at Project Driveway 1	D2. Tennyson St at Project Driveway 2
48/79 ← 807/2203 ← 204/583 → 695/315 ← 531/364 ← 309/308 97/71 → 382/424 → 73/56 → 48/42 ↑ 2553/1175 ↑ 173/306 ↑	1063/2594 ← 29/48 3102/1401 ↑ 16/16 ↑	41/59 ← 24/24 → 41/78 →

LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 11
OPENING YEAR 2020 PLUS PROJECT TRAFFIC VOLUMES

TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2022 PLUS PROJECT CONDITIONS

ICU Methodology

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project	Impact	Without Project		With Project		Project	Impact
		V/C	LOS	V/C	LOS	Impact	Sig?	V/C	LOS	V/C	LOS	Impact	Sig?
1	Sepulveda Blvd at Manhattan Beach Blvd	1.113	F	1.116	F	0.003	No	1.116	F	1.128	F	0.012	No
2	Sepulveda Blvd at 2nd St	0.998	E	1.002	E	0.004	No	0.846	D	0.852	D	0.006	No
3	Sepulveda Blvd at Longfellow Dr	0.954	E	0.960	E	0.006	No	0.807	D	0.817	D	0.010	No
4	Sepulveda Blvd at Tennyson St	--	--	--	--	--	--	--	--	--	--	--	--
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	1.208	F	1.216	F	0.008	No	0.923	E	0.925	E	0.002	No
D1	Sepulveda Blvd at Dwy 1	--	--	--	--	--	--	--	--	--	--	--	--
D2	Tennyson St at Dwy 2	--	--	--	--	--	--	--	--	--	--	--	--

HCM Methodology

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Project	Impact	Without Project		With Project		Project	Impact
		Delay	LOS	Delay	LOS	Impact	Sig?	Delay	LOS	Delay	LOS	Impact	Sig?
1	Sepulveda Blvd at Manhattan Beach Blvd	71.9	E	73.6	E	--	--	73.2	E	75.2	E	--	--
2	Sepulveda Blvd at 2nd St	27.4	C	28.2	C	--	--	14.8	B	15.6	B	--	--
3	Sepulveda Blvd at Longfellow Dr	12.7	B	12.9	B	--	--	7.4	A	7.5	A	--	--
4	Sepulveda Blvd at Tennyson St	>100	F	>100	F	N/A	No	>100	F	>100	F	N/A	No
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	76.2	E	78.4	E	--	--	45.3	D	46.6	D	--	--
D1	Sepulveda Blvd at Dwy 1	-	-	66.1	F	-	-	-	-	18.1	C	-	-
D2	Tennyson St at Dwy 2	-	-	7.3	A	-	-	-	-	7.5	A	-	-

LOS shown in Bold indicates unacceptable Level of Service.
ICU = Intersection Capacity Utilization
HCM = Highway Capacity Manual
LOS = Level of Service
Intersection operation is expressed in volume-to-capacity (v/c) ratio for ICU methodology.
Intersection operation is expressed in average seconds of delay (del/veh) ratio for HCM methodology.

TRAFFIC SIGNAL WARRANTS

The unsignalized intersection of Sepulveda Boulevard at Tennyson Street would operate at an unacceptable Level of Service under Existing Plus Project, and Opening Year Plus Project conditions. A traffic signal warrant analysis was completed for this intersection. The California Manual on Uniform Traffic Control Devices (MUTCD), Warrant 3 for peak hour was used. Using the opening Year Plus Project forecasted volumes, Warrant 3 is not met for the intersection of Sepulveda Boulevard at Tennyson Street in either peak hour. The traffic signal warrant worksheet is provided in Appendix D.

The California Manual on Uniform Control Devices (MUTCD) specifically states that, "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." The reference document goes on to state a number of other factors to take into account when considering a signal for a specific location, including whether or not a signal would improve the overall safety of the intersection, whether it would benefit or disrupt progressive traffic flow (in this case, on Sepulveda Boulevard), and consideration of site-specific characteristics such as queueing, signal spacing, and overall delay to the main street through movements.

The decision to install a traffic signal would be based on engineering judgement, and not solely upon satisfying a single peak hour warrant. It is recommended that the intersection be monitored once the project is completed to observe actual peak hour operation, and a decision about signalization should be made based on those observations as well as engineering judgement, based on the factors listed above.

VEHICLE MILES TRAVELED (VMT) ASSESSMENT

SB 743 was approved by the California legislature in September 2013. SB 743 requires changes to California Environmental Quality Act (CEQA), specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "Level of Service" (LOS) for evaluating transportation projects. OPR has updated guidelines for CEQA and written a technical advisory for evaluating transportation impacts in CEQA and set a deadline of July 2020. OPR has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts.

Since Manhattan Beach is yet to adopt VMT based guidelines, a qualitative VMT analysis has been provided instead.

Proximity to Transit

Transit service to the project area is provided by Beach Cities Transit, which serves the South Bay region of Los Angeles County; Metro; and LADOT Transit. The project site is within 1/2-mile of transit services as shown on Figure 12. Currently, the project site is served by Metro Line 232 and Metro Line 130. Metro Line 232 operates between the City of Long Beach and LAX City Bus Center, traveling through the project area along Sepulveda Boulevard. Line 232 operates on weekdays from 4:38 AM to 1:03 AM with approximately 20-minute headways during peak hours, on weekends from 4:38 AM to 1:01 AM with approximately 30-minute headways during peak hours.

Metro Line 130 operates between Redondo Beach and Cerritos, traveling through the project area along Artesia Boulevard. Line 130 operates on weekdays from 6:14 AM to 10:27 pm with approximately 60-minute headways during peak hours, on weekends from 6:55 AM to 10:26 PM with approximately 60-minute headways during peak hours. The project's proximity to existing transit service will likely reduce the automobile VMT associated with the project.

Screening Threshold for Land Use Projects

OPR Technical Advisory suggests that the City may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. Based on the OPR Technical Advisory, projects that generate or add 110 or fewer daily trips could be considered not to lead to a significant impact.

The project site was previously occupied by a high-turnover (sit-down) restaurant. The trips generated by approximately 8,392 sf of restaurant use was calculated based on ITE Trip Generation Manual (10th Edition) rates to be 941 daily gross trips. The proposed project is estimated to generate 1,071 gross trips, which is equivalent to 130 additional net daily trips compared to the existing office uses, which is nominally higher than the screening threshold of 110 daily trips. Further, the proposed project has multiple land uses (office, hotel, retail) that will result in internal capture of trips between complementary uses potentially reducing the increase in trips compared to the previous use to less than the VMT screening threshold of 110 daily trips. As such, the project is not likely to lead to a significant VMT impact.

Project VMT

In the absence of adopted VMT thresholds by the lead agency, a logical way to evaluate this type of facility is to consider the major trip purposes of the site in terms of their trip length and frequency. Given the description, three types of trips were broadly considered for this development given its context: (1) employee commute trips; (2) guest trips related to the hotel and retail uses; and (3) other trips related to functioning of the proposed uses. The following discussion is provided regarding these three broad trip types.

- Employee commute trips. It is understood that many of Manhattan Beach's residents travel considerable distance for employment. The Southern California Association of Government (SCAG) Local Profile Report (May 2019) for the City of Manhattan Beach identifies 11.5% of commuters work and live in Manhattan Beach, while 88.5% commute to other places. Most often an important strategy for reducing VMT in a community like this is to improve the local jobs/housing balance by increasing the number of employment opportunities. As such, it is reasonable to expect that increasing local employment opportunities will reduce the average commuter trip lengths of residents, resulting in a net decrease to regional net VMT.
- Guest trips related to the hotel use. It is reasonable to assume that hotel would not generate new demand but meets existing demand that guests would otherwise travel in the region for the service. Further, proximity to transit and potential use of shuttle services would also likely reduce the single occupancy vehicle trips.

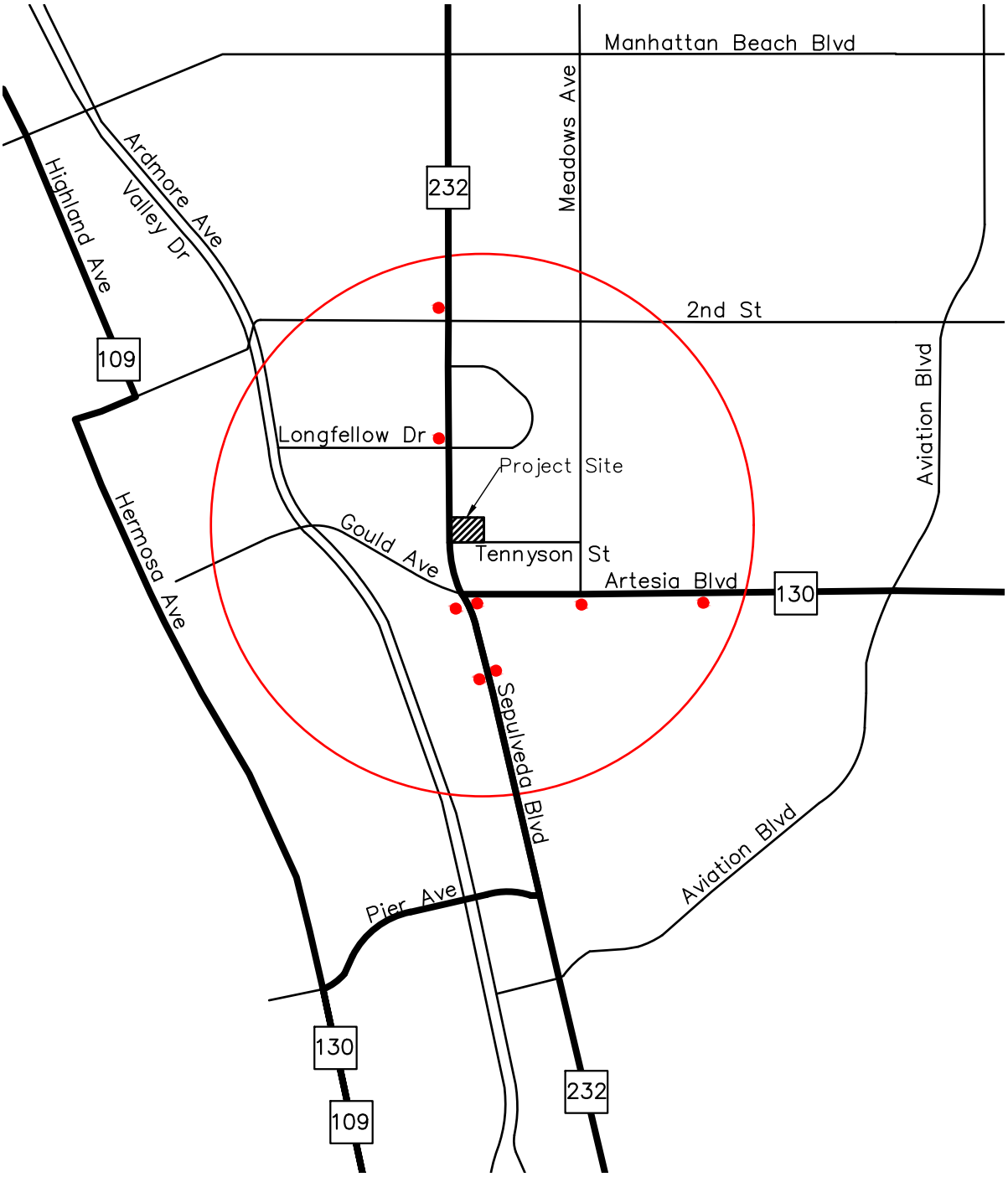
- Other trips. These are often the smallest number and shortest distance of trips for a facility like this and include a broad range of trip types, such as, employee lunches off-site, maintenance teams for on-site infrastructure, supply deliveries, etc. As such their impact to the overall VMT of the site is likely minimal. As such it is not likely that they are impactful to the local transportation system and are secondary to the other two trip types discussed.

Finally, it is worth noting that while this project is expected to provide additional jobs and some related trips to the area, the facility itself is not expected to be the principal catalyst for new trips. Rather, it is anticipated that these trips would most likely occur regardless of whether this location were developed as it is in response to a likely existing demand for services in the region. Accordingly, if this site were not developed, a similar site will be developed elsewhere to meet this demand and as such the alternative to this development would likely not eliminate any related VMT. In consideration of this and the other considerations discussed above, it is anticipated that this redevelopment project would not result in a significant finding under SB 743.

SHARED PARKING ANALYSIS

A separate Shared Parking analysis was completed and approved by the City Planning Department (March 9, 2020). The project will provide 158 parking spaces.

NOT TO SCALE



LEGEND:
XX = Bus Route
= 1/2 Mile Radius
= Bus Stop

FIGURE 12
EXISTING TRANSIT ROUTES

SUMMARY OF FINDINGS AND CONCLUSIONS

- The applicant proposes to develop a 98,050-square-foot mixed-use development consisting of a 162-room hotel, 6,845 square feet of retail space, and 9,264 square feet of office space. The project site is bounded by Sepulveda Blvd to the west, Chabela Drive to the east, Tennyson St to the south, and a commercial building to the north. The project site is currently occupied by an approximately 10,000-square-foot vacant restaurant building and parking lot.

- Vehicular access to for the project site would be provided by one right-in-right-out (RIRO) only driveway on Sepulveda Blvd and one full movement driveway on Tennyson St. Both driveways would be unsignalized.

- Morning and evening peak hour operating conditions were evaluated at five study intersections for the following scenarios:

    - Existing Conditions
    - Existing Plus Project
    -
    - Opening Year 2022
    - Opening Year 2022 Plus Project
    -

- Existing peak hour traffic counts were used from traffic studies for other projects. For counts more than a year old, an ambient growth rate of 1.0% was applied.

- Under Existing Conditions, all study intersections are currently operating at an acceptable Level of Service, except for the following intersections:
    - ICU Methodology
        - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
        - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

    - HCM Methodology
        - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

- The project is estimated to generate approximately 983 vehicle trips daily, with 70 trips in the morning peak hour and 87 trips in the evening peak hour.

- Under Existing Plus Project Conditions, the following study intersections would operate at an unacceptable Level of Service:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F
    - D1 – Sepulveda Blvd at Driveway 1: AM – LOS F

- Under Opening Year 2022 Conditions, the following study intersections would operate at an unacceptable Level of Service:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F

- Under Opening Year 2022 Plus Project Conditions, the following study intersections would operate at an unacceptable Level of Service:

- ICU Methodology
    - #1 – Sepulveda Blvd at Manhattan Beach Blvd: AM & PM – LOS F
    - #5 – Sepulveda Blvd at Artesia Blvd/Gould Ave: AM – LOS F

- HCM Methodology
    - #4 – Sepulveda Blvd at Tennyson St: AM & PM – LOS F
    - D1 – Sepulveda Blvd at Driveway 1: AM – LOS F

- Based on the Level of Service standards and significant impact criteria, the project-related impact would not be considered significant; therefore, no mitigation is required.

- A traffic signal warrant analysis was completed for the unsignalized intersection of Sepulveda Boulevard at Tennyson Street. Based on the California MUTCD, Warrant 3 is not met for the intersection.

- Since the City of Manhattan Beach is yet to adopt VMT based guidelines, a qualitative VMT analysis has been provided instead. Based on a review of the net increase in daily trips compared to the previous use, proximity to transit and jobs/housing balance of the project area, it is anticipated that this redevelopment project would not result in a substantial increase in VMT in the region.

APPENDIX A

Approved Scoping Agreement

Kimley»Horn

TRAFFIC STUDY SCOPE OF WORK
MEMORANDUM OF UNDERSTANDING

To: Mr. Erik Zandvliet, City Traffic Engineer
City of Manhattan Beach

From: Serine Ciandella

Date: March 10, 2020

Subject: Traffic Study Scope of Work – Manhattan Beach Hotel Project
600 S. Sepulveda Boulevard, Manhattan Beach, CA

Kimley-Horn is pleased to submit the following Draft Traffic Study Scope of Work for the Manhattan Beach Hotel project (the Project) for your review.

The Traffic Impact Study for the Project will satisfy the traffic impact requirements of the City of Manhattan Beach and will follow the procedures outlined in the current Los Angeles County Congestion Management Program (CMP) for Traffic Impact Analyses.

Project Description

The Project site is an approximately 1.5-acre parcel located at 600 S. Sepulveda Boulevard, on the northeast corner of the intersection of Sepulveda Boulevard and Tennyson Street. The property is currently occupied by a vacant restaurant building and parking lot.

The Project proposes demolition of the existing building and the construction of a mixed-used development consisting of a 162-room hotel, 6,845 square feet of retail space, and 9,264 square feet of office space. Project access will consist of one right-in/right-out only driveway on Sepulveda Boulevard, and one full-movement driveway on Tennyson Street. A parking supply of 160 spaces will be provided for the Project. A copy of the project site plan is provided on Figure A.

Project Trip Generation

Trip generation estimates were developed based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, (10th Edition, 2017). The estimated Project trip generation is summarized on Table A. After adjustment for retail pass-by trips, the Project is forecasted to generate 983 daily trips, with 70 trips in the morning peak hour and 87 trips in the evening peak hour.

Project Trip Distribution

Project trip distribution assumptions are based on the location and configuration of site access points in relation to the surrounding street system, the site's proximity to local and regional transportation facilities, and the suggested regional trip distribution factors provided in the LA County CMP (Appendix D, Exhibit D-2 and D-3).

Preliminary project trip distribution assumptions are as follows:

- South on Sepulveda Boulevard – 40%
  - East on Artesia Boulevard – 25%
  - Continue south on Sepulveda Boulevard – 15%
- North on Sepulveda Boulevard – 60%
  - East on Manhattan Beach Boulevard – 15%
  - West on Manhattan Beach Boulevard – 10%
  - Continue north on Sepulveda Boulevard – 35%

Project trip distribution assumptions will be confirmed with City staff prior to conducting the analysis.

Study Intersections

The following is a list of suggested study intersections for the Manhattan Beach Hotel Project:

1. Sepulveda Boulevard at Manhattan Beach Boulevard
2. Sepulveda Boulevard at 2nd Street
3. Sepulveda Boulevard at Longfellow Avenue
4. Sepulveda Boulevard at Tennyson Street
5. Sepulveda Boulevard at Artesia Boulevard
6. Sepulveda Boulevard at the Project Driveway
7. Tennyson Street at the Project Driveway

Cumulative Traffic Conditions

Cumulative Traffic Conditions will consist of Existing traffic volumes; plus an ambient traffic growth rate per year to the Project Opening Year 2022; plus traffic from Cumulative Projects, consisting of approved projects in Manhattan Beach, El Segundo, and Hermosa Beach that may contribute traffic to the study intersections. The ambient growth rate will reflect the annual growth factors provided for the South Bay area in the Los Angeles County CMP – General Traffic Volume Growth Factors Chart (Appendix D, Exhibit D-1). The list of Cumulative Projects will be submitted to City staff prior to conducting the analysis.

Analysis Scenarios

The traffic impact analysis will be conducted for the weekday morning and evening peak hours for the following traffic scenarios:

1. Existing Conditions;
2. Existing Plus Project;
3. Scenario (2) with Mitigation, if necessary;
4. Opening Year 2022 Conditions (Existing plus Ambient Growth plus Cumulative Projects);
5. Opening Year 2022 Plus Project;
6. Scenario (5) with Mitigation, if necessary;

The intersection analysis will be conducted using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) delay methodology for unsignalized intersections. The project's traffic-related impact will be based on the significant impact criteria outlined in the current Los Angeles County CMP.

Study intersections located on a State Highway facility (i.e., Sepulveda Boulevard) will also be analyzed using the HCM operational analysis methodology pursuant to the California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies, December 2002.*

Samples of intersection analysis worksheets for both methodologies will be submitted to City staff for review prior to conducting the analysis.

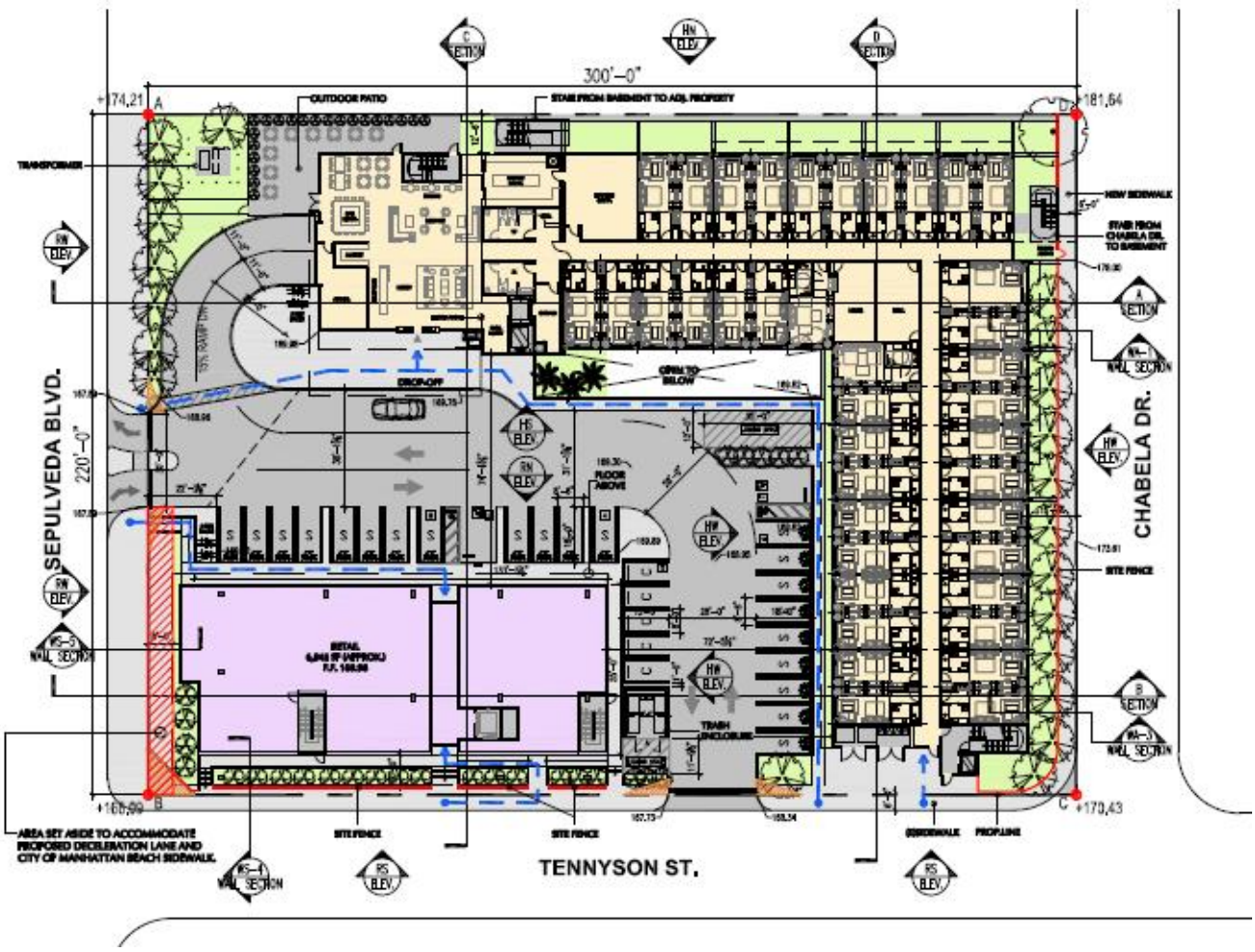
The Traffic Study will be prepared as a stand-alone report, and will include:

- A summary of the analysis assumptions, methodology, and findings,
- Figures and tables to accompany the report text,
- A summary of the conclusions and recommendations based on the analysis findings,
- Technical Appendices, which will include:
  - Intersection analysis worksheets
  - A copy of the Shared Parking Memorandum (submitted on March 9, 2020)
  - A copy of the Right-turn Access Memorandum (submitted on March 9, 2020)

MANHATTAN BEACH HOTEL TRAFFIC STUDY SCOPE OF WORK

MEMORANDUM OF UNDERSTANDING

ATTACHMENTS


SEPULVEDA BLVD.
CHABELA DR.
TENNYSON ST.
300'-0"
220'-0"
OUTDOOR PATIO
DROP-OFF
SITE FENCE
TRANSFORMER
AREA SET ASIDE TO ACCOMMODATE PROPOSED DECELERATION LANE AND CITY OF MANHATTAN BEACH SIDEWALK.

Kimley»Horn

TABLE A
SUMMARY OF PROJECT TRIP GENERATION
Manhattan Beach Hotel Mixed-Use Project

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
All Suites Hotel	311	Room	4.46	0.18	0.16	0.34	0.173	0.187	0.36
Shopping Center	820	KSF	37.75	0.583	0.357	0.94	1.829	1.981	3.81
General Office Building	710	KSF	9.74	0.998	0.162	1.16	0.184	0.966	1.15

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
All Suites Hotel	162	Room	723	29	26	55	28	30	58
Shopping Center	6.845	KSF	258	4	2	6	13	14	27
Pass-by Trips (50% PM) [2]			*-88*	*-1*	*-1*	*-2*	*-4*	*-5*	*-9*
Net Retail Trips			*170*	*3*	*1*	*4*	*9*	*9*	*18*
General Office Building	9.264	KSF	90	9	2	11	2	9	11
Total Project Trips			**983**	**41**	**29**	**70**	**39**	**48**	**87**

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook, 3rd Edition

APPENDIX B

Traffic Data Collection Worksheets

Prepared by National Data & Surveying Services

N Sepulveda Blvd & Manhattan Beach Blvd

Peak Hour Turning Movement Count

ID: 19-05679-002
City: Manhattan Beach

Day: Wednesday
Date: 11/13/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

N Sepulveda Blvd — SOUTHBOUND

AM	129	922	107	0	3100	AM
NOON	0	0	0	0	0	NOON
PM	94	2299	203	0	1447	PM

Manhattan Beach Blvd — EASTBOUND

AM	NOON	PM		
755	0	704		
0	0	0	0	
172	0	172	1	
441	0	478	2	
176	0	150	1	
AM	NOON	PM		

Manhattan Beach Blvd — WESTBOUND

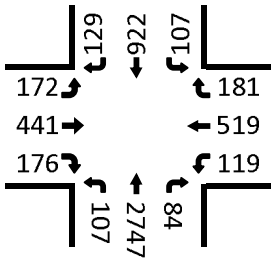
PM	NOON	AM	
144	0	181	1
447	0	519	2
191	0	119	1
0	0	0	0
839	0	632	
PM	NOON	AM	

N Sepulveda Blvd — NORTHBOUND

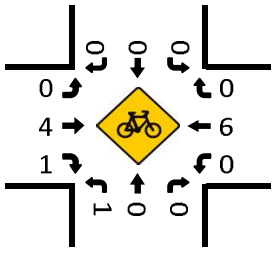
PM	2640	0	163	1131	158	PM
NOON	0	0	0	0	0	NOON
AM	1217	0	107	2747	84	AM

CONTROL			
Signalized			
TEV	5704	0	5630
	AM	NOON	PM
PHF	0.95		0.98

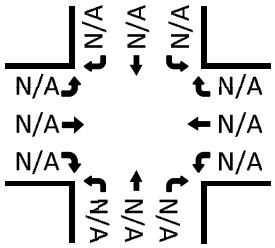
Total Vehicles (AM)



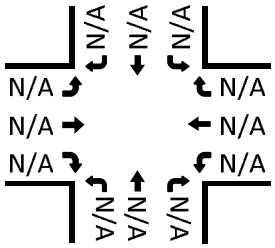
Bikes (AM)



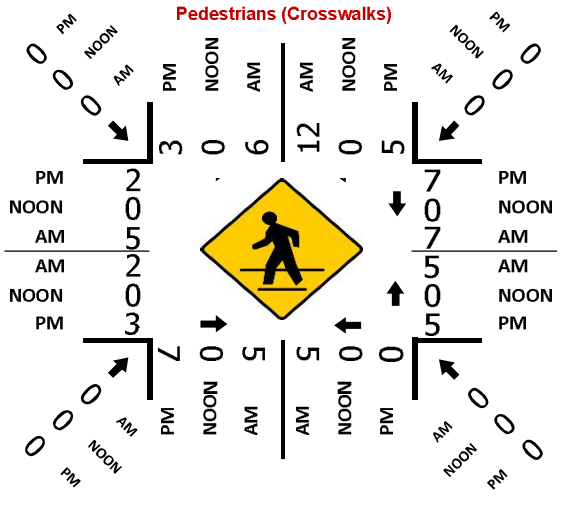
Total Vehicles (Noon)



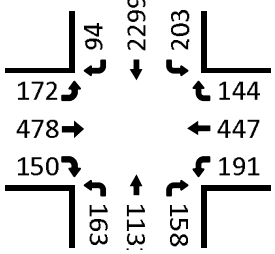
Bikes (NOON)



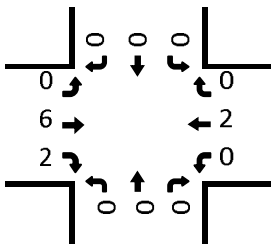
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: N Sepulveda Blvd & Manhattan Beach Blvd
City: Manhattan Beach
Control: Signalized

Project ID: 19-05679-002
Date: 11/13/2019

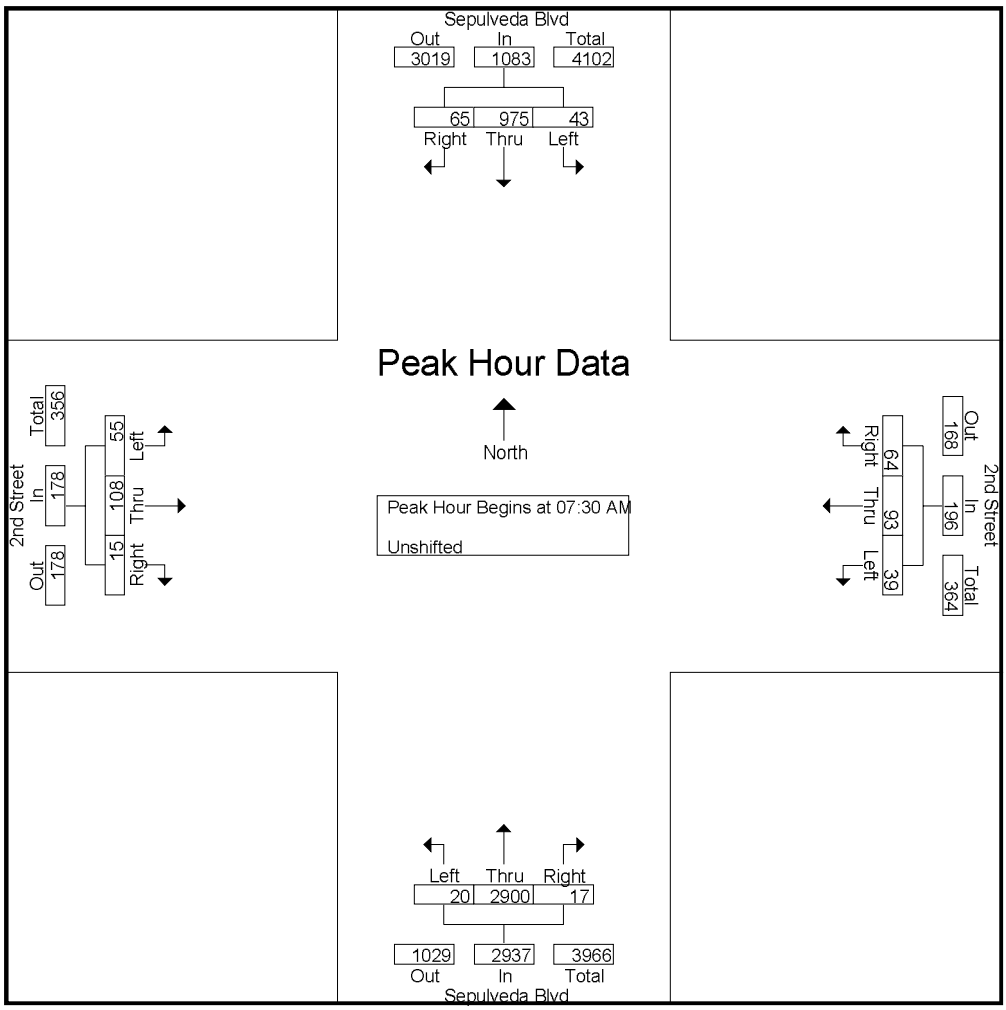
Total

NS/EW Streets:	N Sepulveda Blvd				N Sepulveda Blvd				Manhattan Beach Blvd				Manhattan Beach Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	3	0	0	2	3	0	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	21	655	15	0	17	152	21	0	22	42	20	0	17	83	42	0	1107
7:15 AM	25	584	15	0	24	150	28	0	26	82	19	0	32	141	44	0	1170
7:30 AM	19	743	20	0	25	277	35	0	31	76	50	0	22	106	36	0	1440
7:45 AM	35	577	23	0	29	218	30	0	49	115	52	0	29	157	45	0	1359
8:00 AM	27	763	21	0	19	240	37	0	44	107	42	0	30	118	46	0	1494
8:15 AM	26	664	20	0	34	187	27	0	48	143	32	0	38	138	54	0	1411
8:30 AM	29	711	17	0	43	245	39	0	35	111	20	0	32	101	53	0	1436
8:45 AM	34	478	31	0	37	229	54	0	36	144	27	0	40	159	64	0	1333
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	216	5175	162	0	228	1698	271	0	291	820	262	0	240	1003	384	0	10750
APPROACH %'s :	3.89%	93.19%	2.92%	0.00%	10.38%	77.29%	12.34%	0.00%	21.19%	59.72%	19.08%	0.00%	14.75%	61.65%	23.60%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	107	2747	84	0	107	922	129	0	172	441	176	0	119	519	181	0	5704
PEAK HR FACTOR :	0.764	0.900	0.913	0.000	0.787	0.832	0.872	0.000	0.878	0.771	0.846	0.000	0.783	0.826	0.838	0.000	0.954
	0.906				0.859				0.885				0.886				

NS/EW Streets:	N Sepulveda Blvd				N Sepulveda Blvd				Manhattan Beach Blvd				Manhattan Beach Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	3	0	0	2	3	0	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	46	269	54	0	55	481	32	0	57	154	38	0	39	105	33	0	1363
4:15 PM	36	287	52	0	53	597	37	0	46	121	36	0	30	110	29	0	1434
4:30 PM	54	289	30	0	48	483	15	0	52	137	34	0	53	154	47	0	1396
4:45 PM	39	317	36	0	36	608	19	0	42	103	35	0	37	99	26	0	1397
5:00 PM	41	270	36	0	47	504	32	0	42	140	39	0	48	135	36	0	1370
5:15 PM	43	303	35	0	41	635	16	0	46	106	30	0	31	95	38	0	1419
5:30 PM	40	263	38	0	67	537	16	0	54	132	46	0	62	108	35	0	1398
5:45 PM	39	295	49	0	48	623	30	0	30	100	35	0	50	109	35	0	1443
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	338	2293	330	0	395	4468	197	0	369	993	293	0	350	915	279	0	11220
APPROACH %'s :	11.42%	77.44%	11.14%	0.00%	7.81%	88.30%	3.89%	0.00%	22.30%	60.00%	17.70%	0.00%	22.67%	59.26%	18.07%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	163	1131	158	0	203	2299	94	0	172	478	150	0	191	447	144	0	5630
PEAK HR FACTOR :	0.948	0.933	0.806	0.000	0.757	0.905	0.734	0.000	0.796	0.854	0.815	0.000	0.770	0.828	0.947	0.000	0.975
	0.948				0.926				0.862				0.893				

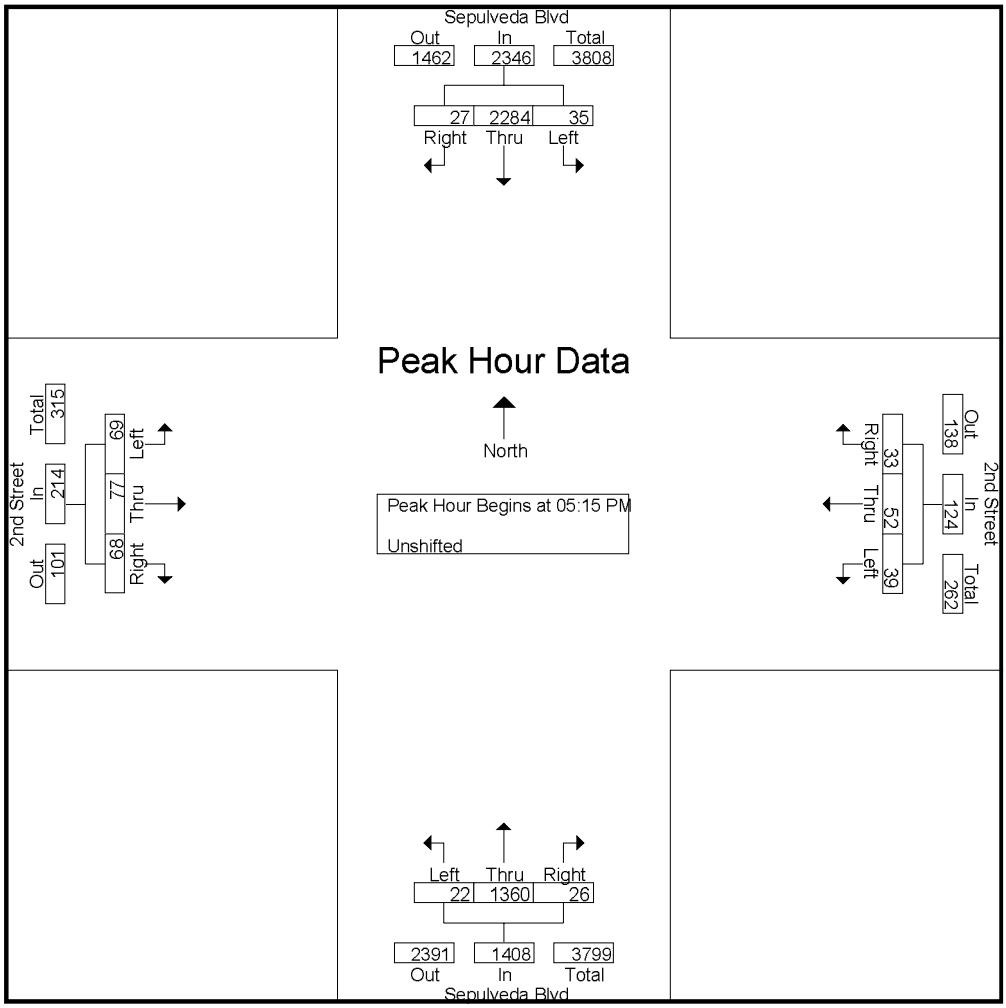
File Name : Sepulveda_2nd
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Sepulveda Blvd Southbound				2nd Street Westbound				Sepulveda Blvd Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	**267**	13	**292**	3	14	6	23	1	724	**5**	730	14	35	1	50	1095
07:45 AM	**16**	240	8	264	12	24	**31**	**67**	4	**809**	3	**816**	11	**37**	**5**	**53**	**1200**
08:00 AM	9	246	**25**	280	9	**38**	14	61	7	721	4	732	**15**	17	5	37	1110
08:15 AM	6	222	19	247	**15**	17	13	45	**8**	646	5	659	15	19	4	38	989
Total Volume	43	975	65	1083	39	93	64	196	20	2900	17	2937	55	108	15	178	4394
% App. Total	4	90	6		19.9	47.4	32.7		0.7	98.7	0.6		30.9	60.7	8.4		
PHF	.672	.913	.650	.927	.650	.612	.516	.731	.625	.896	.850	.900	.917	.730	.750	.840	.915



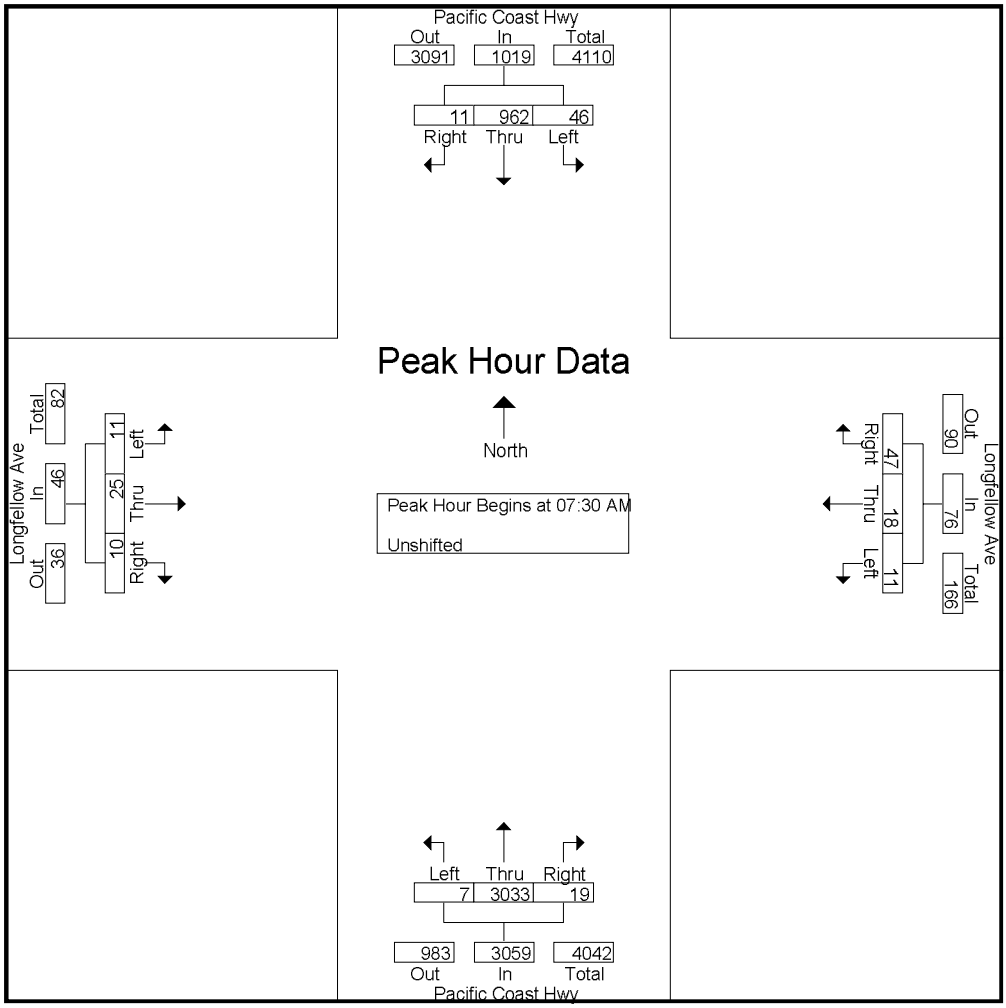
File Name : Sepulveda_2nd
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Sepulveda Blvd Southbound				2nd Street Westbound				Sepulveda Blvd Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	**13**	583	6	**602**	**12**	10	9	31	3	314	**8**	325	19	18	**19**	**56**	1014
05:30 PM	6	567	8	581	9	13	**10**	**32**	7	**362**	7	**376**	16	22	18	56	1045
05:45 PM	12	550	4	566	11	14	7	32	**9**	324	4	337	13	**23**	13	49	984
06:00 PM	4	**584**	**9**	597	7	**15**	7	29	3	360	7	370	**21**	14	18	53	**1049**
Total Volume	35	2284	27	2346	39	52	33	124	22	1360	26	1408	69	77	68	214	4092
% App. Total	1.5	97.4	1.2		31.5	41.9	26.6		1.6	96.6	1.8		32.2	36	31.8		
PHF	.673	.978	.750	.974	.813	.867	.825	.969	.611	.939	.813	.936	.821	.837	.895	.955	.975



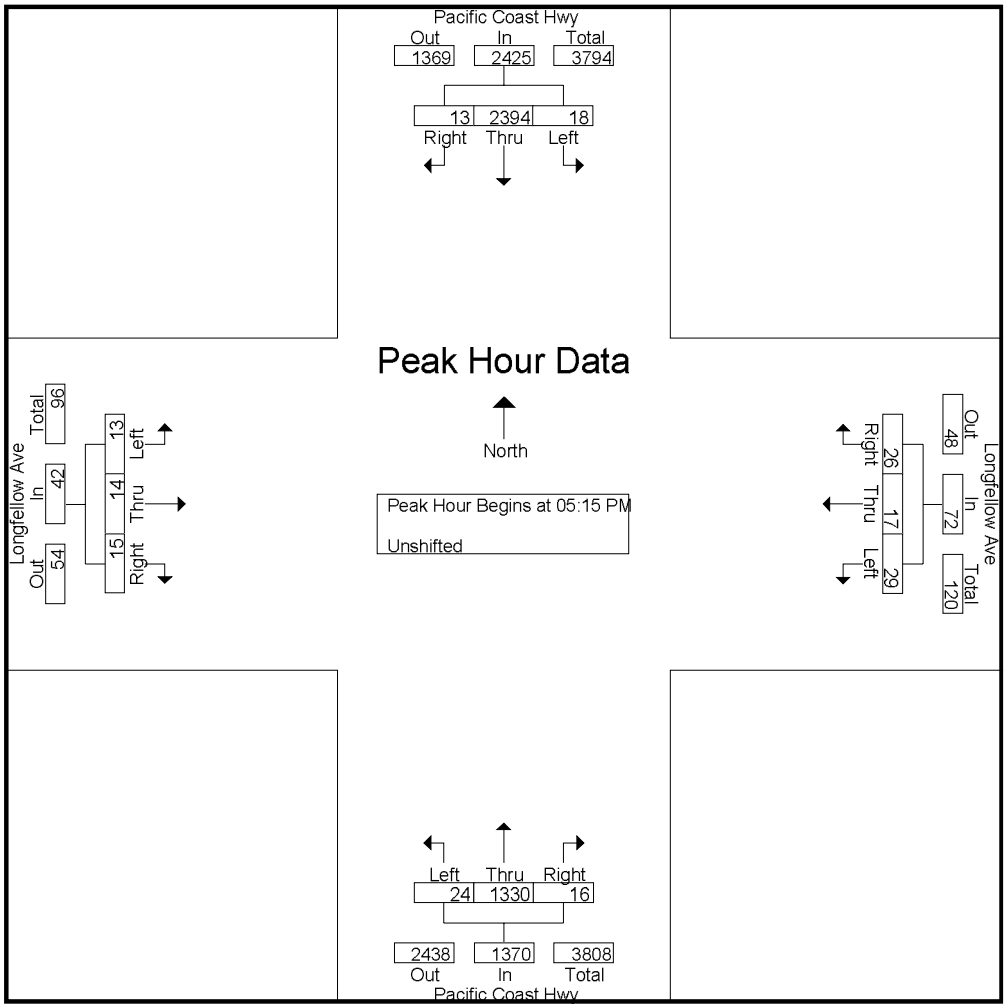
File Name : PacificCoastHwy_Longfellow
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Longfellow Ave Westbound				Pacific Coast Hwy Northbound				Longfellow Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	11	244	3	258	1	1	15	17	0	790	1	791	1	**11**	**4**	16	1082
07:45 AM	**15**	**249**	1	265	**5**	**12**	**18**	**35**	0	**792**	4	**796**	**6**	10	1	**17**	**1113**
08:00 AM	8	220	2	230	0	5	10	15	3	731	6	740	2	2	2	6	991
08:15 AM	12	249	**5**	**266**	5	0	4	9	**4**	720	**8**	732	2	2	3	7	1014
Total Volume	46	962	11	1019	11	18	47	76	7	3033	19	3059	11	25	10	46	4200
% App. Total	4.5	94.4	1.1		14.5	23.7	61.8		0.2	99.2	0.6		23.9	54.3	21.7		
PHF	.767	.966	.550	.958	.550	.375	.653	.543	.438	.957	.594	.961	.458	.568	.625	.676	.943



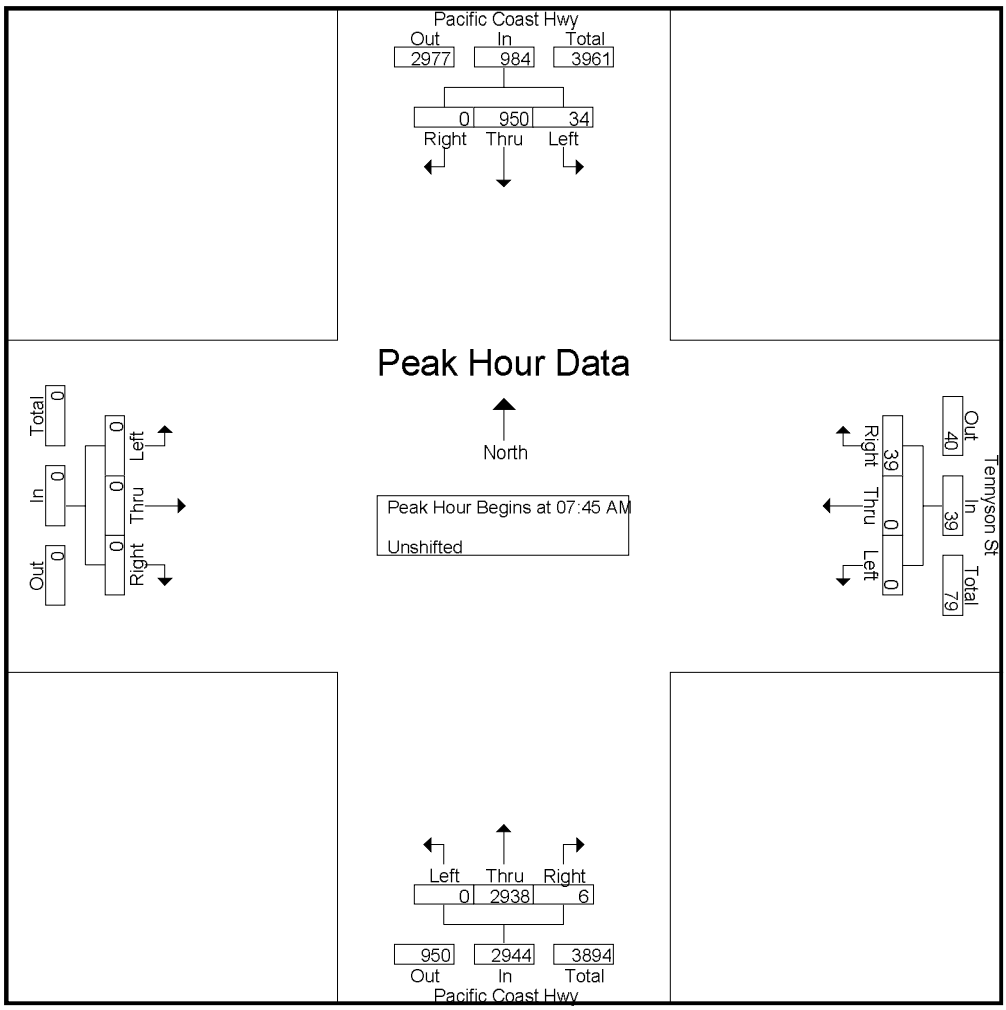
File Name : PacificCoastHwy_Longfellow
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Longfellow Ave Westbound				Pacific Coast Hwy Northbound				Longfellow Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	**6**	**624**	3	**633**	6	5	6	17	5	312	**8**	325	**6**	4	4	**14**	989
05:30 PM	5	593	**4**	602	7	**6**	**7**	**20**	**10**	**363**	1	**374**	4	**5**	2	11	**1007**
05:45 PM	3	612	4	619	6	3	6	15	5	325	3	333	1	3	**6**	10	977
06:00 PM	4	565	2	571	**10**	3	7	20	4	330	4	338	2	2	3	7	936
Total Volume	18	2394	13	2425	29	17	26	72	24	1330	16	1370	13	14	15	42	3909
% App. Total	0.7	98.7	0.5		40.3	23.6	36.1		1.8	97.1	1.2		31	33.3	35.7		
PHF	.750	.959	.813	.958	.725	.708	.929	.900	.600	.916	.500	.916	.542	.700	.625	.750	.970



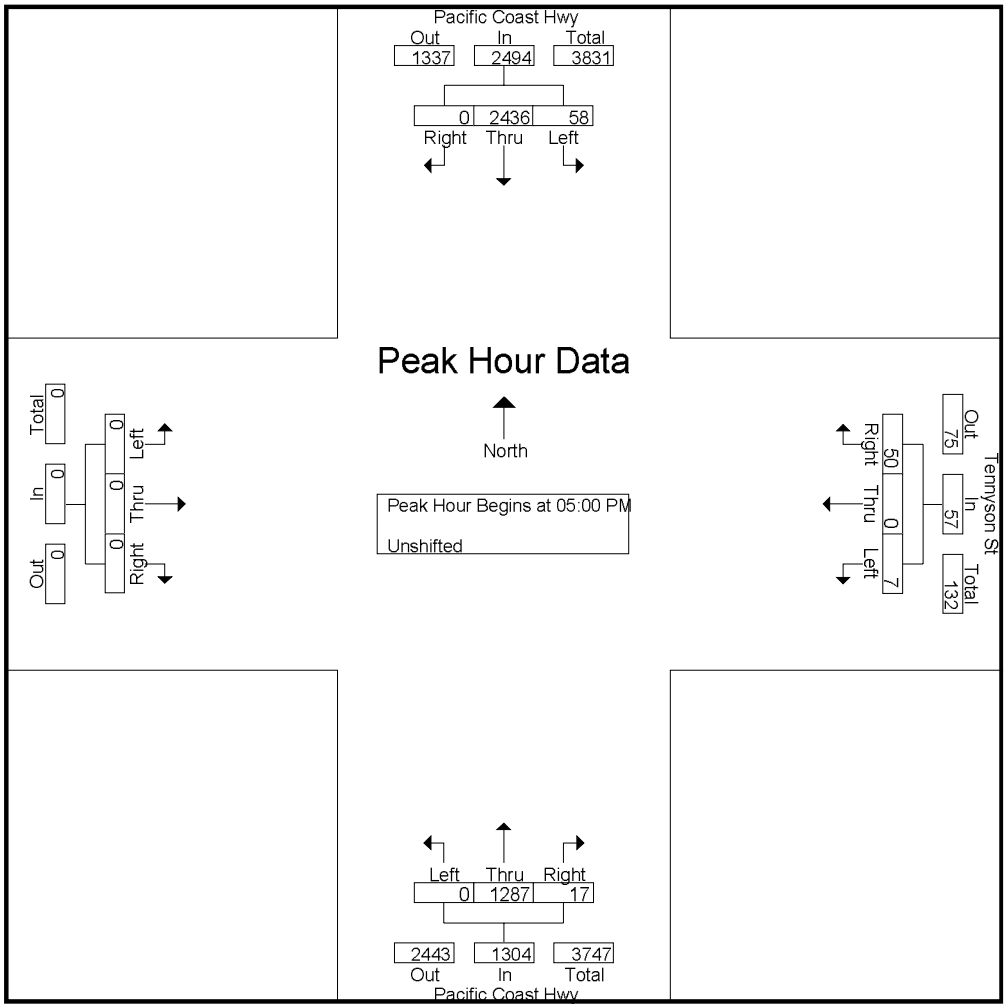
File Name : PacificCoastHwy_Tennyson
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Tennyson St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**12**	218	0	230	0	0	**15**	**15**	0	**771**	**3**	**774**	0	0	0	0	**1019**
08:00 AM	8	212	0	220	0	0	11	11	0	726	2	728	0	0	0	0	959
08:15 AM	8	245	0	253	0	0	8	8	0	710	1	711	0	0	0	0	972
08:30 AM	6	**275**	0	**281**	0	0	5	5	0	731	0	731	0	0	0	0	1017
Total Volume	34	950	0	984	0	0	39	39	0	2938	6	2944	0	0	0	0	3967
% App. Total	3.5	96.5	0		0	0	100		0	99.8	0.2		0	0	0		
PHF	.708	.864	.000	.875	.000	.000	.650	.650	.000	.953	.500	.951	.000	.000	.000	.000	.973



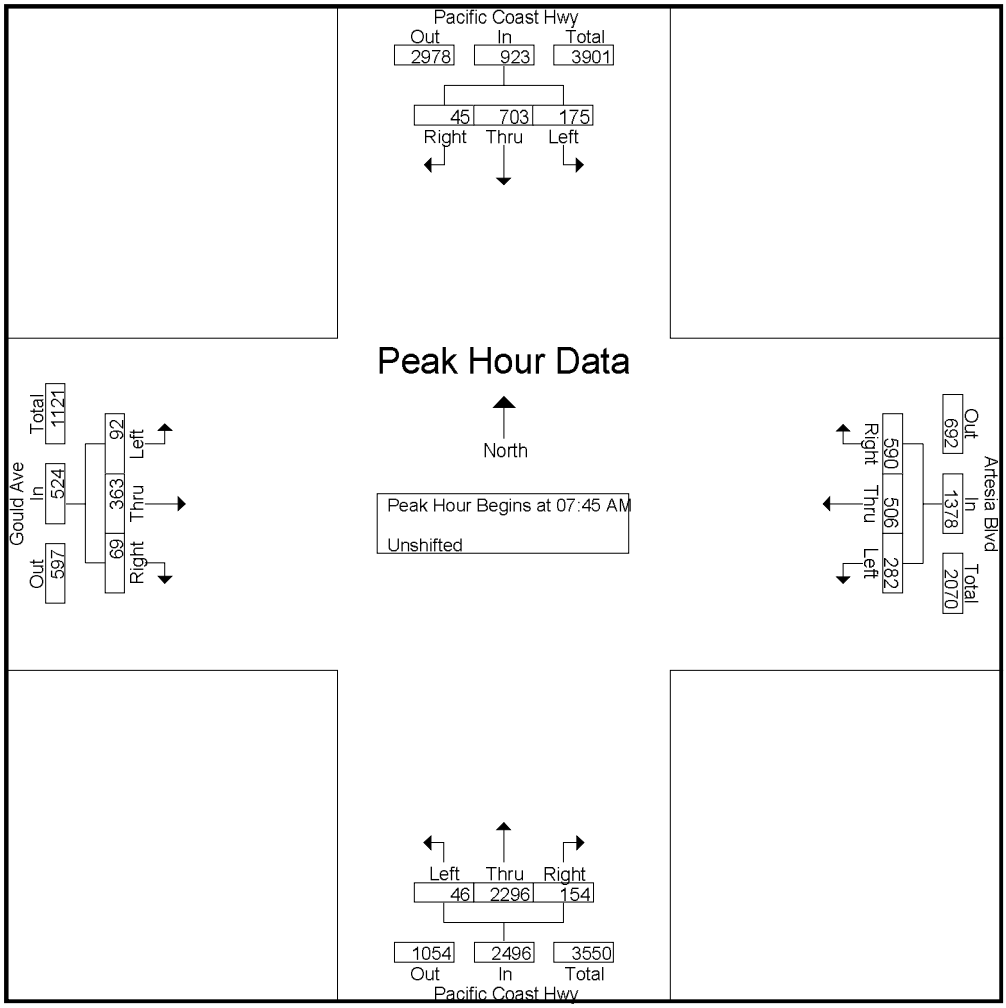
File Name : PacificCoastHwy_Tennyson
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Tennyson St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	10	591	0	601	**2**	0	13	15	0	325	3	328	0	0	0	0	944
05:15 PM	12	**630**	0	**642**	2	0	9	11	0	301	2	303	0	0	0	0	956
05:30 PM	**20**	589	0	609	2	0	**15**	**17**	0	**349**	3	**352**	0	0	0	0	**978**
05:45 PM	16	626	0	642	1	0	13	14	0	312	**9**	321	0	0	0	0	977
Total Volume	58	2436	0	2494	7	0	50	57	0	1287	17	1304	0	0	0	0	3855
% App. Total	2.3	97.7	0		12.3	0	87.7		0	98.7	1.3		0	0	0		
PHF	.725	.967	.000	.971	.875	.000	.833	.838	.000	.922	.472	.926	.000	.000	.000	.000	.985



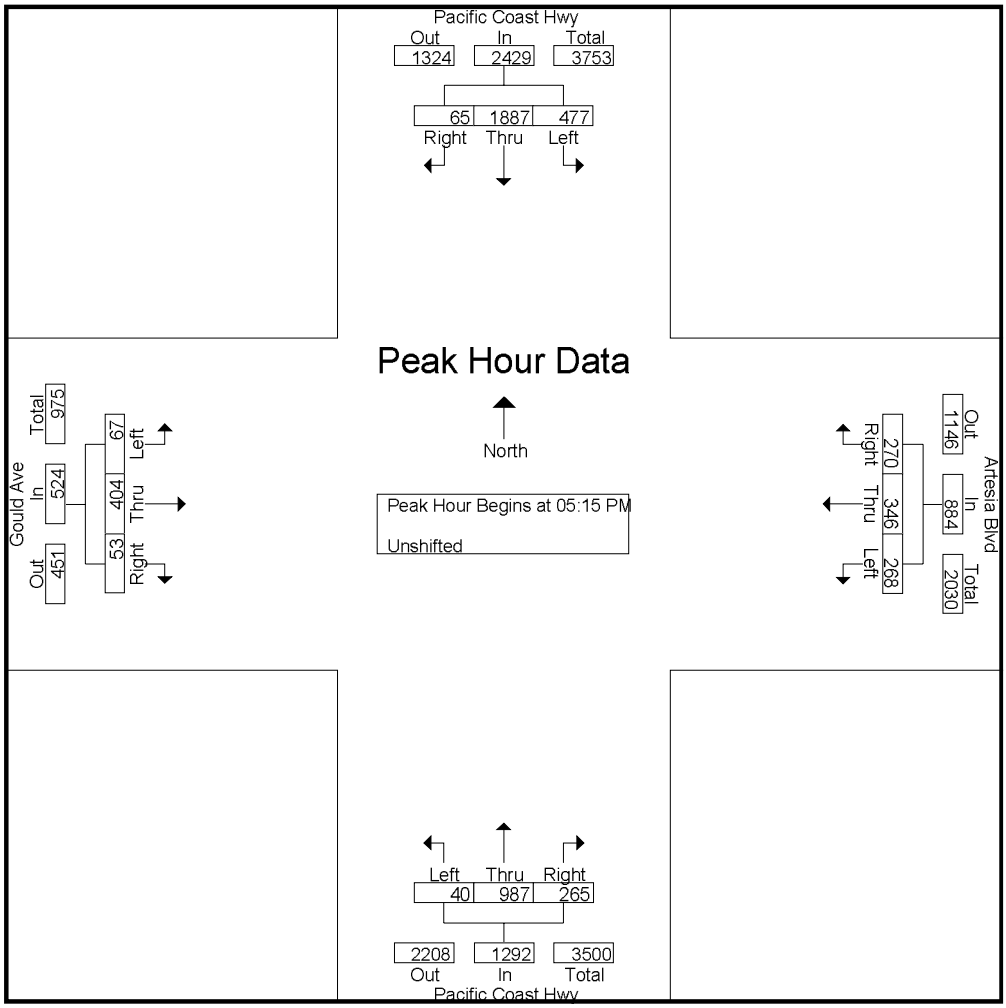
File Name : PacificCoastHwy_Gould-Artesia
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Artesia Blvd Westbound				Pacific Coast Hwy Northbound				Gould Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**60**	147	8	215	60	**139**	**181**	**380**	8	579	45	632	**28**	**122**	15	**165**	**1392**
08:00 AM	42	168	9	219	54	118	127	299	**19**	**589**	34	**642**	22	75	12	109	1269
08:15 AM	50	179	**17**	**246**	64	136	144	344	11	556	20	587	27	92	**22**	141	1318
08:30 AM	23	**209**	11	243	**104**	113	138	355	8	572	**55**	635	15	74	20	109	1342
Total Volume	175	703	45	923	282	506	590	1378	46	2296	154	2496	92	363	69	524	5321
% App. Total	19	76.2	4.9		20.5	36.7	42.8		1.8	92	6.2		17.6	69.3	13.2		
PHF	.729	.841	.662	.938	.678	.910	.815	.907	.605	.975	.700	.972	.821	.744	.784	.794	.956



File Name : PacificCoastHwy_Gould-Artesia
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Artesia Blvd Westbound				Pacific Coast Hwy Northbound				Gould Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	122	475	**22**	**619**	**81**	94	62	237	6	215	64	285	19	97	**21**	137	1278
05:30 PM	117	464	17	598	53	75	**73**	201	**15**	**267**	**85**	**367**	**22**	75	8	105	1271
05:45 PM	**123**	**480**	16	619	70	**106**	73	**249**	10	241	56	307	11	**117**	14	**142**	**1317**
06:00 PM	115	468	10	593	64	71	62	197	9	264	60	333	15	115	10	140	1263
Total Volume	477	1887	65	2429	268	346	270	884	40	987	265	1292	67	404	53	524	5129
% App. Total	19.6	77.7	2.7		30.3	39.1	30.5		3.1	76.4	20.5		12.8	77.1	10.1		
PHF	.970	.983	.739	.981	.827	.816	.925	.888	.667	.924	.779	.880	.761	.863	.631	.923	.974



APPENDIX C

Intersection Analysis Worksheets

APPENDIX C-1

ICU Methodology

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_AM.vistro
Report File: K:\...\ICU - 1 EX AM.pdf

Scenario 1 EX AM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	NB Thru	1.084	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	NB Right	0.969	-	E
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	NB Thru	0.908	-	E
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	NB Thru	1.123	-	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.084

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	754	23	29	253	35	47	121	48	33	142	50
Total Analysis Volume [veh/h]	117	3015	92	117	1012	141	189	484	193	130	570	199
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.65	0.65	0.04	0.24	0.24	0.12	0.15	0.12	0.08	0.18	0.08
Intersection LOS	F											
Intersection V/C	1.084											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.969

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	820	5	12	277	18	15	30	4	11	26	18
Total Analysis Volume [veh/h]	0	23	3282	20	49	1107	74	62	122	17	45	105	73
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.69	0.69	0.03	0.25	0.25	0.04	0.09	0.09	0.03	0.11	0.11
Intersection LOS	E												
Intersection V/C	0.969												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	859	6	13	272	3	3	7	3	4	5	13
Total Analysis Volume [veh/h]	8	3435	24	53	1089	12	12	28	11	17	21	53
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.72	0.72	0.03	0.23	0.23	0.01	0.03	0.03	0.01	0.05	0.05
Intersection LOS	E											
Intersection V/C	0.908											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.123

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	649	43	49	199	13	26	103	20	80	143	167
Total Analysis Volume [veh/h]	52	2596	174	198	795	51	104	411	78	318	572	667
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.54	0.00	0.07	0.18	0.18	0.07	0.15	0.15	0.11	0.18	0.35
Intersection LOS	F											
Intersection V/C	1.123											

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_PM.vistro
Report File: K:\...\ICU - 1 EX PM.pdf

Scenario 1 EX PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	SB Right	1.054	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	SB Thru	0.792	-	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	SB Thru	0.743	-	C
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	SB Thru	0.855	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.054

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	310	43	56	631	26	47	131	41	52	123	39
Total Analysis Volume [veh/h]	179	1241	174	223	2524	103	189	525	165	210	490	158
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.29	0.29	0.08	0.55	0.55	0.12	0.16	0.10	0.13	0.15	0.02
Intersection LOS	F											
Intersection V/C	1.054											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	387	7	10	648	8	20	22	19	11	15	9
Total Analysis Volume [veh/h]	0	25	1547	29	39	2591	30	78	87	77	45	59	37
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.33	0.33	0.02	0.55	0.55	0.05	0.10	0.10	0.03	0.06	0.06
Intersection LOS	C												
Intersection V/C	0.792												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	378	6	6	678	4	4	4	4	11	5	7
Total Analysis Volume [veh/h]	27	1513	24	23	2711	15	15	16	17	45	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.32	0.32	0.01	0.57	0.57	0.01	0.03	0.03	0.03	0.03	0.03
Intersection LOS	C											
Intersection V/C	0.743											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.855

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	279	75	135	533	18	19	114	15	76	98	76
Total Analysis Volume [veh/h]	46	1115	300	539	2133	74	76	457	60	303	391	305
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.23	0.00	0.19	0.46	0.46	0.05	0.16	0.16	0.11	0.12	0.00
Intersection LOS	D											
Intersection V/C	0.855											

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_AM.vistro
Report File: K:\...\ICU - 2 EX WP AM.pdf

Scenario 2 EX WP AM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	NB Thru	1.088	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	NB Right	0.973	-	E
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	NB Thru	0.914	-	E
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	NB Thru	1.131	-	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	11	4	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	2785	89	108	945	130	174	445	182	126	524	183
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	757	24	29	257	35	47	121	49	34	142	50
Total Analysis Volume [veh/h]	121	3027	97	117	1027	141	189	484	198	137	570	199
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.65	0.65	0.04	0.24	0.24	0.12	0.15	0.12	0.09	0.18	0.08
Intersection LOS	F											
Intersection V/C	1.088											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.973

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	0	18	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	21	3037	18	45	1042	68	57	112	16	41	97	67
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	825	5	12	283	18	15	30	4	11	26	18
Total Analysis Volume [veh/h]	11	23	3301	20	49	1133	74	62	122	17	45	105	73
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.69	0.69	0.03	0.25	0.25	0.04	0.09	0.09	0.03	0.11	0.11
Intersection LOS	E												
Intersection V/C	0.973												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.914

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3189	22	49	1037	11	11	26	10	16	19	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	867	6	13	282	3	3	7	3	4	5	13
Total Analysis Volume [veh/h]	8	3466	24	53	1127	12	12	28	11	17	21	53
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.73	0.73	0.03	0.24	0.24	0.01	0.03	0.03	0.01	0.05	0.05
Intersection LOS	E											
Intersection V/C	0.914											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.131

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	7	4	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2394	160	189	735	47	96	378	72	293	526	624
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	651	43	51	200	13	26	103	20	80	143	170
Total Analysis Volume [veh/h]	52	2602	174	205	799	51	104	411	78	318	572	678
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.54	0.00	0.07	0.18	0.18	0.07	0.15	0.15	0.11	0.18	0.35
Intersection LOS	F											
Intersection V/C	1.131											

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_PM.vistro
Report File: K:\...\ICU - 2 EX WP PM.pdf

Scenario 2 EX WP PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	SB Thru	1.065	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	SB Thru	0.798	-	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	SB Thru	0.753	-	C
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	SB Right	0.857	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.065

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	17	7	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	1159	167	205	2336	95	174	483	156	199	451	145
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	315	45	56	635	26	47	131	42	54	123	39
Total Analysis Volume [veh/h]	185	1260	182	223	2539	103	189	525	170	216	490	158
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.30	0.30	0.08	0.55	0.55	0.12	0.16	0.11	0.14	0.15	0.02
Intersection LOS	F											
Intersection V/C	1.065											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	0	29	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	23	1452	27	36	2408	28	72	80	71	41	54	34
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	395	7	10	654	8	20	22	19	11	15	9
Total Analysis Volume [veh/h]	19	25	1578	29	39	2617	30	78	87	77	45	59	37
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.33	0.33	0.02	0.55	0.55	0.05	0.10	0.10	0.03	0.06	0.06
Intersection LOS	C												
Intersection V/C	0.798												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	0	43	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1440	22	21	2537	14	14	15	16	41	18	27
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	391	6	6	689	4	4	4	4	11	5	7
Total Analysis Volume [veh/h]	27	1565	24	23	2758	15	15	16	17	45	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.33	0.33	0.01	0.58	0.58	0.01	0.03	0.03	0.03	0.03	0.03
Intersection LOS	C											
Intersection V/C	0.753											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.857

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	12	7	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1032	276	508	1969	68	70	420	55	279	360	291
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	280	75	138	535	18	19	114	15	76	98	79
Total Analysis Volume [veh/h]	46	1122	300	552	2140	74	76	457	60	303	391	316
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.23	0.00	0.19	0.46	0.46	0.05	0.16	0.16	0.11	0.12	0.01
Intersection LOS	D											
Intersection V/C	0.857											

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_AM.vistro
Report File: K:\...\ICU - 3 OY 2022 AM.pdf

Scenario 3 OY 2022 AM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	NB Thru	1.113	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	NB Right	0.998	-	E
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	NB Right	0.954	-	E
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	NB Thru	1.208	-	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.113

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	3	56	7	2	152	3	3	1	4	31	2	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	2858	93	111	1092	134	179	450	184	152	531	189
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	777	25	30	297	36	49	122	50	41	144	51
Total Analysis Volume [veh/h]	122	3107	101	121	1187	146	195	489	200	165	577	205
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.67	0.67	0.04	0.28	0.28	0.12	0.15	0.13	0.10	0.18	0.09
Intersection LOS	F											
Intersection V/C	1.113											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.998

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	1	81	0	1	174	1	1	0	3	0	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	22	3130	18	46	1202	70	59	113	19	41	98	69
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	851	5	13	327	19	16	31	5	11	27	19
Total Analysis Volume [veh/h]	0	24	3402	20	50	1307	76	64	123	21	45	107	75
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.71	0.71	0.03	0.29	0.29	0.04	0.09	0.09	0.03	0.11	0.11
Intersection LOS	E												
Intersection V/C	0.998												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	123	11	12	125	0	0	2	0	0	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3315	33	61	1137	11	11	28	10	16	19	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	901	9	17	309	3	3	8	3	4	5	14
Total Analysis Volume [veh/h]	8	3603	36	66	1236	12	12	30	11	17	21	54
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.76	0.76	0.04	0.26	0.26	0.01	0.03	0.03	0.01	0.05	0.05
Intersection LOS	E											
Intersection V/C	0.954											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.208

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	135	11	13	65	1	0	0	0	13	0	65
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2547	173	197	803	48	97	382	73	309	531	685
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	692	47	54	218	13	26	104	20	84	144	186
Total Analysis Volume [veh/h]	52	2768	188	214	873	52	105	415	79	336	577	745
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.58	0.00	0.07	0.19	0.19	0.07	0.15	0.15	0.12	0.18	0.39
Intersection LOS	F											
Intersection V/C	1.208											

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_ICU_PM.vistro
Report File: K:\...\ICU - 3 OY 2022 PM.pdf

Scenario 3 OY 2022 PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	SB Right	1.116	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	SB Thru	0.846	-	D
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	SB Thru	0.807	-	D
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	SB Thru	0.923	-	E

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.116

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	9	218	36	11	151	7	7	2	2	14	1	10
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	1371	198	218	2496	103	183	490	156	209	457	156
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	373	54	59	678	28	50	133	42	57	124	42
Total Analysis Volume [veh/h]	191	1490	215	237	2713	112	199	533	170	227	497	170
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.36	0.36	0.08	0.59	0.59	0.12	0.17	0.11	0.14	0.16	0.02
Intersection LOS	F											
Intersection V/C	1.116											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	5	237	0	4	190	4	3	0	0	0	0	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	28	1674	27	40	2598	32	76	81	72	41	55	37
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	455	7	11	706	9	21	22	20	11	15	10
Total Analysis Volume [veh/h]	0	30	1820	29	43	2824	35	83	88	78	45	60	40
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.39	0.39	0.03	0.60	0.60	0.05	0.10	0.10	0.03	0.06	0.06
Intersection LOS	D												
Intersection V/C	0.846												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.807

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	214	0	0	239	0	0	0	0	7	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1620	22	21	2758	14	14	15	16	48	18	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	440	6	6	749	4	4	4	4	13	5	8
Total Analysis Volume [veh/h]	27	1761	24	23	2998	15	15	16	17	52	20	30
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.37	0.37	0.01	0.63	0.63	0.01	0.03	0.03	0.03	0.03	0.03
Intersection LOS	D											
Intersection V/C	0.807											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.923

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	133	27	70	214	10	0	0	0	26	0	21
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1169	306	571	2196	79	71	424	56	308	364	305
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	318	83	155	597	21	19	115	15	84	99	83
Total Analysis Volume [veh/h]	46	1271	333	621	2387	86	77	461	61	335	396	332
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.26	0.00	0.22	0.52	0.52	0.05	0.16	0.16	0.12	0.12	0.00
Intersection LOS	E											
Intersection V/C	0.923											

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	NB Thru	1.116	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	NB Thru	1.002	-	F
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	NB Thru	0.960	-	E
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	NB Thru	1.216	-	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.116

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	3	56	7	2	152	3	3	1	4	31	2	4
Site-Generated Trips [veh/h]	3	11	4	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	2869	97	111	1106	134	179	450	188	158	531	189
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	780	26	30	301	36	49	122	51	43	144	51
Total Analysis Volume [veh/h]	125	3118	105	121	1202	146	195	489	204	172	577	205
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.67	0.67	0.04	0.28	0.28	0.12	0.15	0.13	0.11	0.18	0.09
Intersection LOS	F											
Intersection V/C	1.116											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	1	81	0	1	174	1	1	0	3	0	0	1
Site-Generated Trips [veh/h]	11	0	18	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	22	3148	18	46	1226	70	59	113	19	41	98	69
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	855	5	13	333	19	16	31	5	11	27	19
Total Analysis Volume [veh/h]	11	24	3422	20	50	1333	76	64	123	21	45	107	75
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.72	0.72	0.03	0.29	0.29	0.04	0.09	0.09	0.03	0.11	0.11
Intersection LOS	F												
Intersection V/C	1.002												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.960

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	123	11	12	125	0	0	2	0	0	0	1
Site-Generated Trips [veh/h]	0	29	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3344	33	61	1172	11	11	28	10	16	19	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	909	9	17	318	3	3	8	3	4	5	14
Total Analysis Volume [veh/h]	8	3635	36	66	1274	12	12	30	11	17	21	54
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.76	0.76	0.04	0.27	0.27	0.01	0.03	0.03	0.01	0.05	0.05
Intersection LOS	E											
Intersection V/C	0.960											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.216

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	135	11	13	65	1	0	0	0	13	0	65
Site-Generated Trips [veh/h]	0	6	0	7	4	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2553	173	204	807	48	97	382	73	309	531	695
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	694	47	55	219	13	26	104	20	84	144	189
Total Analysis Volume [veh/h]	52	2775	188	222	877	52	105	415	79	336	577	755
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.58	0.00	0.08	0.19	0.19	0.07	0.15	0.15	0.12	0.18	0.39
Intersection LOS	F											
Intersection V/C	1.216											

Manhattan Beach Hotel

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Report File: K:\...\ICU - 4 OY 2022 WP PM.pdf

Scenario 4 OY 2022 WP PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	ICU 1	SB Right	1.128	-	F
2	Sepulveda Blvd at 2nd St	Signalized	ICU 1	SB Thru	0.852	-	D
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	ICU 1	SB Right	0.817	-	D
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	ICU 1	SB Thru	0.925	-	E

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.128

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	9	218	36	11	151	7	7	2	2	14	1	10
Site-Generated Trips [veh/h]	5	17	7	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	181	1388	205	218	2510	103	183	490	160	215	457	156
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	377	56	59	682	28	50	133	43	58	124	42
Total Analysis Volume [veh/h]	197	1509	223	237	2728	112	199	533	174	234	497	170
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.36	0.36	0.08	0.59	0.59	0.12	0.17	0.11	0.15	0.16	0.02
Intersection LOS	F											
Intersection V/C	1.128											

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.852

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	5	237	0	4	190	4	3	0	0	0	0	3
Site-Generated Trips [veh/h]	19	0	29	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	28	1703	27	40	2622	32	76	81	72	41	55	37
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	8	463	7	11	713	9	21	22	20	11	15	10
Total Analysis Volume [veh/h]	19	30	1851	29	43	2850	35	83	88	78	45	60	40
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.39	0.39	0.03	0.60	0.60	0.05	0.10	0.10	0.03	0.06	0.06
Intersection LOS	D												
Intersection V/C	0.852												

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	214	0	0	239	0	0	0	0	7	0	1
Site-Generated Trips [veh/h]	0	48	0	0	43	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1668	22	21	2801	14	14	15	16	48	18	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	453	6	6	761	4	4	4	4	13	5	8
Total Analysis Volume [veh/h]	27	1813	24	23	3045	15	15	16	17	52	20	30
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

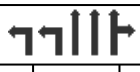
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.38	0.38	0.01	0.64	0.64	0.01	0.03	0.03	0.03	0.03	0.03
Intersection LOS	D											
Intersection V/C	0.817											

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.925

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	133	27	70	214	10	0	0	0	26	0	21
Site-Generated Trips [veh/h]	0	6	0	12	7	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1175	306	583	2203	79	71	424	56	308	364	315
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	319	83	158	599	21	19	115	15	84	99	86
Total Analysis Volume [veh/h]	46	1277	333	634	2395	86	77	461	61	335	396	342
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.27	0.00	0.22	0.52	0.52	0.05	0.16	0.16	0.12	0.12	0.00
Intersection LOS	E											
Intersection V/C	0.925											

APPENDIX C-2

HCM Methodology

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_HCM_AM.vistro
Report File: K:\...\HCM - 1 EX AM.pdf

Scenario 1 EX AM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	NB Right	0.979	69.8	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.822	23.3	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.818	10.5	B
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Right	0.617	10,000.0	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Right	0.817	57.5	E
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	NB Thru	0.031	0.0	A
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	WB Thru	0.000	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	69.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.979

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	754	23	29	253	35	47	121	48	33	142	50
Total Analysis Volume [veh/h]	117	3015	92	117	1012	141	189	484	193	130	570	199
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	41	0	9	36	0	14	33	0	17	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	8	50	50	5	47	47	10	20	20	9	19	28
g / C, Green / Cycle	0.08	0.50	0.50	0.05	0.47	0.47	0.10	0.20	0.20	0.09	0.19	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.57	0.58	0.03	0.22	0.22	0.11	0.14	0.12	0.07	0.16	0.13
s, saturation flow rate [veh/h]	1781	3560	1842	3459	3560	1755	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	146	1773	917	173	1659	818	178	718	321	161	684	448
d1, Uniform Delay [s]	45.12	25.11	25.11	46.70	18.20	18.20	45.00	36.87	36.26	44.63	38.85	29.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	9.82	74.21	86.85	4.56	0.94	1.90	48.89	1.11	1.81	9.18	2.74	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	0.80	1.15	1.17	0.68	0.47	0.47	1.06	0.67	0.60	0.81	0.83	0.44
d, Delay for Lane Group [s/veh]	54.94	99.32	111.96	51.27	19.14	20.11	93.89	37.98	38.08	53.81	41.59	30.14
Lane Group LOS	D	F	F	D	B	C	F	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.23	37.78	42.31	1.53	6.10	6.24	6.79	5.51	4.40	3.55	6.90	3.97
50th-Percentile Queue Length [ft/ln]	80.76	944.58	1057.85	38.32	152.47	156.00	169.87	137.85	109.99	88.75	172.49	99.20
95th-Percentile Queue Length [veh/ln]	5.81	53.10	59.42	2.76	10.15	10.34	11.32	9.37	7.84	6.39	11.21	7.14
95th-Percentile Queue Length [ft/ln]	145.37	1327.42	1485.51	68.97	253.72	258.41	282.94	234.13	195.99	159.76	280.19	178.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.94	103.42	111.96	51.27	19.37	20.11	93.89	37.98	38.08	53.81	41.59	30.14
Movement LOS	D	F	F	D	B	C	F	D	D	D	D	C
d_A, Approach Delay [s/veh]	101.90			22.39			50.20			40.83		
Approach LOS	F			C			D			D		
d_I, Intersection Delay [s/veh]	69.84											
Intersection LOS	E											
Intersection V/C	0.979											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.236	3.302	2.735	2.718
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	640	580	640
d_b, Bicycle Delay [s]	19.85	23.12	25.21	23.12
l_b,int, Bicycle LOS Score for Intersection	3.333	2.258	2.274	2.301
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.822

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	820	5	12	277	18	15	30	4	11	26	18
Total Analysis Volume [veh/h]	0	23	3282	20	49	1107	74	62	122	17	45	105	73
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	65	65	4	67	67	19	19	19	19
g / C, Green / Cycle	0.02	0.65	0.65	0.04	0.67	0.67	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.61	0.61	0.03	0.22	0.22	0.05	0.08	0.04	0.10
s, saturation flow rate [veh/h]	1781	3560	1864	1781	3560	1811	1206	1830	1250	1744
c, Capacity [veh/h]	42	2320	1215	66	2368	1204	161	350	196	333
d1, Uniform Delay [s]	48.29	15.48	15.56	47.66	7.19	7.19	45.25	35.40	42.09	36.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.55	8.46	14.44	14.79	0.37	0.74	1.52	0.73	0.59	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.93	0.94	0.74	0.33	0.33	0.39	0.40	0.23	0.53
d, Delay for Lane Group [s/veh]	58.84	23.94	30.00	62.45	7.56	7.92	46.77	36.13	42.68	37.76
Lane Group LOS	E	C	C	E	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.69	21.46	24.65	1.47	3.34	3.52	1.56	3.02	1.07	4.01
50th-Percentile Queue Length [ft/ln]	17.21	536.43	616.15	36.86	83.41	87.95	39.05	75.46	26.65	100.18
95th-Percentile Queue Length [veh/ln]	1.24	29.05	32.79	2.65	6.01	6.33	2.81	5.43	1.92	7.21
95th-Percentile Queue Length [ft/ln]	30.97	726.35	819.69	66.35	150.14	158.31	70.29	135.82	47.97	180.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.84	58.84	26.00	30.00	62.45	7.67	7.92	46.77	36.13	36.13	42.68	37.76	37.76
Movement LOS	E	E	C	C	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	26.25				9.86			39.41			38.75		
Approach LOS	C				A			D			D		
d_I, Intersection Delay [s/veh]	23.30												
Intersection LOS	C												
Intersection V/C	0.822												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.290	3.336	2.078	2.081
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	3.388	2.236	1.891	1.928
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	859	6	13	272	3	3	7	3	4	5	13
Total Analysis Volume [veh/h]	8	3435	24	53	1089	12	12	28	11	17	21	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	53	0	9	47	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	78	78	4	81	81	6	6	6
g / C, Green / Cycle	0.01	0.78	0.78	0.04	0.81	0.81	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.00	0.64	0.64	0.03	0.20	0.20	0.07	0.01	0.04
s, saturation flow rate [veh/h]	1781	3560	1863	1781	3560	1860	756	1368	1660
c, Capacity [veh/h]	19	2775	1452	69	2874	1501	91	85	103
d1, Uniform Delay [s]	49.15	6.71	6.75	47.63	2.33	2.33	46.21	44.75	46.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.87	2.81	5.31	16.39	0.21	0.40	5.23	1.15	8.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.82	0.82	0.77	0.25	0.25	0.56	0.20	0.72
d, Delay for Lane Group [s/veh]	63.02	9.52	12.06	64.02	2.54	2.74	51.44	45.90	55.01
Lane Group LOS	E	A	B	E	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	11.26	12.90	1.61	1.21	1.34	1.40	0.43	2.05
50th-Percentile Queue Length [ft/ln]	6.79	281.43	322.42	40.36	30.16	33.52	35.01	10.69	51.26
95th-Percentile Queue Length [veh/ln]	0.49	16.76	18.79	2.91	2.17	2.41	2.52	0.77	3.69
95th-Percentile Queue Length [ft/ln]	12.21	418.99	469.66	72.65	54.29	60.34	63.03	19.24	92.27

Movement, Approach, & Intersection Results

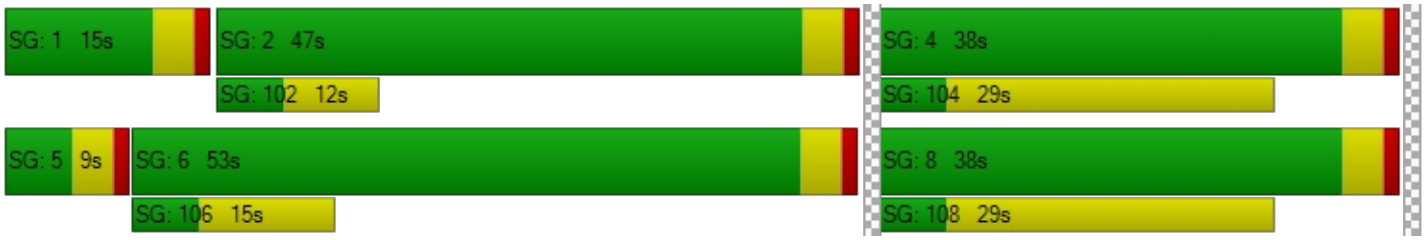
d_M, Delay for Movement [s/veh]	63.02	10.38	12.06	64.02	2.61	2.74	51.44	51.44	51.44	45.90	55.01	55.01
Movement LOS	E	B	B	E	A	A	D	D	D	D	E	E
d_A, Approach Delay [s/veh]	10.51			5.43			51.44			53.31		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	10.54											
Intersection LOS	B											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.263	3.266	1.766	2.011
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	980	860	680	680
d_b, Bicycle Delay [s]	13.01	16.25	21.78	21.78
l_b,int, Bicycle LOS Score for Intersection	3.466	2.194	1.644	1.710
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	3061	6	35	992	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3061	6	35	992	0	41
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	832	2	10	270	0	11
Total Analysis Volume [veh/h]	3327	7	38	1078	0	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	1.51	0.01	0.00	0.62
d_M, Delay for Movement [s/veh]	0.00	0.00	596.61	0.00	10000.00	10000.00
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	4.66	0.00	7.79	7.79
95th-Percentile Queue Length [ft/ln]	0.00	0.00	116.62	0.00	194.77	194.77
d_A, Approach Delay [s/veh]	0.00		20.31		10000.00	
Approach LOS	A		C		F	
d_I, Intersection Delay [s/veh]	105.15					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	57.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	649	43	49	199	13	26	103	20	80	143	167
Total Analysis Volume [veh/h]	52	2596	174	198	795	51	104	411	78	318	572	667
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	18	33	0	11	26	0	9	42	0	14	47	47
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	51	7	54	54	5	16	16	10	21	32
g / C, Green / Cycle	0.04	0.51	0.07	0.54	0.54	0.05	0.16	0.16	0.10	0.21	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.51	0.06	0.16	0.16	0.06	0.13	0.13	0.09	0.16	0.42
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1813	1781	1870	1768	3459	3560	1589
c, Capacity [veh/h]	69	2586	242	1918	977	89	304	287	346	756	512
d1, Uniform Delay [s]	47.56	24.62	45.87	12.63	12.64	47.50	40.50	40.56	44.60	36.96	33.88
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.45
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.75	18.64	6.67	0.39	0.76	98.80	5.62	6.18	10.05	1.58	148.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	1.00	0.82	0.29	0.29	1.17	0.82	0.83	0.92	0.76	1.30
d, Delay for Lane Group [s/veh]	62.32	43.26	52.54	13.02	13.40	146.30	46.12	46.74	54.65	38.53	182.09
Lane Group LOS	E	F	D	B	B	F	D	D	D	D	F
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.56	23.34	2.63	3.40	3.57	4.65	6.37	6.12	4.36	6.64	33.15
50th-Percentile Queue Length [ft/ln]	39.01	583.55	65.85	84.93	89.27	116.18	159.19	152.98	108.88	166.02	828.81
95th-Percentile Queue Length [veh/ln]	2.81	31.36	4.74	6.11	6.43	8.36	10.51	10.18	7.78	10.87	49.58
95th-Percentile Queue Length [ft/ln]	70.23	784.10	118.54	152.87	160.69	209.12	262.65	254.40	194.44	271.67	1239.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.32	43.26	0.00	52.54	13.13	13.40	146.30	46.36	46.74	54.65	38.53	182.09
Movement LOS	E	F		D	B	B	F	D	D	D	D	F
d_A, Approach Delay [s/veh]	43.63			20.62			63.94			103.32		
Approach LOS	D			C			E			F		
d_I, Intersection Delay [s/veh]	57.49											
Intersection LOS	E											
Intersection V/C	0.817											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.200	0.000	2.554	2.902
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	440	760	860
d_b, Bicycle Delay [s]	25.21	30.42	19.22	16.25
l_b,int, Bicycle LOS Score for Intersection	3.016	2.134	2.049	2.844
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	3102	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3102	0	0	1028	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	776	0	0	257	0	0
Total Analysis Volume [veh/h]	3102	0	0	1028	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	46.02
Movement LOS	A	A		A		E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		46.02	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	0	41	41	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	41	41	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	10	10	0
Total Analysis Volume [veh/h]	0	0	0	41	41	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.91	8.50	7.30	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.70		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	WB Left	0.954	51.0	D
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.660	13.6	B
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.636	6.7	A
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Left	0.295	160.2	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Left	0.741	34.5	C
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	SB Thru	0.026	0.0	A
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.050	7.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	51.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	310	43	56	631	26	47	131	41	52	123	39
Total Analysis Volume [veh/h]	179	1241	174	223	2524	103	189	525	165	210	490	158
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	13	37	0	12	36	0	15	37	0	14	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	9	48	48	8	47	47	11	18	18	10	17	29
g / C, Green / Cycle	0.09	0.48	0.48	0.08	0.47	0.47	0.11	0.18	0.18	0.10	0.17	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.27	0.27	0.06	0.48	0.49	0.11	0.15	0.10	0.12	0.14	0.10
s, saturation flow rate [veh/h]	1781	3560	1755	3459	3560	1833	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	160	1714	845	277	1678	864	196	636	284	178	600	459
d1, Uniform Delay [s]	45.50	18.33	18.33	45.24	26.43	26.43	44.31	39.56	37.64	45.00	40.07	28.09
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	69.97	1.29	2.61	5.49	29.15	43.24	22.48	2.79	1.88	93.07	2.78	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	1.12	0.55	0.55	0.81	1.03	1.05	0.96	0.83	0.58	1.18	0.82	0.34
d, Delay for Lane Group [s/veh]	115.47	19.62	20.94	50.73	55.58	69.67	66.79	42.35	39.52	138.07	42.85	28.54
Lane Group LOS	F	B	C	D	F	F	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.06	7.74	7.94	2.91	25.50	29.64	5.84	6.39	3.82	8.98	5.98	3.02
50th-Percentile Queue Length [ft/ln]	176.49	193.49	198.56	72.83	637.61	741.09	146.02	159.68	95.51	224.51	149.42	75.49
95th-Percentile Queue Length [veh/ln]	11.87	12.30	12.56	5.24	34.49	39.94	9.80	10.53	6.88	14.75	9.99	5.44
95th-Percentile Queue Length [ft/ln]	296.65	307.55	314.10	131.09	862.33	998.46	245.11	263.30	171.91	368.75	249.65	135.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	115.47	19.93	20.94	50.73	60.05	69.67	66.79	42.35	39.52	138.07	42.85	28.54
Movement LOS	F	B	C	D	E	E	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	30.77			59.67			47.08			63.52		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	50.96											
Intersection LOS	D											
Intersection V/C	0.954											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.226	3.273	2.728	2.749
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	640	660	640
d_b, Bicycle Delay [s]	22.45	23.12	22.45	23.12
l_b,int, Bicycle LOS Score for Intersection	2.436	3.127	2.285	2.267
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.660

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	387	7	10	648	8	20	22	19	11	15	9
Total Analysis Volume [veh/h]	0	25	1547	29	39	2591	30	78	87	77	45	59	37
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	68	68	3	69	69	17	17	17	17
g / C, Green / Cycle	0.03	0.68	0.68	0.03	0.69	0.69	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.01	0.29	0.29	0.02	0.48	0.48	0.06	0.09	0.04	0.05
s, saturation flow rate [veh/h]	1781	3560	1852	1781	3560	1859	1299	1727	1222	1751
c, Capacity [veh/h]	45	2417	1258	59	2446	1277	197	290	141	294
d1, Uniform Delay [s]	48.20	7.27	7.27	47.79	9.47	9.51	43.46	38.25	46.19	36.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.54	0.56	1.07	11.97	1.72	3.30	1.29	1.73	1.28	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.43	0.43	0.66	0.70	0.71	0.40	0.57	0.32	0.33
d, Delay for Lane Group [s/veh]	58.74	7.83	8.34	59.76	11.19	12.81	44.76	39.98	47.47	37.26
Lane Group LOS	E	A	A	E	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.74	4.58	4.95	1.15	10.21	11.29	1.92	3.81	1.14	2.11
50th-Percentile Queue Length [ft/ln]	18.61	114.53	123.66	28.80	255.13	282.37	47.92	95.23	28.52	52.73
95th-Percentile Queue Length [veh/ln]	1.34	8.09	8.59	2.07	15.44	16.81	3.45	6.86	2.05	3.80
95th-Percentile Queue Length [ft/ln]	33.49	202.28	214.84	51.83	386.11	420.16	86.26	171.42	51.34	94.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.74	58.74	8.00	8.34	59.76	11.74	12.81	44.76	39.98	39.98	47.47	37.26	37.26
Movement LOS	E	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.80				12.45			41.52			40.52		
Approach LOS	A				B			D			D		
d_I, Intersection Delay [s/veh]	13.56												
Intersection LOS	B												
Intersection V/C	0.660												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.265	3.313	2.063	2.043
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.440	3.023	1.959	1.792
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	378	6	6	678	4	4	4	4	11	5	7
Total Analysis Volume [veh/h]	27	1513	24	23	2711	15	15	16	17	45	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	80	80	2	80	80	5	5	5
g / C, Green / Cycle	0.03	0.80	0.80	0.02	0.80	0.80	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.02	0.28	0.28	0.01	0.50	0.50	0.05	0.03	0.03
s, saturation flow rate [veh/h]	1781	3560	1855	1781	3560	1865	887	1376	1693
c, Capacity [veh/h]	48	2855	1488	43	2845	1490	95	90	92
d1, Uniform Delay [s]	48.09	2.74	2.74	48.25	4.05	4.06	47.33	46.44	46.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.15	0.34	0.66	10.09	1.06	2.03	4.08	4.29	4.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.35	0.35	0.54	0.63	0.63	0.50	0.50	0.54
d, Delay for Lane Group [s/veh]	58.24	3.08	3.40	58.34	5.11	6.09	51.41	50.72	50.86
Lane Group LOS	E	A	A	E	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.80	1.99	2.21	0.68	5.28	5.95	1.30	1.20	1.30
50th-Percentile Queue Length [ft/ln]	19.91	49.77	55.14	17.11	131.89	148.71	32.44	29.96	32.53
95th-Percentile Queue Length [veh/ln]	1.43	3.58	3.97	1.23	9.04	9.95	2.34	2.16	2.34
95th-Percentile Queue Length [ft/ln]	35.85	89.59	99.25	30.80	226.06	248.71	58.40	53.94	58.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	3.19	3.40	58.34	5.44	6.09	51.41	51.41	51.41	50.72	50.86	50.86
Movement LOS	E	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.14			5.89			51.41			50.79		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.71											
Intersection LOS	A											
Intersection V/C	0.636											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.269	3.222	1.775	1.998
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.420	3.072	1.639	1.715
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	160.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	1349	18	60	2545	7	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1349	18	60	2545	7	52
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	367	5	16	692	2	14
Total Analysis Volume [veh/h]	1466	20	65	2766	8	57
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.29	0.03	0.29	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	27.18	0.00	160.22	39.22
Movement LOS	A	A	D	A	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.14	0.00	2.22	2.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	28.58	0.00	55.43	55.43
d_A, Approach Delay [s/veh]	0.00		0.62		54.11	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	279	75	135	533	18	19	114	15	76	98	76
Total Analysis Volume [veh/h]	46	1115	300	539	2133	74	76	457	60	303	391	305
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	33	0	19	43	0	30	36	0	12	18	18
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	44	15	56	56	6	17	17	8	19	38
g / C, Green / Cycle	0.04	0.44	0.15	0.56	0.56	0.06	0.17	0.17	0.08	0.19	0.38
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.16	0.41	0.41	0.04	0.14	0.14	0.09	0.11	0.19
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1838	1781	1870	1795	3459	3560	1589
c, Capacity [veh/h]	64	2249	519	1977	1021	101	315	302	277	682	607
d1, Uniform Delay [s]	47.68	19.96	42.50	16.67	16.82	46.46	40.23	40.27	46.00	36.70	23.66
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.63	0.78	29.44	2.45	4.88	10.58	5.79	6.21	55.32	0.76	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.50	1.04	0.73	0.74	0.75	0.83	0.84	1.10	0.57	0.50
d, Delay for Lane Group [s/veh]	61.31	20.75	71.94	19.12	21.70	57.04	46.02	46.48	101.32	37.47	24.45
Lane Group LOS	E	C	F	B	C	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	6.17	8.45	12.23	13.59	2.15	6.69	6.50	5.53	4.37	5.52
50th-Percentile Queue Length [ft/ln]	34.30	154.24	211.16	305.70	339.70	53.75	167.35	162.61	138.37	109.19	138.07
95th-Percentile Queue Length [veh/ln]	2.47	10.24	13.44	17.96	19.63	3.87	10.94	10.69	9.67	7.79	9.38
95th-Percentile Queue Length [ft/ln]	61.74	256.08	336.04	449.08	490.83	96.74	273.43	267.17	241.87	194.87	234.42

Movement, Approach, & Intersection Results

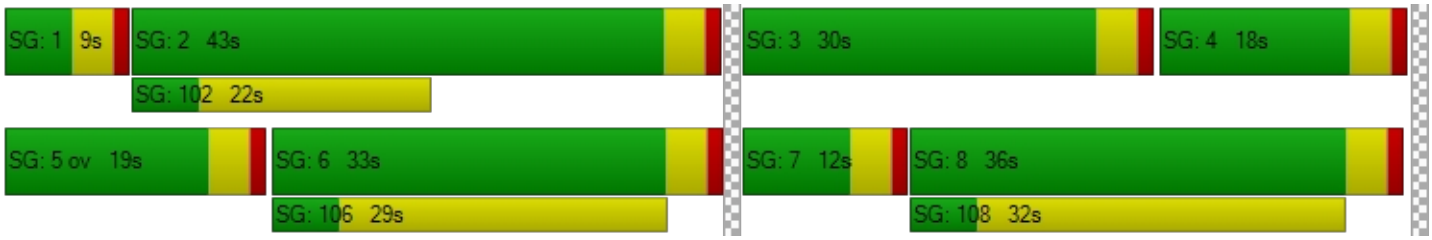
d_M, Delay for Movement [s/veh]	61.31	20.75	0.00	71.94	19.95	21.70	57.04	46.21	46.48	101.32	37.47	24.45
Movement LOS	E	C		F	B	C	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	22.36			30.20			47.63			52.86		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.54											
Intersection LOS	C											
Intersection V/C	0.741											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.178	0.000	2.522	2.878
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	780	640	280
d_b, Bicycle Delay [s]	25.21	18.61	23.12	36.98
l_b,int, Bicycle LOS Score for Intersection	2.198	3.070	2.049	2.384
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	1401	0	0	2551	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1401	0	0	2551	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	350	0	0	638	0	0
Total Analysis Volume [veh/h]	1401	0	0	2551	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.00
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		16.00	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	78	0	59	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	78	0	59	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	20	0	15	0
Total Analysis Volume [veh/h]	0	0	78	0	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.90	8.58	7.45	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.16	0.16	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.98	3.98	0.00	0.00
d_A, Approach Delay [s/veh]	9.24		7.45		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.24					
Intersection LOS	A					

Manhattan Beach Hotel

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Report File: K:\...\HCM - 2 EX WP AM.pdf

Scenario 2 EX WP AM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	NB Right	0.983	71.2	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.826	23.9	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.825	10.7	B
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Right	0.625	10,000.0	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Right	0.826	59.1	E
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	WB Right	0.335	66.1	F
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.015	7.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	71.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.983

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	11	4	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	2785	89	108	945	130	174	445	182	126	524	183
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	757	24	29	257	35	47	121	49	34	142	50
Total Analysis Volume [veh/h]	121	3027	97	117	1027	141	189	484	198	137	570	199
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	41	0	9	36	0	14	33	0	17	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	8	50	50	5	46	46	10	20	20	9	19	28
g / C, Green / Cycle	0.08	0.50	0.50	0.05	0.46	0.46	0.10	0.20	0.20	0.09	0.19	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.58	0.58	0.03	0.22	0.22	0.11	0.14	0.12	0.08	0.16	0.13
s, saturation flow rate [veh/h]	1781	3560	1841	3459	3560	1757	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	150	1773	916	173	1651	815	178	704	314	168	684	448
d1, Uniform Delay [s]	44.99	25.11	25.11	46.70	18.43	18.43	45.00	37.25	36.77	44.41	38.85	29.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	9.75	76.84	89.80	4.56	0.98	1.97	48.89	1.21	2.08	9.12	2.74	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	0.81	1.16	1.17	0.68	0.47	0.47	1.06	0.69	0.63	0.81	0.83	0.44
d, Delay for Lane Group [s/veh]	54.74	101.95	114.90	51.27	19.41	20.41	93.89	38.46	38.85	53.54	41.59	30.14
Lane Group LOS	D	F	F	D	B	C	F	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.33	38.43	43.03	1.53	6.24	6.39	6.79	5.55	4.57	3.73	6.90	3.97
50th-Percentile Queue Length [ft/ln]	83.36	960.74	1075.83	38.32	155.90	159.66	169.87	138.84	114.29	93.31	172.49	99.20
95th-Percentile Queue Length [veh/ln]	6.00	54.11	60.58	2.76	10.33	10.53	11.32	9.42	8.08	6.72	11.21	7.14
95th-Percentile Queue Length [ft/ln]	150.05	1352.75	1514.43	68.97	258.29	263.27	282.94	235.47	201.95	167.95	280.19	178.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.74	106.13	114.90	51.27	19.65	20.41	93.89	38.46	38.85	53.54	41.59	30.14
Movement LOS	D	F	F	D	B	C	F	D	D	D	D	C
d_A, Approach Delay [s/veh]	104.48			22.61			50.58			40.88		
Approach LOS	F			C			D			D		
d_I, Intersection Delay [s/veh]	71.22											
Intersection LOS	E											
Intersection V/C	0.983											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.242	3.305	2.736	2.720
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	640	580	640
d_b, Bicycle Delay [s]	19.85	23.12	25.21	23.12
l_b,int, Bicycle LOS Score for Intersection	3.344	2.266	2.278	2.307
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	0	18	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	21	3037	18	45	1042	68	57	112	16	41	97	67
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	825	5	12	283	18	15	30	4	11	26	18
Total Analysis Volume [veh/h]	11	23	3301	20	49	1133	74	62	122	17	45	105	73
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	65	65	4	66	66	19	19	19	19
g / C, Green / Cycle	0.03	0.65	0.65	0.04	0.66	0.66	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.61	0.61	0.03	0.22	0.22	0.05	0.08	0.04	0.10
s, saturation flow rate [veh/h]	1781	3560	1864	1781	3560	1812	1206	1830	1250	1744
c, Capacity [veh/h]	54	2320	1215	66	2344	1193	161	350	196	333
d1, Uniform Delay [s]	47.90	15.62	15.70	47.66	7.53	7.53	45.25	35.40	42.09	36.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.12	8.95	15.13	14.79	0.40	0.78	1.52	0.73	0.59	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.94	0.94	0.74	0.34	0.34	0.39	0.40	0.23	0.53
d, Delay for Lane Group [s/veh]	59.02	24.57	30.83	62.45	7.93	8.31	46.77	36.13	42.68	37.76
Lane Group LOS	E	C	C	E	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.00	21.89	25.17	1.47	3.53	3.73	1.56	3.02	1.07	4.01
50th-Percentile Queue Length [ft/ln]	25.04	547.36	629.30	36.86	88.31	93.13	39.05	75.46	26.65	100.18
95th-Percentile Queue Length [veh/ln]	1.80	29.57	33.40	2.65	6.36	6.71	2.81	5.43	1.92	7.21
95th-Percentile Queue Length [ft/ln]	45.08	739.20	835.00	66.35	158.97	167.63	70.29	135.82	47.97	180.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.02	59.02	26.70	30.83	62.45	8.04	8.31	46.77	36.13	36.13	42.68	37.76	37.76
Movement LOS	E	E	C	C	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	27.06				10.18			39.41			38.75		
Approach LOS	C				B			D			D		
d_I, Intersection Delay [s/veh]	23.86												
Intersection LOS	C												
Intersection V/C	0.826												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.298	3.342	2.078	2.081
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	3.399	2.250	1.891	1.928
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.825

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3189	22	49	1037	11	11	26	10	16	19	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	867	6	13	282	3	3	7	3	4	5	13
Total Analysis Volume [veh/h]	8	3466	24	53	1127	12	12	28	11	17	21	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	53	0	9	47	0	0	38	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	78	78	4	81	81	6	6	6
g / C, Green / Cycle	0.01	0.78	0.78	0.04	0.81	0.81	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.00	0.64	0.64	0.03	0.21	0.21	0.07	0.01	0.04
s, saturation flow rate [veh/h]	1781	3560	1863	1781	3560	1860	756	1368	1660
c, Capacity [veh/h]	19	2775	1452	69	2874	1501	91	85	103
d1, Uniform Delay [s]	49.15	6.82	6.86	47.63	2.35	2.35	46.21	44.75	46.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.87	2.94	5.55	16.39	0.22	0.42	5.23	1.15	8.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.82	0.83	0.77	0.26	0.26	0.56	0.20	0.72
d, Delay for Lane Group [s/veh]	63.02	9.76	12.41	64.02	2.57	2.78	51.44	45.90	55.01
Lane Group LOS	E	A	B	E	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.27	11.56	13.27	1.61	1.26	1.40	1.40	0.43	2.05
50th-Percentile Queue Length [ft/ln]	6.79	289.10	331.65	40.36	31.49	35.00	35.01	10.69	51.26
95th-Percentile Queue Length [veh/ln]	0.49	17.14	19.24	2.91	2.27	2.52	2.52	0.77	3.69
95th-Percentile Queue Length [ft/ln]	12.21	428.53	480.98	72.65	56.67	63.00	63.03	19.24	92.27

Movement, Approach, & Intersection Results

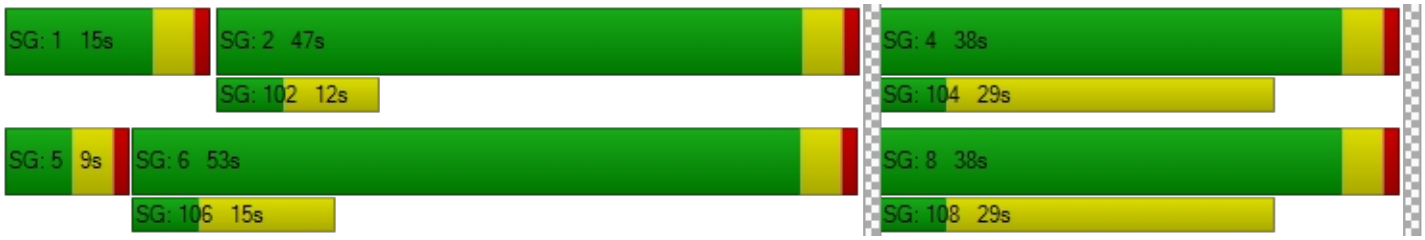
d_M, Delay for Movement [s/veh]	63.02	10.66	12.41	64.02	2.64	2.78	51.44	51.44	51.44	45.90	55.01	55.01
Movement LOS	E	B	B	E	A	A	D	D	D	D	E	E
d_A, Approach Delay [s/veh]	10.79			5.37			51.44			53.31		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	10.68											
Intersection LOS	B											
Intersection V/C	0.825											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.273	3.275	1.766	2.011
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	980	860	680	680
d_b, Bicycle Delay [s]	13.01	16.25	21.78	21.78
l_b,int, Bicycle LOS Score for Intersection	3.484	2.215	1.644	1.710
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	3061	6	35	992	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	24	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3077	6	59	1003	0	41
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	836	2	16	273	0	11
Total Analysis Volume [veh/h]	3345	7	64	1090	0	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	2.60	0.01	0.00	0.63
d_M, Delay for Movement [s/veh]	0.00	0.00	1062.33	0.00	10000.00	10000.00
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	7.95	0.00	7.79	7.79
95th-Percentile Queue Length [ft/ln]	0.00	0.00	198.71	0.00	194.77	194.77
d_A, Approach Delay [s/veh]	0.00		58.92		10000.00	
Approach LOS	A		F		F	
d_I, Intersection Delay [s/veh]	113.82					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	59.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	7	4	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2394	160	189	735	47	96	378	72	293	526	624
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	651	43	51	200	13	26	103	20	80	143	170
Total Analysis Volume [veh/h]	52	2602	174	205	799	51	104	411	78	318	572	678
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	18	33	0	11	26	0	9	42	0	14	47	47
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	51	7	54	54	5	16	16	10	21	32
g / C, Green / Cycle	0.04	0.51	0.07	0.54	0.54	0.05	0.16	0.16	0.10	0.21	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.51	0.06	0.16	0.16	0.06	0.13	0.13	0.09	0.16	0.43
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1813	1781	1870	1768	3459	3560	1589
c, Capacity [veh/h]	69	2586	242	1918	977	89	304	287	346	756	512
d1, Uniform Delay [s]	47.56	24.62	45.97	12.64	12.65	47.50	40.50	40.56	44.60	36.96	33.88
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.46
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.75	19.22	7.96	0.39	0.77	98.80	5.62	6.18	10.05	1.58	157.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	1.01	0.85	0.29	0.29	1.17	0.82	0.83	0.92	0.76	1.32
d, Delay for Lane Group [s/veh]	62.32	43.83	53.93	13.03	13.41	146.30	46.12	46.74	54.65	38.53	191.52
Lane Group LOS	E	F	D	B	B	F	D	D	D	D	F
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.56	23.48	2.77	3.42	3.59	4.65	6.37	6.12	4.36	6.64	34.49
50th-Percentile Queue Length [ft/ln]	39.01	587.00	69.20	85.41	89.78	116.18	159.19	152.98	108.88	166.02	862.37
95th-Percentile Queue Length [veh/ln]	2.81	31.58	4.98	6.15	6.46	8.36	10.51	10.18	7.78	10.87	51.76
95th-Percentile Queue Length [ft/ln]	70.23	789.61	124.56	153.73	161.60	209.12	262.65	254.40	194.44	271.67	1294.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.32	43.83	0.00	53.93	13.14	13.41	146.30	46.36	46.74	54.65	38.53	191.52
Movement LOS	E	F		D	B	B	F	D	D	D	D	F
d_A, Approach Delay [s/veh]	44.20			21.08			63.94			107.95		
Approach LOS	D			C			E			F		
d_I, Intersection Delay [s/veh]	59.07											
Intersection LOS	E											
Intersection V/C	0.826											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.201	0.000	2.554	2.905
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	440	760	860
d_b, Bicycle Delay [s]	25.21	30.42	19.22	16.25
l_b,int, Bicycle LOS Score for Intersection	3.019	2.140	2.049	2.853
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	66.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.335

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	3102	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	35	0	29
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3102	16	0	1063	0	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	776	4	0	266	0	7
Total Analysis Volume [veh/h]	3102	16	0	1063	0	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.33
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	66.15
Movement LOS	A	A		A		F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	1.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	32.03
d_A, Approach Delay [s/veh]	0.00		0.00		66.15	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	0	41	41	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	24	41	41	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	6	10	10	0
Total Analysis Volume [veh/h]	0	0	24	41	41	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.23	8.50	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.17	1.17	0.00	0.00
d_A, Approach Delay [s/veh]	8.86		2.71		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.66					
Intersection LOS	A					

Manhattan Beach Hotel

Vistro File: K:\...\Mhttn Bch Hotel_HCM_PM.vistro
Report File: K:\...\HCM - 2 EX WP PM.pdf

Scenario 2 EX WP PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	WB Left	0.965	52.7	D
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	NB Left	0.677	14.3	B
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.646	6.8	A
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Left	0.395	220.1	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Left	0.743	35.5	D
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	WB Right	0.148	18.1	C
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.066	7.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	52.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.965

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	17	7	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	1159	167	205	2336	95	174	483	156	199	451	145
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	315	45	56	635	26	47	131	42	54	123	39
Total Analysis Volume [veh/h]	185	1260	182	223	2539	103	189	525	170	216	490	158
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	13	37	0	12	36	0	15	37	0	14	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	9	48	48	8	47	47	11	18	18	10	17	29
g / C, Green / Cycle	0.09	0.48	0.48	0.08	0.47	0.47	0.11	0.18	0.18	0.10	0.17	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.27	0.27	0.06	0.49	0.50	0.11	0.15	0.11	0.12	0.14	0.10
s, saturation flow rate [veh/h]	1781	3560	1752	3459	3560	1833	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	160	1713	843	277	1678	864	196	637	284	178	601	459
d1, Uniform Delay [s]	45.50	18.47	18.47	45.24	26.44	26.44	44.31	39.55	37.76	45.00	40.06	28.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	84.33	1.35	2.73	5.49	30.95	45.25	22.48	2.78	2.02	106.93	2.77	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	1.15	0.56	0.56	0.81	1.03	1.05	0.96	0.82	0.60	1.21	0.82	0.34
d, Delay for Lane Group [s/veh]	129.83	19.82	21.20	50.73	57.39	71.69	66.79	42.33	39.77	151.93	42.83	28.53
Lane Group LOS	F	B	C	D	F	F	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.70	7.96	8.16	2.91	25.92	30.12	5.84	6.39	3.95	9.67	5.97	3.02
50th-Percentile Queue Length [ft/ln]	192.48	198.88	203.98	72.83	647.96	753.06	146.02	159.63	98.87	241.65	149.37	75.47
95th-Percentile Queue Length [veh/ln]	12.87	12.58	12.84	5.24	35.14	40.69	9.80	10.53	7.12	15.82	9.98	5.43
95th-Percentile Queue Length [ft/ln]	321.83	314.52	321.10	131.09	878.49	1017.37	245.11	263.24	177.97	395.60	249.59	135.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	129.83	20.14	21.20	50.73	61.93	71.69	66.79	42.33	39.77	151.93	42.83	28.53
Movement LOS	F	C	C	D	E	E	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	32.73			61.41			47.07			67.49		
Approach LOS	C			E			D			E		
d_I, Intersection Delay [s/veh]	52.74											
Intersection LOS	D											
Intersection V/C	0.965											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.235	3.277	2.730	2.751
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	640	660	640
d_b, Bicycle Delay [s]	22.45	23.12	22.45	23.12
l_b,int, Bicycle LOS Score for Intersection	2.454	3.135	2.289	2.272
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	0	29	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	23	1452	27	36	2408	28	72	80	71	41	54	34
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	395	7	10	654	8	20	22	19	11	15	9
Total Analysis Volume [veh/h]	19	25	1578	29	39	2617	30	78	87	77	45	59	37
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	68	68	3	68	68	17	17	17	17
g / C, Green / Cycle	0.04	0.68	0.68	0.03	0.68	0.68	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.30	0.30	0.02	0.49	0.49	0.06	0.09	0.04	0.05
s, saturation flow rate [veh/h]	1781	3560	1853	1781	3560	1859	1299	1727	1222	1751
c, Capacity [veh/h]	63	2417	1258	59	2410	1258	197	290	141	294
d1, Uniform Delay [s]	47.71	7.33	7.33	47.79	10.20	10.24	43.46	38.25	46.19	36.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.17	0.58	1.11	11.97	1.90	3.64	1.29	1.73	1.28	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.44	0.44	0.66	0.72	0.72	0.40	0.57	0.32	0.33
d, Delay for Lane Group [s/veh]	60.88	7.91	8.44	59.76	12.10	13.88	44.76	39.98	47.47	37.26
Lane Group LOS	E	A	A	E	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.31	4.71	5.09	1.15	10.92	12.10	1.92	3.81	1.14	2.11
50th-Percentile Queue Length [ft/ln]	32.72	117.75	127.20	28.80	273.08	302.56	47.92	95.23	28.52	52.73
95th-Percentile Queue Length [veh/ln]	2.36	8.27	8.79	2.07	16.34	17.81	3.45	6.86	2.05	3.80
95th-Percentile Queue Length [ft/ln]	58.89	206.73	219.68	51.83	408.59	445.19	86.26	171.42	51.34	94.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.88	60.88	8.08	8.44	59.76	12.69	13.88	44.76	39.98	39.98	47.47	37.26	37.26
Movement LOS	E	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.49				13.39			41.52			40.52		
Approach LOS	A				B			D			D		
d_I, Intersection Delay [s/veh]	14.28												
Intersection LOS	B												
Intersection V/C	0.677												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.276	3.321	2.063	2.043
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.457	3.037	1.959	1.792
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	0	43	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1440	22	21	2537	14	14	15	16	41	18	27
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	391	6	6	689	4	4	4	4	11	5	7
Total Analysis Volume [veh/h]	27	1565	24	23	2758	15	15	16	17	45	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	80	80	2	80	80	5	5	5
g / C, Green / Cycle	0.03	0.80	0.80	0.02	0.80	0.80	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.02	0.29	0.29	0.01	0.51	0.51	0.05	0.03	0.03
s, saturation flow rate [veh/h]	1781	3560	1856	1781	3560	1865	887	1376	1693
c, Capacity [veh/h]	48	2855	1488	43	2845	1490	95	90	92
d1, Uniform Delay [s]	48.09	2.78	2.78	48.25	4.12	4.13	47.33	46.44	46.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.15	0.36	0.70	10.09	1.11	2.12	4.08	4.29	4.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.37	0.37	0.54	0.64	0.64	0.50	0.50	0.54
d, Delay for Lane Group [s/veh]	58.24	3.14	3.47	58.34	5.23	6.26	51.41	50.72	50.86
Lane Group LOS	E	A	A	E	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.80	2.09	2.31	0.68	5.47	6.17	1.30	1.20	1.30
50th-Percentile Queue Length [ft/ln]	19.91	52.17	57.82	17.11	136.64	154.23	32.44	29.96	32.53
95th-Percentile Queue Length [veh/ln]	1.43	3.76	4.16	1.23	9.30	10.24	2.34	2.16	2.34
95th-Percentile Queue Length [ft/ln]	35.85	93.90	104.08	30.80	232.50	256.07	58.40	53.94	58.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	3.25	3.47	58.34	5.58	6.26	51.41	51.41	51.41	50.72	50.86	50.86
Movement LOS	E	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.17			6.02			51.41			50.79		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.77											
Intersection LOS	A											
Intersection V/C	0.646											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.282	3.235	1.775	1.998
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.448	3.097	1.639	1.715
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	220.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	1349	18	60	2545	7	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	24	19	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1365	18	84	2564	7	52
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	371	5	23	697	2	14
Total Analysis Volume [veh/h]	1484	20	91	2787	8	57
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.41	0.03	0.39	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	32.08	0.00	220.14	54.48
Movement LOS	A	A	D	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.87	0.00	2.82	2.82
95th-Percentile Queue Length [ft/ln]	0.00	0.00	46.81	0.00	70.56	70.56
d_A, Approach Delay [s/veh]	0.00		1.01		74.87	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	1.75					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	35.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	12	7	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1032	276	508	1969	68	70	420	55	279	360	291
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	280	75	138	535	18	19	114	15	76	98	79
Total Analysis Volume [veh/h]	46	1122	300	552	2140	74	76	457	60	303	391	316
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	33	0	19	43	0	30	36	0	12	18	18
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	44	15	56	56	6	17	17	8	19	38
g / C, Green / Cycle	0.04	0.44	0.15	0.56	0.56	0.06	0.17	0.17	0.08	0.19	0.38
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.16	0.41	0.41	0.04	0.14	0.14	0.09	0.11	0.20
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1838	1781	1870	1795	3459	3560	1589
c, Capacity [veh/h]	64	2249	519	1977	1021	101	315	302	277	682	607
d1, Uniform Delay [s]	47.68	20.00	42.50	16.70	16.86	46.46	40.23	40.27	46.00	36.70	23.86
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.63	0.79	38.21	2.47	4.94	10.58	5.79	6.21	55.32	0.76	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.50	1.06	0.73	0.75	0.75	0.83	0.84	1.10	0.57	0.52
d, Delay for Lane Group [s/veh]	61.31	20.79	80.71	19.18	21.80	57.04	46.02	46.48	101.32	37.47	24.81
Lane Group LOS	E	C	F	B	C	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	6.22	9.08	12.29	13.68	2.15	6.69	6.50	5.53	4.37	5.79
50th-Percentile Queue Length [ft/ln]	34.30	155.50	226.95	307.37	341.92	53.75	167.35	162.61	138.37	109.19	144.78
95th-Percentile Queue Length [veh/ln]	2.47	10.31	14.41	18.05	19.74	3.87	10.94	10.69	9.67	7.79	9.74
95th-Percentile Queue Length [ft/ln]	61.74	257.76	360.34	451.13	493.54	96.74	273.43	267.17	241.87	194.87	243.45

Movement, Approach, & Intersection Results

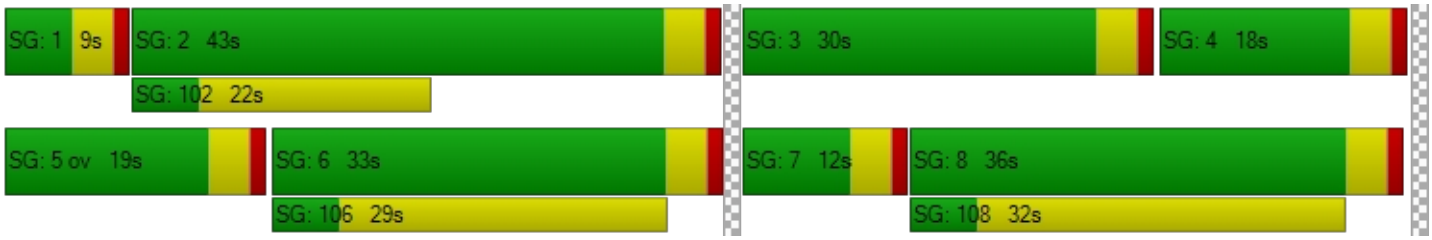
d_M, Delay for Movement [s/veh]	61.31	20.79	0.00	80.71	20.02	21.80	57.04	46.21	46.48	101.32	37.47	24.81
Movement LOS	E	C		F	C	C	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	22.39			32.18			47.63			52.66		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.50											
Intersection LOS	D											
Intersection V/C	0.743											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.179	0.000	2.522	2.882
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	780	640	280
d_b, Bicycle Delay [s]	25.21	18.61	23.12	36.98
l_b,int, Bicycle LOS Score for Intersection	2.202	3.081	2.049	2.393
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.148

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	1401	0	0	2551	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	43	0	48
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1401	16	0	2594	0	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	350	4	0	649	0	12
Total Analysis Volume [veh/h]	1401	16	0	2594	0	48
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.15
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	18.07
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.52
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	12.89
d_A, Approach Delay [s/veh]	0.00		0.00		18.07	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	78	0	59	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	102	0	59	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	26	0	15	0
Total Analysis Volume [veh/h]	0	0	102	0	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.07	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.31	8.58	7.49	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.21	0.21	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.30	5.30	0.00	0.00
d_A, Approach Delay [s/veh]	9.44		7.49		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.75					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	EB Left	1.008	71.9	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.849	27.4	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	NB Left	0.864	12.7	B
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Right	0.837	10,000.0	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Right	0.908	76.2	E
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	NB Thru	0.031	0.0	A
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	WB Thru	0.000	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	71.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.008

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	3	56	7	2	152	3	3	1	4	31	2	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	2858	93	111	1092	134	179	450	184	152	531	189
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	777	25	30	297	36	49	122	50	41	144	51
Total Analysis Volume [veh/h]	122	3107	101	121	1187	146	195	489	200	165	577	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	43	0	9	38	0	12	34	0	14	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	8	52	52	5	48	48	8	17	17	10	19	28
g / C, Green / Cycle	0.08	0.52	0.52	0.05	0.48	0.48	0.08	0.17	0.17	0.10	0.19	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.59	0.60	0.03	0.25	0.25	0.11	0.14	0.13	0.09	0.16	0.13
s, saturation flow rate [veh/h]	1781	3560	1840	3459	3560	1767	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	151	1836	949	173	1712	850	142	620	277	178	692	452
d1, Uniform Delay [s]	44.96	24.21	24.21	46.76	17.97	17.97	46.00	39.52	39.00	44.64	38.74	29.41
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	9.74	72.44	85.41	5.05	1.13	2.27	175.48	2.28	3.55	17.87	2.73	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	0.81	1.15	1.16	0.70	0.52	0.52	1.37	0.79	0.72	0.93	0.83	0.45
d, Delay for Lane Group [s/veh]	54.70	96.65	109.62	51.81	19.10	20.24	221.48	41.80	42.54	62.50	41.47	30.12
Lane Group LOS	D	F	F	D	B	C	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.36	38.49	43.21	1.59	7.12	7.33	10.46	5.88	4.86	4.91	6.98	4.09
50th-Percentile Queue Length [ft/ln]	84.02	962.26	1080.22	39.87	177.88	183.28	261.40	147.06	121.57	122.64	174.45	102.30
95th-Percentile Queue Length [veh/ln]	6.05	53.94	60.55	2.87	11.49	11.77	17.36	9.86	8.48	8.54	11.31	7.37
95th-Percentile Queue Length [ft/ln]	151.23	1348.56	1513.75	71.77	287.24	294.29	434.00	246.50	211.98	213.45	282.76	184.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.70	100.84	109.62	51.81	19.39	20.24	221.48	41.80	42.54	62.50	41.47	30.12
Movement LOS	D	F	F	D	B	C	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	99.42			22.17			81.60			42.68		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	71.93											
Intersection LOS	E											
Intersection V/C	1.008											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.281	3.337	2.740	2.729
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	780	680	600	640
d_b, Bicycle Delay [s]	18.61	21.78	24.50	23.12
l_b,int, Bicycle LOS Score for Intersection	3.391	2.359	2.289	2.341
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.849

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	1	81	0	1	174	1	1	0	3	0	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	22	3130	18	46	1202	70	59	113	19	41	98	69
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	851	5	13	327	19	16	31	5	11	27	19
Total Analysis Volume [veh/h]	0	24	3402	20	50	1307	76	64	123	21	45	107	75
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	65	65	4	66	66	19	19	19	19
g / C, Green / Cycle	0.02	0.65	0.65	0.04	0.66	0.66	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.63	0.63	0.03	0.26	0.26	0.05	0.08	0.04	0.10
s, saturation flow rate [veh/h]	1781	3560	1864	1781	3560	1818	1202	1823	1244	1743
c, Capacity [veh/h]	43	2305	1207	67	2352	1201	163	356	197	340
d1, Uniform Delay [s]	48.24	16.82	16.90	47.65	7.76	7.76	45.12	35.17	41.95	36.17
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.52	13.47	20.83	15.19	0.49	0.95	1.53	0.74	0.58	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.97	0.98	0.75	0.39	0.39	0.39	0.40	0.23	0.54
d, Delay for Lane Group [s/veh]	58.76	30.28	37.73	62.84	8.24	8.71	46.65	35.91	42.53	37.48
Lane Group LOS	E	C	D	E	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.72	25.23	29.07	1.51	4.18	4.43	1.61	3.12	1.06	4.08
50th-Percentile Queue Length [ft/ln]	17.90	630.83	726.85	37.73	104.60	110.69	40.28	78.00	26.60	102.10
95th-Percentile Queue Length [veh/ln]	1.29	33.47	37.92	2.72	7.53	7.88	2.90	5.62	1.92	7.35
95th-Percentile Queue Length [ft/ln]	32.22	836.79	947.92	67.91	188.28	196.96	72.50	140.41	47.88	183.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.76	58.76	32.82	37.73	62.84	8.38	8.71	46.65	35.91	35.91	42.53	37.48	37.48
Movement LOS	E	E	C	D	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	33.03				10.30			39.22			38.48		
Approach LOS	C				B			D			D		
d_I, Intersection Delay [s/veh]	27.37												
Intersection LOS	C												
Intersection V/C	0.849												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.336	3.384	2.082	2.083
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	3.455	2.348	1.903	1.934
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	123	11	12	125	0	0	2	0	0	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3315	33	61	1137	11	11	28	10	16	19	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	901	9	17	309	3	3	8	3	4	5	14
Total Analysis Volume [veh/h]	8	3603	36	66	1236	12	12	30	11	17	21	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	49	0	9	49	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	77	77	5	81	81	6	6	6
g / C, Green / Cycle	0.01	0.77	0.77	0.05	0.81	0.81	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.00	0.67	0.67	0.04	0.23	0.23	0.07	0.01	0.05
s, saturation flow rate [veh/h]	1781	3560	1861	1781	3560	1861	789	1366	1659
c, Capacity [veh/h]	18	2739	1431	85	2872	1501	94	86	105
d1, Uniform Delay [s]	49.20	8.07	8.15	47.10	2.43	2.43	46.16	44.66	45.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.55	4.14	7.77	14.11	0.25	0.48	5.22	1.11	8.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.87	0.88	0.78	0.29	0.29	0.56	0.20	0.72
d, Delay for Lane Group [s/veh]	64.75	12.21	15.92	61.21	2.68	2.91	51.38	45.77	54.75
Lane Group LOS	E	B	B	E	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.28	14.41	16.71	1.95	1.44	1.60	1.45	0.43	2.07
50th-Percentile Queue Length [ft/ln]	6.92	360.34	417.81	48.70	35.88	39.89	36.30	10.66	51.78
95th-Percentile Queue Length [veh/ln]	0.50	20.64	23.42	3.51	2.58	2.87	2.61	0.77	3.73
95th-Percentile Queue Length [ft/ln]	12.46	516.00	585.42	87.66	64.59	71.79	65.34	19.19	93.20

Movement, Approach, & Intersection Results

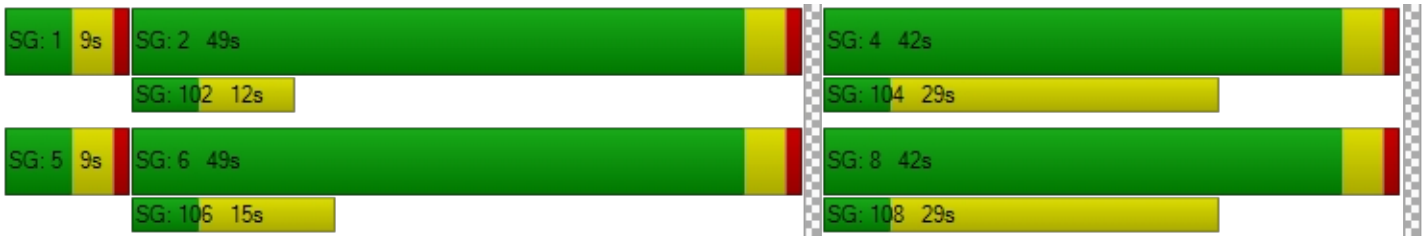
d_M, Delay for Movement [s/veh]	64.75	13.46	15.92	61.21	2.76	2.91	51.38	51.38	51.38	45.77	54.75	54.75
Movement LOS	E	B	B	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.60			5.69			51.38			53.09		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.67											
Intersection LOS	B											
Intersection V/C	0.864											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.309	3.312	1.767	2.020
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	760	760
d_b, Bicycle Delay [s]	15.13	15.13	19.22	19.22
l_b,int, Bicycle LOS Score for Intersection	3.565	2.282	1.647	1.711
Bicycle LOS	D	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.837

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	3061	6	35	992	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	197	3	17	76	2	5
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3289	9	52	1078	2	46
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	894	2	14	293	1	13
Total Analysis Volume [veh/h]	3575	10	57	1172	2	50
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	3.10	0.01	0.00	0.84
d_M, Delay for Movement [s/veh]	0.00	0.00	1376.29	0.00	10000.00	10000.00
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	7.63	0.00	8.73	8.73
95th-Percentile Queue Length [ft/ln]	0.00	0.00	190.68	0.00	218.32	218.32
d_A, Approach Delay [s/veh]	0.00		63.83		10000.00	
Approach LOS	A		F		F	
d_I, Intersection Delay [s/veh]	122.99					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	76.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	135	11	13	65	1	0	0	0	13	0	65
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2547	173	197	803	48	97	382	73	309	531	685
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	692	47	54	218	13	26	104	20	84	144	186
Total Analysis Volume [veh/h]	52	2768	188	214	873	52	105	415	79	336	577	745
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	21	37	0	10	26	0	9	39	0	14	44	44
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	52	6	54	54	5	16	16	10	21	31
g / C, Green / Cycle	0.04	0.52	0.06	0.54	0.54	0.05	0.16	0.16	0.10	0.21	0.31
(v / s)_i Volume / Saturation Flow Rate	0.03	0.54	0.06	0.17	0.17	0.06	0.14	0.14	0.10	0.16	0.47
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1817	1781	1870	1768	3459	3560	1589
c, Capacity [veh/h]	70	2630	208	1912	976	89	306	290	346	761	499
d1, Uniform Delay [s]	47.54	24.19	47.00	12.94	12.95	47.50	40.43	40.48	44.86	36.89	34.31
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.39	33.40	37.35	0.44	0.87	103.10	5.62	6.18	16.67	1.58	232.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	1.05	1.03	0.32	0.32	1.18	0.83	0.83	0.97	0.76	1.49
d, Delay for Lane Group [s/veh]	61.93	57.59	84.35	13.39	13.82	150.60	46.05	46.66	61.53	38.46	266.94
Lane Group LOS	E	F	F	B	B	F	D	D	E	D	F
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.56	27.24	3.64	3.80	4.00	4.75	6.43	6.18	4.92	6.70	43.99
50th-Percentile Queue Length [ft/ln]	38.88	681.07	91.01	94.95	99.94	118.83	160.77	154.43	122.90	167.38	1099.75
95th-Percentile Queue Length [veh/ln]	2.80	37.28	6.55	6.84	7.20	8.56	10.59	10.25	8.55	10.94	67.59
95th-Percentile Queue Length [ft/ln]	69.98	932.04	163.81	170.92	179.89	213.90	264.75	256.33	213.80	273.47	1689.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.93	57.59	0.00	84.35	13.52	13.82	150.60	46.29	46.66	61.53	38.46	266.94
Movement LOS	E	F		F	B	B	F	D	D	E	D	F
d_A, Approach Delay [s/veh]	57.67			26.84			64.62			145.80		
Approach LOS	E			C			E			F		
d_I, Intersection Delay [s/veh]	76.20											
Intersection LOS	E											
Intersection V/C	0.908											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.233	0.000	2.556	2.919
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	440	700	800
d_b, Bicycle Delay [s]	22.45	30.42	21.13	18.00
l_b,int, Bicycle LOS Score for Intersection	3.111	2.186	2.054	2.927
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	3102	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3102	0	0	1028	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	776	0	0	257	0	0
Total Analysis Volume [veh/h]	3102	0	0	1028	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	46.02
Movement LOS	A	A		A		E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		46.02	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	0	41	41	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	41	41	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	10	10	0
Total Analysis Volume [veh/h]	0	0	0	41	41	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.91	8.50	7.30	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.70		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Manhattan Beach Hotel

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Report File: K:\...\HCM - 3 OY 2022 PM.pdf

Scenario 3 OY 2022 PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	WB Left	1.017	73.2	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.714	14.8	B
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.686	7.4	A
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Left	3.714	2,571.9	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Left	0.810	45.3	D
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	SB Thru	0.026	0.0	A
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.050	7.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	73.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.017

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	9	218	36	11	151	7	7	2	2	14	1	10
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	1371	198	218	2496	103	183	490	156	209	457	156
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	373	54	59	678	28	50	133	42	57	124	42
Total Analysis Volume [veh/h]	191	1490	215	237	2713	112	199	533	170	227	497	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	38	0	12	36	0	14	35	0	15	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	10	47	47	8	45	45	10	18	18	11	19	31
g / C, Green / Cycle	0.10	0.47	0.47	0.08	0.45	0.45	0.10	0.18	0.18	0.11	0.19	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.32	0.32	0.07	0.52	0.53	0.11	0.15	0.11	0.13	0.14	0.11
s, saturation flow rate [veh/h]	1781	3560	1752	3459	3560	1833	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	178	1668	821	277	1597	822	178	646	289	196	682	495
d1, Uniform Delay [s]	45.00	20.78	20.84	45.43	27.58	27.58	45.00	39.39	37.51	44.50	37.98	26.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	52.63	2.30	4.67	7.52	79.39	94.88	68.79	2.74	1.91	83.79	1.51	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	1.07	0.68	0.69	0.86	1.16	1.18	1.12	0.82	0.59	1.16	0.73	0.34
d, Delay for Lane Group [s/veh]	97.63	23.08	25.51	52.95	106.97	122.46	113.79	42.13	39.42	128.29	39.50	26.95
Lane Group LOS	F	C	C	D	F	F	F	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.98	10.48	10.94	3.17	35.57	40.16	7.78	6.48	3.94	9.37	5.80	3.15
50th-Percentile Queue Length [ft/ln]	174.50	261.96	273.43	79.33	889.31	1003.95	194.48	161.89	98.43	234.16	145.10	78.82
95th-Percentile Queue Length [veh/ln]	11.61	15.79	16.36	5.71	50.41	56.95	12.87	10.65	7.09	15.22	9.76	5.68
95th-Percentile Queue Length [ft/ln]	290.27	394.68	409.02	142.79	1260.19	1423.81	321.70	266.22	177.17	380.41	243.88	141.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	97.63	23.65	25.51	52.95	111.88	122.46	113.79	42.13	39.42	128.29	39.50	26.95
Movement LOS	F	C	C	D	F	F	F	D	D	F	D	C
d_A, Approach Delay [s/veh]	31.31			107.71			57.43			59.66		
Approach LOS	C			F			E			E		
d_I, Intersection Delay [s/veh]	73.19											
Intersection LOS	E											
Intersection V/C	1.017											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.298	3.332	2.736	2.765
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	640	620	640
d_b, Bicycle Delay [s]	21.78	23.12	23.81	23.12
l_b,int, Bicycle LOS Score for Intersection	2.602	3.244	2.304	2.297
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.714

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	5	237	0	4	190	4	3	0	0	0	0	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	28	1674	27	40	2598	32	76	81	72	41	55	37
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	455	7	11	706	9	21	22	20	11	15	10
Total Analysis Volume [veh/h]	0	30	1820	29	43	2824	35	83	88	78	45	60	40
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	68	68	3	68	68	17	17	17	17
g / C, Green / Cycle	0.03	0.68	0.68	0.03	0.68	0.68	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.34	0.34	0.02	0.53	0.53	0.06	0.10	0.04	0.06
s, saturation flow rate [veh/h]	1781	3560	1855	1781	3560	1858	1295	1727	1219	1747
c, Capacity [veh/h]	50	2409	1255	62	2432	1270	191	291	137	294
d1, Uniform Delay [s]	48.02	7.94	7.94	47.72	10.60	10.67	44.05	38.25	46.50	36.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.70	0.76	1.45	12.87	2.43	4.68	1.55	1.76	1.37	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.50	0.50	0.69	0.77	0.78	0.43	0.57	0.33	0.34
d, Delay for Lane Group [s/veh]	58.72	8.70	9.39	60.60	13.03	15.35	45.60	40.00	47.88	37.35
Lane Group LOS	E	A	A	E	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.89	5.91	6.40	1.28	12.58	14.09	2.06	3.85	1.14	2.20
50th-Percentile Queue Length [ft/ln]	22.14	147.63	160.04	31.91	314.62	352.24	51.53	96.24	28.62	54.92
95th-Percentile Queue Length [veh/ln]	1.59	9.89	10.55	2.30	18.40	20.25	3.71	6.93	2.06	3.95
95th-Percentile Queue Length [ft/ln]	39.85	247.27	263.77	57.44	460.07	506.14	92.75	173.22	51.51	98.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.72	58.72	8.93	9.39	60.60	13.81	15.35	45.60	40.00	40.00	47.88	37.35	37.35
Movement LOS	E	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.73				14.52			41.87			40.61		
Approach LOS	A				B			D			D		
d_I, Intersection Delay [s/veh]	14.83												
Intersection LOS	B												
Intersection V/C	0.714												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.337	3.393	2.068	2.046
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.593	3.156	1.970	1.799
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	214	0	0	239	0	0	0	0	7	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1620	22	21	2758	14	14	15	16	48	18	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	440	6	6	749	4	4	4	4	13	5	8
Total Analysis Volume [veh/h]	27	1761	24	23	2998	15	15	16	17	52	20	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	57	0	9	57	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	80	80	2	79	79	6	6	6
g / C, Green / Cycle	0.03	0.80	0.80	0.02	0.79	0.79	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.33	0.33	0.01	0.55	0.56	0.05	0.04	0.03
s, saturation flow rate [veh/h]	1781	3560	1857	1781	3560	1865	1039	1376	1691
c, Capacity [veh/h]	48	2835	1479	43	2826	1480	109	94	101
d1, Uniform Delay [s]	48.09	3.09	3.09	48.25	4.78	4.80	46.33	46.25	45.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.15	0.45	0.86	10.09	1.46	2.79	2.76	4.92	3.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.41	0.41	0.54	0.70	0.70	0.44	0.55	0.50
d, Delay for Lane Group [s/veh]	58.24	3.54	3.95	58.34	6.25	7.59	49.09	51.17	49.30
Lane Group LOS	E	A	A	E	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.80	2.62	2.90	0.68	6.94	7.85	1.26	1.39	1.30
50th-Percentile Queue Length [ft/ln]	19.91	65.42	72.48	17.11	173.40	196.28	31.53	34.79	32.52
95th-Percentile Queue Length [veh/ln]	1.43	4.71	5.22	1.23	11.26	12.45	2.27	2.51	2.34
95th-Percentile Queue Length [ft/ln]	35.85	117.75	130.47	30.80	281.38	311.16	56.75	62.63	58.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	3.68	3.95	58.34	6.71	7.59	49.09	49.09	49.09	51.17	49.30	49.30
Movement LOS	E	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.49			7.10			49.09			50.25		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.44											
Intersection LOS	A											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.354	3.296	1.775	2.000
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1060	1060	600	600
d_b, Bicycle Delay [s]	11.05	11.05	24.50	24.50
l_b,int, Bicycle LOS Score for Intersection	2.556	3.229	1.639	1.728
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	2,571.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.714

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	1349	18	60	2545	7	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	148	6	79	288	5	16
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1510	24	140	2858	12	69
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	410	7	38	777	3	19
Total Analysis Volume [veh/h]	1641	26	152	3107	13	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.83	0.03	3.71	0.28
d_M, Delay for Movement [s/veh]	0.00	0.00	79.25	0.00	2571.88	1556.84
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	5.81	0.00	11.19	11.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	145.24	0.00	279.85	279.85
d_A, Approach Delay [s/veh]	0.00		3.70		1706.79	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	32.36					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	133	27	70	214	10	0	0	0	26	0	21
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1169	306	571	2196	79	71	424	56	308	364	305
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	318	83	155	597	21	19	115	15	84	99	83
Total Analysis Volume [veh/h]	46	1271	333	621	2387	86	77	461	61	335	396	332
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	33	0	19	43	0	26	36	0	12	22	22
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	44	15	55	55	6	17	17	8	19	38
g / C, Green / Cycle	0.04	0.44	0.15	0.55	0.55	0.06	0.17	0.17	0.08	0.19	0.38
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.18	0.46	0.46	0.04	0.14	0.14	0.10	0.11	0.21
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1837	1781	1870	1795	3459	3560	1589
c, Capacity [veh/h]	64	2242	519	1972	1018	102	318	305	277	686	608
d1, Uniform Delay [s]	47.68	20.88	42.50	18.27	18.54	46.45	40.16	40.20	46.00	36.66	24.08
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.63	1.05	93.00	4.02	8.16	10.79	5.79	6.21	102.33	0.77	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.57	1.20	0.82	0.84	0.76	0.84	0.84	1.21	0.58	0.55
d, Delay for Lane Group [s/veh]	61.31	21.93	135.50	22.28	26.70	57.24	45.94	46.41	148.33	37.43	25.27
Lane Group LOS	E	C	F	C	C	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	7.37	13.03	15.24	17.39	2.18	6.76	6.56	7.34	4.42	6.18
50th-Percentile Queue Length [ft/ln]	34.30	184.14	325.66	381.04	434.64	54.54	168.93	164.07	183.53	110.62	154.58
95th-Percentile Queue Length [veh/ln]	2.47	11.82	20.48	21.64	24.22	3.93	11.02	10.76	12.53	7.87	10.26
95th-Percentile Queue Length [ft/ln]	61.74	295.41	511.95	541.10	605.60	98.18	275.51	269.10	313.16	196.86	256.53

Movement, Approach, & Intersection Results

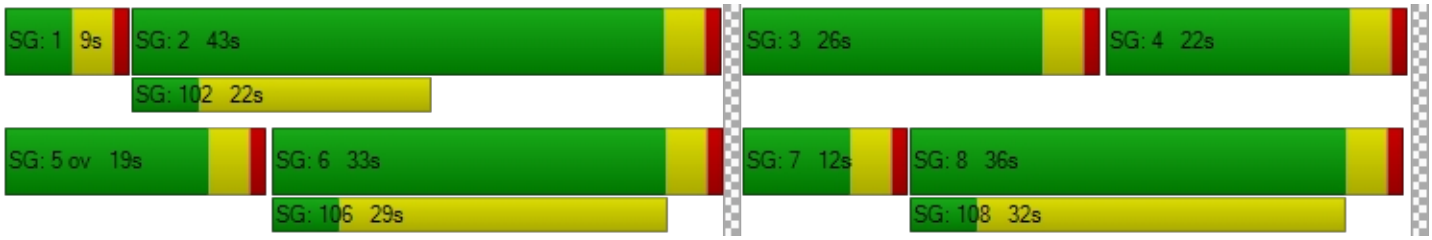
d_M, Delay for Movement [s/veh]	61.31	21.93	0.00	135.50	23.70	26.70	57.24	46.14	46.41	148.33	37.43	25.27
Movement LOS	E	C		F	C	C	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	23.31			46.23			47.59			68.58		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	45.30											
Intersection LOS	D											
Intersection V/C	0.810											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.232	0.000	2.526	2.899
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	780	640	360
d_b, Bicycle Delay [s]	25.21	18.61	23.12	33.62
l_b,int, Bicycle LOS Score for Intersection	2.284	3.261	2.054	2.437
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	1401	0	0	2551	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1401	0	0	2551	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	350	0	0	638	0	0
Total Analysis Volume [veh/h]	1401	0	0	2551	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.00
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		16.00	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	78	0	59	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	78	0	59	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	20	0	15	0
Total Analysis Volume [veh/h]	0	0	78	0	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.90	8.58	7.45	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.16	0.16	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.98	3.98	0.00	0.00
d_A, Approach Delay [s/veh]	9.24		7.45		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.24					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	EB Left	1.011	73.6	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	SB Left	0.854	28.2	C
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	NB Left	0.871	12.9	B
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Right	0.849	10,000.0	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Right	0.916	78.4	E
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	WB Right	0.335	66.1	F
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.015	7.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	73.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.011

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	108	2774	85	108	931	130	174	445	178	120	524	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	3	56	7	2	152	3	3	1	4	31	2	4
Site-Generated Trips [veh/h]	3	11	4	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	2869	97	111	1106	134	179	450	188	158	531	189
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	780	26	30	301	36	49	122	51	43	144	51
Total Analysis Volume [veh/h]	125	3118	105	121	1202	146	195	489	204	172	577	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	43	0	9	38	0	12	34	0	14	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	9	52	52	5	48	48	8	17	17	10	19	28
g / C, Green / Cycle	0.09	0.52	0.52	0.05	0.48	0.48	0.08	0.17	0.17	0.10	0.19	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.59	0.60	0.03	0.25	0.25	0.11	0.14	0.13	0.10	0.16	0.13
s, saturation flow rate [veh/h]	1781	3560	1839	3459	3560	1768	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	154	1833	947	173	1702	845	142	623	278	178	695	453
d1, Uniform Delay [s]	44.85	24.26	24.26	46.76	18.23	18.23	46.00	39.44	39.03	44.83	38.66	29.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	9.61	75.45	88.67	5.05	1.18	2.37	175.48	2.22	3.72	24.06	2.65	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	0.81	1.15	1.17	0.70	0.53	0.53	1.37	0.78	0.73	0.97	0.83	0.45
d, Delay for Lane Group [s/veh]	54.46	99.71	112.92	51.81	19.41	20.59	221.48	41.66	42.75	68.89	41.31	30.04
Lane Group LOS	D	F	F	D	B	C	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.44	39.18	43.96	1.59	7.26	7.49	10.46	5.88	4.98	5.40	6.97	4.09
50th-Percentile Queue Length [ft/ln]	85.89	979.51	1098.91	39.87	181.57	187.29	261.40	146.89	124.52	135.02	174.22	102.23
95th-Percentile Queue Length [veh/ln]	6.18	55.04	61.77	2.87	11.68	11.98	17.36	9.85	8.64	9.21	11.30	7.36
95th-Percentile Queue Length [ft/ln]	154.60	1376.10	1544.36	71.77	292.06	299.51	434.00	246.27	216.02	230.30	282.45	184.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.46	103.97	112.92	51.81	19.70	20.59	221.48	41.66	42.75	68.89	41.31	30.04
Movement LOS	D	F	F	D	B	C	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	102.40			22.44			81.40			43.86		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	73.57											
Intersection LOS	E											
Intersection V/C	1.011											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.287	3.340	2.742	2.731
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	780	680	600	640
d_b, Bicycle Delay [s]	18.61	21.78	24.50	23.12
l_b,int, Bicycle LOS Score for Intersection	3.401	2.368	2.292	2.347
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	21	3019	18	45	1018	68	57	112	16	41	97	67
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	1	81	0	1	174	1	1	0	3	0	0	1
Site-Generated Trips [veh/h]	11	0	18	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	22	3148	18	46	1226	70	59	113	19	41	98	69
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	855	5	13	333	19	16	31	5	11	27	19
Total Analysis Volume [veh/h]	11	24	3422	20	50	1333	76	64	123	21	45	107	75
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	65	65	4	65	65	19	19	19	19
g / C, Green / Cycle	0.03	0.65	0.65	0.04	0.65	0.65	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.63	0.64	0.03	0.26	0.26	0.05	0.08	0.04	0.10
s, saturation flow rate [veh/h]	1781	3560	1864	1781	3560	1819	1202	1823	1244	1743
c, Capacity [veh/h]	55	2305	1207	67	2328	1189	163	356	197	340
d1, Uniform Delay [s]	47.88	16.98	17.07	47.65	8.12	8.12	45.12	35.17	41.95	36.17
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.26	14.45	21.96	15.19	0.52	1.01	1.53	0.74	0.58	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.98	0.98	0.75	0.40	0.40	0.39	0.40	0.23	0.54
d, Delay for Lane Group [s/veh]	59.13	31.43	39.03	62.84	8.64	9.13	46.65	35.91	42.53	37.48
Lane Group LOS	E	C	D	E	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	25.88	29.80	1.51	4.41	4.67	1.61	3.12	1.06	4.08
50th-Percentile Queue Length [ft/ln]	25.78	647.01	745.11	37.73	110.29	116.75	40.28	78.00	26.60	102.10
95th-Percentile Queue Length [veh/ln]	1.86	34.22	38.76	2.72	7.86	8.21	2.90	5.62	1.92	7.35
95th-Percentile Queue Length [ft/ln]	46.40	855.59	968.94	67.91	196.41	205.35	72.50	140.41	47.88	183.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.13	59.13	34.02	39.03	62.84	8.79	9.13	46.65	35.91	35.91	42.53	37.48	37.48
Movement LOS	E	E	C	D	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	34.30				10.66			39.22			38.48		
Approach LOS	C				B			D			D		
d_I, Intersection Delay [s/veh]	28.24												
Intersection LOS	C												
Intersection V/C	0.854												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.344	3.391	2.082	2.083
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	3.466	2.362	1.903	1.934
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.871

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	7	3160	22	49	1002	11	11	26	10	16	19	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	123	11	12	125	0	0	2	0	0	0	1
Site-Generated Trips [veh/h]	0	29	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3344	33	61	1172	11	11	28	10	16	19	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	909	9	17	318	3	3	8	3	4	5	14
Total Analysis Volume [veh/h]	8	3635	36	66	1274	12	12	30	11	17	21	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	49	0	9	49	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	77	77	5	81	81	6	6	6
g / C, Green / Cycle	0.01	0.77	0.77	0.05	0.81	0.81	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.00	0.68	0.68	0.04	0.24	0.24	0.07	0.01	0.05
s, saturation flow rate [veh/h]	1781	3560	1861	1781	3560	1861	789	1366	1659
c, Capacity [veh/h]	18	2739	1431	85	2872	1501	94	86	105
d1, Uniform Delay [s]	49.20	8.21	8.30	47.10	2.45	2.45	46.16	44.66	45.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.55	4.41	8.22	14.11	0.26	0.50	5.22	1.11	8.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.88	0.88	0.78	0.29	0.29	0.56	0.20	0.72
d, Delay for Lane Group [s/veh]	64.75	12.62	16.52	61.21	2.71	2.95	51.38	45.77	54.75
Lane Group LOS	E	B	B	E	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.28	14.86	17.27	1.95	1.49	1.66	1.45	0.43	2.07
50th-Percentile Queue Length [ft/ln]	6.92	371.54	431.63	48.70	37.32	41.49	36.30	10.66	51.78
95th-Percentile Queue Length [veh/ln]	0.50	21.18	24.08	3.51	2.69	2.99	2.61	0.77	3.73
95th-Percentile Queue Length [ft/ln]	12.46	529.60	601.99	87.66	67.17	74.69	65.34	19.19	93.20

Movement, Approach, & Intersection Results

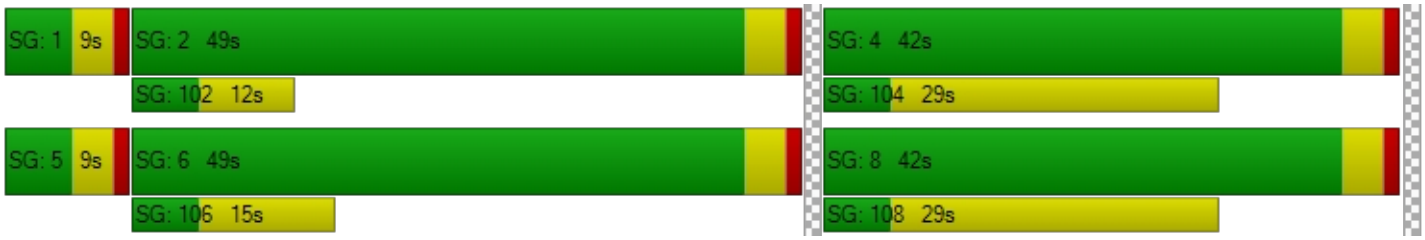
d_M, Delay for Movement [s/veh]	64.75	13.94	16.52	61.21	2.79	2.95	51.38	51.38	51.38	45.77	54.75	54.75
Movement LOS	E	B	B	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.07			5.65			51.38			53.09		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.95											
Intersection LOS	B											
Intersection V/C	0.871											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.318	3.321	1.767	2.020
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	760	760
d_b, Bicycle Delay [s]	15.13	15.13	19.22	19.22
l_b,int, Bicycle LOS Score for Intersection	3.583	2.303	1.647	1.711
Bicycle LOS	D	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.849

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	3061	6	35	992	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	197	3	17	76	2	5
Site-Generated Trips [veh/h]	16	0	24	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3305	9	76	1089	2	46
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	898	2	21	296	1	13
Total Analysis Volume [veh/h]	3592	10	83	1184	2	50
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	4.61	0.01	0.00	0.85
d_M, Delay for Movement [s/veh]	0.00	0.00	2051.98	0.00	10000.00	10000.00
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	10.96	0.00	8.73	8.73
95th-Percentile Queue Length [ft/ln]	0.00	0.00	274.05	0.00	218.32	218.32
d_A, Approach Delay [s/veh]	0.00		134.42		10000.00	
Approach LOS	A		F		F	
d_I, Intersection Delay [s/veh]	140.28					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	78.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.916

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	48	2388	160	182	731	47	96	378	72	293	526	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	135	11	13	65	1	0	0	0	13	0	65
Site-Generated Trips [veh/h]	0	6	0	7	4	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	2553	173	204	807	48	97	382	73	309	531	695
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	694	47	55	219	13	26	104	20	84	144	189
Total Analysis Volume [veh/h]	52	2775	188	222	877	52	105	415	79	336	577	755
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	21	37	0	10	26	0	9	39	0	14	44	44
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	52	6	54	54	5	16	16	10	21	31
g / C, Green / Cycle	0.04	0.52	0.06	0.54	0.54	0.05	0.16	0.16	0.10	0.21	0.31
(v / s)_i Volume / Saturation Flow Rate	0.03	0.54	0.06	0.17	0.17	0.06	0.14	0.14	0.10	0.16	0.47
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1817	1781	1870	1768	3459	3560	1589
c, Capacity [veh/h]	70	2627	208	1910	975	89	307	290	346	763	499
d1, Uniform Delay [s]	47.54	24.21	47.00	12.98	12.98	47.50	40.39	40.44	44.86	36.84	34.29
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.39	34.69	49.60	0.45	0.88	103.10	5.53	6.07	16.67	1.56	240.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	1.06	1.07	0.32	0.32	1.18	0.82	0.83	0.97	0.76	1.51
d, Delay for Lane Group [s/veh]	61.93	58.90	96.60	13.43	13.86	150.60	45.92	46.52	61.53	38.40	274.73
Lane Group LOS	E	F	F	B	B	F	D	D	E	D	F
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.56	27.54	3.99	3.82	4.02	4.75	6.42	6.17	4.92	6.69	45.14
50th-Percentile Queue Length [ft/ln]	38.88	688.46	99.83	95.58	100.59	118.83	160.52	154.16	122.90	167.24	1128.39
95th-Percentile Queue Length [veh/ln]	2.80	37.74	7.19	6.88	7.24	8.56	10.58	10.24	8.55	10.93	69.48
95th-Percentile Queue Length [ft/ln]	69.98	943.38	179.70	172.04	181.07	213.90	264.41	255.98	213.80	273.28	1737.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.93	58.90	0.00	96.60	13.56	13.86	150.60	46.15	46.52	61.53	38.40	274.73
Movement LOS	E	F		F	B	B	F	D	D	E	D	F
d_A, Approach Delay [s/veh]	58.96			29.59			64.51			150.03		
Approach LOS	E			C			E			F		
d_I, Intersection Delay [s/veh]	78.40											
Intersection LOS	E											
Intersection V/C	0.916											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.234	0.000	2.556	2.922
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	440	700	800
d_b, Bicycle Delay [s]	22.45	30.42	21.13	18.00
l_b,int, Bicycle LOS Score for Intersection	3.114	2.193	2.054	2.936
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	66.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.335

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	3102	0	0	1028	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	35	0	29
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3102	16	0	1063	0	29
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	776	4	0	266	0	7
Total Analysis Volume [veh/h]	3102	16	0	1063	0	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.33
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	66.15
Movement LOS	A	A		A		F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	1.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	32.03
d_A, Approach Delay [s/veh]	0.00		0.00		66.15	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	0	41	41	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	24	41	41	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	6	10	10	0
Total Analysis Volume [veh/h]	0	0	24	41	41	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.23	8.50	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.17	1.17	0.00	0.00
d_A, Approach Delay [s/veh]	8.86		2.71		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.66					
Intersection LOS	A					

Manhattan Beach Hotel

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Report File: K:\...\HCM - 4 OY 2022 WP PM.pdf

Scenario 4 OY 2022 WP PM
7/1/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sepulveda Blvd at Manhattan Beach Blvd	Signalized	HCM 6th Edition	WB Left	1.028	75.2	E
2	Sepulveda Blvd at 2nd St	Signalized	HCM 6th Edition	NB Left	0.731	15.6	B
3	Sepulveda Blvd at Longfellow Dr/Ave	Signalized	HCM 6th Edition	SB Left	0.696	7.5	A
4	Sepulveda Blvd at Tennyson St	Two-way stop	HCM 6th Edition	WB Left	57.690	10,000.0	F
5	Sepulveda Blvd at Artesia Blvd/Gould Ave	Signalized	HCM 6th Edition	WB Left	0.812	46.6	D
6	Sepulveda Blvd at Project Dwy 1	Two-way stop	HCM 6th Edition	WB Right	0.148	18.1	C
7	Tennyson St at Project Dwy 2	Two-way stop	HCM 6th Edition	EB Left	0.066	7.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sepulveda Blvd at Manhattan Beach Blvd

Control Type:	Signalized	Delay (sec / veh):	75.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.028

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd		
Base Volume Input [veh/h]	165	1142	160	205	2322	95	174	483	152	193	451	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	9	218	36	11	151	7	7	2	2	14	1	10
Site-Generated Trips [veh/h]	5	17	7	0	14	0	0	0	4	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	181	1388	205	218	2510	103	183	490	160	215	457	156
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	377	56	59	682	28	50	133	43	58	124	42
Total Analysis Volume [veh/h]	197	1509	223	237	2728	112	199	533	174	234	497	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	38	0	12	36	0	14	35	0	15	36	36
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	0	21	0	0	24	0	0	27	27
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	10	47	47	8	45	45	10	18	18	11	19	31
g / C, Green / Cycle	0.10	0.47	0.47	0.08	0.45	0.45	0.10	0.18	0.18	0.11	0.19	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.33	0.33	0.07	0.52	0.53	0.11	0.15	0.11	0.13	0.14	0.11
s, saturation flow rate [veh/h]	1781	3560	1750	3459	3560	1833	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	178	1668	820	277	1596	822	178	647	289	196	682	495
d1, Uniform Delay [s]	45.00	20.95	21.02	45.43	27.58	27.58	45.00	39.38	37.60	44.50	37.98	26.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering 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
d2, Incremental Delay [s]	64.60	2.41	4.93	7.52	82.07	97.50	68.79	2.73	2.02	98.36	1.51	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, 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

Lane Group Results

X, volume / capacity	1.11	0.69	0.70	0.86	1.17	1.19	1.12	0.82	0.60	1.19	0.73	0.34
d, Delay for Lane Group [s/veh]	109.60	23.36	25.95	52.95	109.66	125.08	113.79	42.11	39.63	142.86	39.49	26.94
Lane Group LOS	F	C	C	D	F	F	F	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.57	10.74	11.23	3.17	36.16	40.75	7.78	6.47	4.05	10.16	5.80	3.15
50th-Percentile Queue Length [ft/ln]	189.30	268.58	280.81	79.33	904.01	1018.81	194.48	161.85	101.13	253.99	145.07	78.81
95th-Percentile Queue Length [veh/ln]	12.54	16.12	16.73	5.71	51.33	57.90	12.87	10.65	7.28	16.45	9.75	5.67
95th-Percentile Queue Length [ft/ln]	313.57	402.96	418.22	142.79	1283.31	1447.62	321.70	266.17	182.04	411.36	243.84	141.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	109.60	23.96	25.95	52.95	114.55	125.08	113.79	42.11	39.63	142.86	39.49	26.94
Movement LOS	F	C	C	D	F	F	F	D	D	F	D	C
d_A, Approach Delay [s/veh]	32.94			110.19			57.38			63.97		
Approach LOS	C			F			E			E		
d_I, Intersection Delay [s/veh]	75.18											
Intersection LOS	E											
Intersection V/C	1.028											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.306	3.336	2.738	2.767
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	640	620	640
d_b, Bicycle Delay [s]	21.78	23.12	23.81	23.12
l_b,int, Bicycle LOS Score for Intersection	2.621	3.252	2.307	2.303
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Sepulveda Blvd at 2nd St

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No				No			No			No		
Crosswalk	Yes				Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd				Sepulveda Blvd			2nd St			2nd St		
Base Volume Input [veh/h]	0	23	1423	27	36	2384	28	72	80	71	41	54	34
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.000	1.010	1.010	1.010	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	5	237	0	4	190	4	3	0	0	0	0	3
Site-Generated Trips [veh/h]	19	0	29	0	0	24	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	28	1703	27	40	2622	32	76	81	72	41	55	37
Peak Hour Factor	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	8	463	7	11	713	9	21	22	20	11	15	10
Total Analysis Volume [veh/h]	19	30	1851	29	43	2850	35	83	88	78	45	60	40
Presence of On-Street Parking	No			No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0				0			0			0		
v_co, Outbound Pedestrian Volume crossing	0				0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0				0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Permi	Prote	Permi	Permi	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	-	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	9	58	0	9	58	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	10	0	0	10	0	0	24	0	0	24	0
Rest In Walk			No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No	No		No	No			No			No	
Maximum Recall		No	No		No	No			No			No	
Pedestrian Recall		No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	68	68	3	67	67	17	17	17	17
g / C, Green / Cycle	0.04	0.68	0.68	0.03	0.67	0.67	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.35	0.35	0.02	0.53	0.53	0.06	0.10	0.04	0.06
s, saturation flow rate [veh/h]	1781	3560	1855	1781	3560	1858	1295	1727	1219	1747
c, Capacity [veh/h]	66	2409	1255	62	2401	1253	191	291	137	294
d1, Uniform Delay [s]	47.66	8.01	8.01	47.72	11.32	11.40	44.05	38.25	46.50	36.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.79	0.78	1.50	12.87	2.71	5.21	1.55	1.76	1.37	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.51	0.51	0.69	0.79	0.79	0.43	0.57	0.33	0.34
d, Delay for Lane Group [s/veh]	62.45	8.79	9.51	60.60	14.03	16.60	45.60	40.00	47.88	37.35
Lane Group LOS	E	A	A	E	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.47	6.06	6.57	1.28	13.39	15.02	2.06	3.85	1.14	2.20
50th-Percentile Queue Length [ft/ln]	36.86	151.45	164.29	31.91	334.82	375.62	51.53	96.24	28.62	54.92
95th-Percentile Queue Length [veh/ln]	2.65	10.09	10.78	2.30	19.39	21.38	3.71	6.93	2.06	3.95
95th-Percentile Queue Length [ft/ln]	66.35	252.37	269.39	57.44	484.87	534.54	92.75	173.22	51.51	98.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.45	62.45	9.03	9.51	60.60	14.89	16.60	45.60	40.00	40.00	47.88	37.35	37.35
Movement LOS	E	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	10.40				15.58			41.87			40.61		
Approach LOS	B				B			D			D		
d_I, Intersection Delay [s/veh]	15.62												
Intersection LOS	B												
Intersection V/C	0.731												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.347	3.401	2.068	2.046
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1080	1080	580	580
d_b, Bicycle Delay [s]	10.58	10.58	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.610	3.170	1.970	1.799
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: Sepulveda Blvd at Longfellow Dr/Ave

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Longfellow Ave			Longfellow Dr		
Base Volume Input [veh/h]	25	1392	22	21	2494	14	14	15	16	41	18	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	214	0	0	239	0	0	0	0	7	0	1
Site-Generated Trips [veh/h]	0	48	0	0	43	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1668	22	21	2801	14	14	15	16	48	18	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	453	6	6	761	4	4	4	4	13	5	8
Total Analysis Volume [veh/h]	27	1813	24	23	3045	15	15	16	17	52	20	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	57	0	9	57	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	24	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	80	80	2	79	79	6	6	6
g / C, Green / Cycle	0.03	0.80	0.80	0.02	0.79	0.79	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.34	0.34	0.01	0.56	0.56	0.05	0.04	0.03
s, saturation flow rate [veh/h]	1781	3560	1857	1781	3560	1865	1039	1376	1691
c, Capacity [veh/h]	48	2835	1479	43	2826	1480	109	94	101
d1, Uniform Delay [s]	48.09	3.14	3.14	48.25	4.88	4.89	46.33	46.25	45.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.15	0.47	0.90	10.09	1.54	2.94	2.76	4.92	3.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.43	0.43	0.54	0.71	0.71	0.44	0.55	0.50
d, Delay for Lane Group [s/veh]	58.24	3.61	4.04	58.34	6.42	7.83	49.09	51.17	49.30
Lane Group LOS	E	A	A	E	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.80	2.73	3.03	0.68	7.19	8.15	1.26	1.39	1.30
50th-Percentile Queue Length [ft/ln]	19.91	68.32	75.75	17.11	179.84	203.77	31.53	34.79	32.52
95th-Percentile Queue Length [veh/ln]	1.43	4.92	5.45	1.23	11.59	12.83	2.27	2.51	2.34
95th-Percentile Queue Length [ft/ln]	35.85	122.97	136.35	30.80	289.81	320.83	56.75	62.63	58.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.24	3.75	4.04	58.34	6.90	7.83	49.09	49.09	49.09	51.17	49.30	49.30
Movement LOS	E	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.54			7.29			49.09			50.25		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.54											
Intersection LOS	A											
Intersection V/C	0.696											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.368	3.310	1.775	2.000
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1060	1060	600	600
d_b, Bicycle Delay [s]	11.05	11.05	24.50	24.50
l_b,int, Bicycle LOS Score for Intersection	2.585	3.255	1.639	1.728
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Sepulveda Blvd at Tennyson St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	57.690

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Tennyson St	
Base Volume Input [veh/h]	1349	18	60	2545	7	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	148	6	79	288	5	16
Site-Generated Trips [veh/h]	16	0	24	19	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1526	24	164	2877	12	69
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	415	7	45	782	3	19
Total Analysis Volume [veh/h]	1659	26	178	3127	13	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.99	0.03	57.69	0.28
d_M, Delay for Movement [s/veh]	0.00	0.00	116.44	0.00	10000.00	10000.00
Movement LOS	A	A	F	A	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	8.03	0.00	13.29	13.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	200.79	0.00	332.32	332.32
d_A, Approach Delay [s/veh]	0.00		6.27		10000.00	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	177.38					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: Sepulveda Blvd at Artesia Blvd/Gould Ave

Control Type:	Signalized	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Sepulveda Blvd			Sepulveda Blvd			Gould Ave			Artesia Blvd		
Base Volume Input [veh/h]	42	1026	276	496	1962	68	70	420	55	279	360	281
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100	1.0100
In-Process Volume [veh/h]	0	133	27	70	214	10	0	0	0	26	0	21
Site-Generated Trips [veh/h]	0	6	0	12	7	0	0	0	0	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1175	306	583	2203	79	71	424	56	308	364	315
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	319	83	158	599	21	19	115	15	84	99	86
Total Analysis Volume [veh/h]	46	1277	333	634	2395	86	77	461	61	335	396	342
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	33	0	19	43	0	26	36	0	12	22	22
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	24	0	0	17	0	0	27	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	44	15	55	55	6	17	17	8	19	38
g / C, Green / Cycle	0.04	0.44	0.15	0.55	0.55	0.06	0.17	0.17	0.08	0.19	0.38
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.18	0.46	0.46	0.04	0.14	0.14	0.10	0.11	0.22
s, saturation flow rate [veh/h]	1781	5094	3459	3560	1837	1781	1870	1795	3459	3560	1589
c, Capacity [veh/h]	64	2242	519	1972	1018	102	318	305	277	686	608
d1, Uniform Delay [s]	47.68	20.92	42.50	18.32	18.60	46.45	40.16	40.20	46.00	36.66	24.28
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.63	1.06	103.91	4.08	8.29	10.79	5.79	6.21	102.33	0.77	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.57	1.22	0.82	0.84	0.76	0.84	0.84	1.21	0.58	0.56
d, Delay for Lane Group [s/veh]	61.31	21.97	146.41	22.40	26.89	57.24	45.94	46.41	148.33	37.43	25.65
Lane Group LOS	E	C	F	C	C	E	D	D	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	7.41	13.81	15.34	17.51	2.18	6.76	6.56	7.34	4.42	6.44
50th-Percentile Queue Length [ft/ln]	34.30	185.32	345.30	383.61	437.85	54.54	168.93	164.07	183.53	110.62	161.10
95th-Percentile Queue Length [veh/ln]	2.47	11.88	21.70	21.77	24.38	3.93	11.02	10.76	12.53	7.87	10.61
95th-Percentile Queue Length [ft/ln]	61.74	296.95	542.41	544.21	609.44	98.18	275.51	269.10	313.16	196.86	265.17

Movement, Approach, & Intersection Results

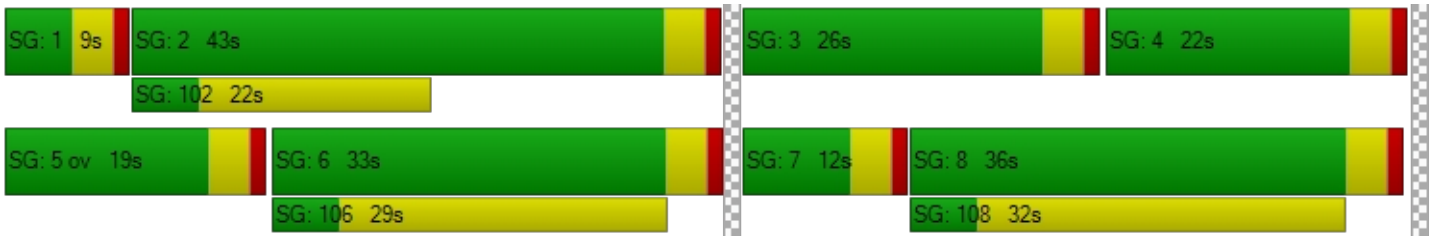
d_M, Delay for Movement [s/veh]	61.31	21.97	0.00	146.41	23.84	26.89	57.24	46.14	46.41	148.33	37.43	25.65
Movement LOS	E	C		F	C	C	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	23.34			48.87			47.59			68.30		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	46.63											
Intersection LOS	D											
Intersection V/C	0.812											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.233	0.000	2.526	2.902
Crosswalk LOS	C	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	780	640	360
d_b, Bicycle Delay [s]	25.21	18.61	23.12	33.62
l_b,int, Bicycle LOS Score for Intersection	2.287	3.273	2.054	2.445
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Sepulveda Blvd at Project Dwy 1

Control Type:	Two-way stop	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.148

Intersection Setup

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Blvd		Sepulveda Blvd		Project Dwy 1	
Base Volume Input [veh/h]	1401	0	0	2551	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	43	0	48
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1401	16	0	2594	0	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	350	4	0	649	0	12
Total Analysis Volume [veh/h]	1401	16	0	2594	0	48
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.15
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	18.07
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.52
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	12.89
d_A, Approach Delay [s/veh]	0.00		0.00		18.07	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Tennyson St at Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name	Project Dwy 2		Tennyson St		Tennyson St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 2		Tennyson St		Tennyson St	
Base Volume Input [veh/h]	0	0	78	0	59	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	102	0	59	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	26	0	15	0
Total Analysis Volume [veh/h]	0	0	102	0	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.07	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.31	8.58	7.49	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.21	0.21	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.30	5.30	0.00	0.00
d_A, Approach Delay [s/veh]	9.44		7.49		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.75					
Intersection LOS	A					

APPENDIX D

Traffic Signal Worksheets

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **Sepulveda Blvd** NB SB # OF APPROACH LANES: **3**

MINOR STREET: **Tennyson St** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **Manhattan Beach, CA**

COMMENTS: Opening Year Plus Project - Total Hourly Volume
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**600**	**150**		**900**	**75**		**480**	**120**		**720**	**60**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	0	0														
09:00 AM	TO	10:00 AM	4,479	48	Y			Y			Y			Y				
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	4,591	81	Y			Y	Y	**Y**	Y			Y	Y	**Y**	**Y**	
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			9,070	129	2	0	**0**	2	1	**1**	2	0	**0**	2	1	**1**	**1**	**0**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**NOT SATISFIED**

07/21/20
Kimley-Horn and Associates

Appendix B:
Noise Technical Memorandum

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Pei-Ming Chou, Michael Baker International

From: Eddie Torres, Michael Baker International
Pierre Glaize, Michael Baker International

Date: September 21, 2020

Subject: Manhattan Beach Hotel Mixed-Use Project – Noise Technical Memorandum

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PURPOSE

The purpose of this technical memorandum is to evaluate potential short- and long-term noise and groundborne vibration impacts as a result of the proposed Manhattan Beach Hotel Mixed-Use Project (project), located in the City of Manhattan Beach (City), California.

PROJECT LOCATION

The 1.52- acre project site is located at the northeast corner of the intersection of Sepulveda Boulevard and Tennyson Street, in the City, Los Angeles County (County), California. The project site is bound by Chabela Drive to the east, South Sepulveda Boulevard to the west, a commercial development to the north, and Tennyson Street to the south.

EXISTING SITE CONDITIONS

The project site is currently developed with a commercial building (formerly El Torrito Restaurant) on the northwest corner surrounded by surface parking. Landscaping consists of trees and shrubs around the perimeter of the project site and within the parking medians.

The project site is designated for General Commercial land uses in the City of Manhattan Beach General Plan and zoned CG (General Commercial).[1,2]

Surrounding uses include a commercial office plaza with medical office, retail, and restaurant uses to the north; a commercial plaza to the south across Tennyson Street; a single-family residential neighborhood

[1] City of Manhattan Beach, *City of Manhattan Zoning Designations*, https://www.citymb.info/home/showdocument?id=76, accessed by August 10, 2020.

[2] City of Manhattan Beach, *Manhattan Beach Code of Ordinances: Title 10 – Planning and Zoning*, last amended December 6, 2018, https://library.municode.com/ca/manhattan_beach/codes/code_of_ordinances?nodeId=TIT10PLZO_PTIISEDIRE_CH10.16CCODI_10.16.030CLCCCGCDCNDIDERE, accessed by August 10, 2020.

to the east across Chabela Drive; and the City of Hermosa Beach to the west across South Sepulveda Boulevard with commercial uses fronting Sepulveda Boulevard and residential uses further west.

PROJECT DESCRIPTION

The proposed project is a mixed-use commercial development consisting of two buildings containing hotel, office, and retail uses. A two-story commercial building would be constructed on the southwestern corner of the project site. An L-shaped, four-story hotel building would be constructed along the north and east property lines of the Project Site. Maximum building heights would not exceed 40 feet for the hotel building or 30 feet for the commercial building based on the project site's average grade. Both buildings would be constructed in the contemporary vernacular style featuring large open volumes of space and natural light. Materials used would include glass, wood, metal, tile, stone, brick and stucco.

The 16,109-square foot commercial building would contain approximate 6,845 square feet of retail uses on the ground floor and approximately 9,264 square feet of office uses on Level 2. Entrances to this building would be provided on both the north and south elevations. The 81,941-square foot select-service hotel building would contain a total of 162 hotel rooms and associated hotel amenities. A canopied drop-off area and main entrance is located along the south elevation of the hotel building. The ground floor of the hotel building would include the hotel lobby, lounge area, a bar and dining area, and 39 guest rooms. Back of house uses and 41 guest rooms would be located on Level 2. Level 3 would include back of house uses; 41 guest rooms; and amenities such as a library area, a fitness room, and meeting rooms for hotel guest use. Level 4 of the hotel building would contain back of house uses, 41 guest rooms, and a rooftop bar and lounge with limited food service and an expansive outdoor deck fronting on Sepulveda Boulevard. Although intended primarily for hotel guest use, the rooftop bar, lounge, and deck would be open to the public and would provide ocean views.

The proposed project would provide 28 surface parking spaces and 130 parking spaces within one-level subterranean parking garage, for a total of 158 on site vehicle parking spaces. Of the 130 subterranean parking spaces, one would be for electric vehicle (EV) charging only. The perimeter of the parking garage would be open to the sky to allow for natural light and ventilation. Access to the parking garage would be provided from a ramp and entrance located to the west of the hotel building. The proposed project would also provide a total of 16 bicycle parking spaces within the parking garage and at-grade adjacent to the hotel building and the commercial building.

Primary vehicular access to the project site would be provided via a primary ingress and egress driveway on Tennyson Street, which leads to the hotel's porte-cochere/drop-off area and the ramp to the subterranean parking garage. A secondary right-in and right-out only driveway would be located on Sepulveda Boulevard. Pedestrian access to the project site would be provided from both Sepulveda Boulevard and Tennyson Street.

The proposed project would be designed to meet the equivalent of U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver level or higher for new construction and would provide design features for recycling/waste reduction, energy and water efficiency, and general sustainability including EV charging stations and bicycle racks and lockers.[3]

[3] Leadership in Energy and Environmental Design, *LEED V4 for Building Design and Construction*, https://www.usgbc.org/sites/default/files/LEED%20v4%20ballot%20version%20%28BDC%29%20-%2013%2011%2013.pdf, accessed by August 12, 2020.

Construction of the proposed project is projected to begin in January 2021, with anticipated project completion in June 2022. Project construction (including demolition of 8,483 square feet of existing building, site preparation, and construction) would result in approximately 26,787 cubic yards of soil export and 2,466 tons of demolition materials. Excavation of up to 25 feet below ground surface may be required to construct the subterranean parking level.

The proposed project would require the following discretionary approvals from the City:

- Master Use Permit
- Vesting Tentative Tract Map for a commercial condominium plan for 20 subdivided air-space units

FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud and 20 dBA higher is perceived to be four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are several metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 p.m. and 7:00 a.m. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA. Similarly, Community Noise Equivalent Level (CNEL) is a measure of 24-hour noise levels that incorporates a 5-dBA penalty for sounds occurring between 7:00 p.m. and 10:00 p.m. and a 10-dBA penalty for sounds occurring

between 10:00 p.m. and 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Sources of earth-borne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 1, *Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels*, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Table 1
Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception.	Vibrations unlikely to cause damage of any type.
0.08	87	Vibrations readily perceptible.	Recommended upper level to which ruins and ancient monuments should be subjected.
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities.	Virtually no risk of architectural damage to normal buildings.
0.2	94	Vibrations may begin to annoy people in buildings.	Threshold at which there is a risk of architectural damage to normal dwellings.
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Architectural damage and possibly minor structural damage.

Source: California Department of Transportation, *Transportation Related Earthborne Vibrations*, 2002.

Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per section (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

EXISTING NOISE SETTING

Noise Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The closest sensitive receptors are single-family residences located approximately 40 feet to the east of the project boundary.

Existing Mobile Noise Levels

The majority of the existing noise in the project area is generated from traffic along the regionally significant Sepulveda Boulevard. According to the City's General Plan Noise Element, the project site lies within the 70 dBA CNEL traffic noise contour.[4]

Existing Stationary Noise Levels

The primary sources of stationary noise in the project vicinity are urban-related activities (i.e., mechanical equipment, parking areas, and pedestrians). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

Existing Ambient Noise Levels

To quantify existing ambient noise levels in the project area, Michael Baker International (Michael Baker) conducted two short-term noise measurements on August 6, 2020; refer to Appendix A, *Noise Data*. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The 10-minute measurements were taken between 12:00 p.m. and 1:00 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. Noise measurements were taken during "off-peak" (9:00 a.m. through 3:00 p.m.) traffic noise hours as this provides a more conservative baseline. During rush hour traffic, vehicle speeds and heavy truck volumes are often low. Free-flowing traffic conditions just before or after rush hour often yield higher

[4] City of Manhattan Beach, *General Plan Noise Element: Figure N-3, Future Noise Levels*, page 10, https://www.citymb.info/home/showdocument?id=90, accessed by August 12, 2020.

noise levels.[5] The average noise levels and sources of noise measured at each location are identified in Table 2, *Noise Measurements*.

Meteorological conditions were clear skies, cool temperatures (70 degrees), and moderate wind speeds (10 miles per hour). Measured noise levels during the daytime measurements ranged between 55.8 and 60.4 dBA L_{eq}. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters.

Table 2
Noise Measurements

Site No.	Location[1]	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	At the corner of Shelly Street and Chabela drive, by the nearest sensitive receptor.	55.8	43.1	85.7	12:19 p.m.
2	At the northwestern corner of Chabela Drive and Keats Street.	60.4	43.0	92.8	12:31 p.m.

Note:
1. Refer to Appendix A, *Noise Data* for a map and photos of the noise measurement locations.

Source: Michael Baker International, August 6, 2020.

REGULATORY SETTING

State of California

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act also finds that there is a continuous and increasing bombardment of noise in urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24, Part 2, Chapter 2-35)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street,

[5] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA.

City of Manhattan Beach

General Plan

The *City of Manhattan Beach General Plan Noise Element* (Manhattan Beach Noise Element) outlines the goals and policies for noise control within the City. The Manhattan Beach Noise Element evaluates the existing noise environment, future noise environment projections, as well as identifies noise-sensitive land uses and major noise sources in the City. The Manhattan Beach Noise Element provides goals, policies, and programs designed to minimize noise problems and to protect public health. The Manhattan Beach Noise Element includes the following goals and policies:

Goal N-1: Provide for measures to reduce noise impacts from transportation noise sources.

Policy N 1.1: Use proven methods of reducing the transmission of traffic noise onto adjacent noise-sensitive land uses (e.g., residences, schools, medical facilities).

Policy N1.2: Ensure the inclusion of noise mitigation measures in the design of new roadway projects in Manhattan Beach.

Policy N1.3: Reduce transportation noise through proper design and coordination of vehicle routing.

Policy N1.4: Ensure the effective enforcement of City, State, and Federal noise levels by all appropriate City divisions.

Policy N1.5: Work with appropriate agencies to mitigate impacts from existing and proposed aviation operations.

Policy N1.6: Work with surrounding jurisdictions and other agencies to mitigate noise impacts.

Goal N-2: Incorporate noise considerations into land use planning decisions.

Policy N 2.1: Establish acceptable limits of noise for various land uses throughout the community.

Policy N 2.2: Ensure acceptable noise levels near residences, schools, medical facilities, and other noise-sensitive areas.

Policy N 2.3: Establish standards for all types of noise not already governed by local ordinances or preempted by State or Federal law.

Policy N 2.4: Encourage acoustical design in new construction

Policy N 2.5: Require that the potential for noise be considered when approving new development to reduce the possibility of adverse effects related to noise generated by new development, as well as impacts from surrounding noise generators on the new development.

Policy N 2.6: Work with businesses in surrounding jurisdictions to manage noise impacts on City residents and businesses.

Goal N-3: Minimize the impact of non-transportation noise sources.

Policy N 3.1: Monitor and update the Noise Ordinance to mitigate noise conflicts.

Policy N 3.2: Enforce the Noise Ordinance.

Policy N 3.3: Minimize impacts associated with single-event noise activities.

Policy N 3.4: Recognize in the Noise Ordinance that nighttime noise levels create a greater sensitivity than do daytime noise levels.

Policy N 3.5: Encourage jurisdictions, including cities, and other agencies to require compliance with the City of Manhattan Beach Noise Ordinance where activities affect Manhattan Beach residents and businesses.

Policy N 3.6: Monitor and minimize noise impacts associated with construction activities on residential neighborhoods.

Construction Noise

The City limits construction activities to between the hours of 7:30 a.m. and 6:00 p.m. on Monday through Friday and between 9:00 a.m. and 6:00 p.m. on Saturday. Construction activities are prohibited on Sundays and on six specified public holidays. The City also enforces the "reasonable person" standard, meaning that noise is considered a nuisance if it causes discomfort or annoyance to any reasonable person of normal sensitivity, or if it exceeds the noise standards set forth in the *City of Manhattan Beach Municipal Code* (Manhattan Beach Municipal Code).

Land Use Noise Compatibility

The Manhattan Beach Noise Element identifies the acceptability of noise exposure levels for different land uses. Table 3, *Land Use Noise Compatibility*, shows the land use compatibility standards for exterior and interior noise.

Municipal Code

Based on the Federal and State guidelines, the City provides noise guidelines and standards for significant noise disturbances in Manhattan Beach Municipal Code Chapter 5.48, *Noise Regulation*, and Chapter 9.44,

Construction Rules. This Chapter is intended to assess noise disturbances and prohibit loud, annoying, and unnecessary noises for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare, prosperity and peace and quiet of the City and its residents.

Table 3
Land Use Noise Compatibility

Land Use Categories	Community Noise Exposure (CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low-Density Single Family, Duplex, Mobile Homes	50-60	60-65	65-75	75-85
Residential – Multiple Family	50-60	60-65	65-75	75-85
Transient Lodging – Motels, Hotels	50-60	60-70	70-80	80-85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-70	70-80	80-85
Auditoriums, Concert Halls, Amphitheaters	N/A	50-65	N/A	65-85
Sports Arenas, Outdoor Spectator Sports	N/A	50-70	N/A	70-85
Playgrounds, Neighborhood Parks	50-70	N/A	70-75	75-85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	N/A	70-80	80-85
Office Buildings, Business, Commercial and Professional	50-65	65-75	75-85	N/A
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	N/A

N/A = Not Applicable
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable – New construction or development should generally not be undertaken.

Source: City of Manhattan Beach, *Manhattan Beach General Plan Noise Element*, 2003

Manhattan Beach Municipal Code Section 5.48.140 – Noise disturbances.

A. Notwithstanding any other provisions of this chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

1. The level of the noise;

2. Whether the nature of the noise is usual or unusual;

3. Whether the origin of the noise is natural or unnatural;

4. The level and intensity of the background noise if any;

5. The proximity of the noise to residential sleeping facilities;

6. *The nature and zoning of the area within which the noise emanates;*

7. *The density of the inhabitation of the area within which the noise emanates;*

8. *The time of the day and night the noise occurs;*

9. *The duration of the noise;*

10. *Whether the noise is recurrent, intermittent or constant;*

11. *Whether the noise is produced by a commercial or noncommercial entity;*

12. *Whether the noise occurs on a weekday, weekend, or holiday.*

B. *The City may issue a citation against the person, persons, or entity responsible for the noise including, but not limited to, the property owner or business operator on whose premises the noise originates.*

Manhattan Beach Municipal Code Section 5.48.160 – Exterior Noise Standards

A. *The following exterior noise level standards unless otherwise specifically indicated, shall apply to all receptor properties within a designated noise zone. The LEE[6] method (Table 6* [Table 4, *Exterior Equivalent Noise Standards -LEE*]*) or the LNG[7] method (Tables 1 through 5) may be utilized at the option of the investigating City employee or contractor.*

B. *Unless otherwise herein provided, no person shall operate or cause to be operated, any source of noise at any location within the City, or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level when measured on any other property to exceed the standards in Tables 1 through 5 and Tables 6 (*Table 4*) of this section.*

[6] "Equivalent noise level (LEE)" means the constant noise level that, in a given situation and time period, contains, the same acoustic energy as the actual time-varying A-weighted noise level.

[7] "Noise level (LNG)" means that noise level expressed in decibels which exceeds the specified (LNG) value as a percentage of total time measured. For instance, an L25 noise level means that noise level which is exceeded twenty-five percent (25%) of the time measured.

Table 4
Exterior equivalent noise standard - LEE

Designated Land Use or Zoning Classification	Time of Day	Exterior A-Weighted Noise Level
Single-family residential districts	7:00 a.m. – 10:00 p.m.	55 dB
	10:00 p.m. – 7 :00 a.m.	50
Commercial	7:00 a.m. – 10:00 p.m.	70
	10:00 p.m. – 7 :00 a.m.	65
Industrial	7:00 a.m. – 10:00 p.m.	75
	10:00 p.m. – 7 :00 a.m.	75
Notes: dBA = A-weighted Sound Pressure Level 1. If the ambient LEE exceeds the level in Table 4, then the ambient LEE becomes the exterior noise standard.		
Source: City of Manhattan Beach, *Manhattan Beach Municipal Code Section 5.48.160 – Exterior Noise Standards*, *Table 6*.		

Manhattan Beach Municipal Code Section 5.48.170 – Interior Noise Standards

A. The following interior noise levels for common wall residential dwellings shall apply, unless otherwise specifically indicated, with windows open or closed.

1. Prohibition. No person shall operate or cause to be operated within a dwelling unit, any source of sound or allow the creation of any noise which causes the noise level when measured inside a neighboring receiving dwelling unit within the same building to exceed the standards in Table 7 through 9 (Table 5, *Interior Noise Standard*) *of this section.*

Table 5
Interior Noise standard

Designated Land Use or Zoning Classification	Time of Day	Exterior A-Weighted Noise Level [1,2,3]
L8 – Interior noise which may not be exceeded for a cumulative period of more than five minutes in any hour		
All	7:00 a.m. – 10:00 p.m.	45 dB
	10:00 p.m. – 7 :00 a.m.	50
L1 – Interior noise which may not be exceeded for a cumulative period of more than one minute in any hour		
All	7:00 a.m. – 10:00 p.m.	50
	10:00 p.m. – 7 :00 a.m.	45
L0 - Interior noise which may not be exceeded for any period of time		
All	7:00 a.m. – 10:00 p.m.	55
	10:00 p.m. – 7 :00 a.m.	50
Notes: dBA = A-weighted Sound Pressure Level 1. If the five (5) minutes per hour ambient level (L8) exceeds the level in Table 5, then the ambient L8 becomes the interior noise standard which may not be exceeded for a cumulative period of more than five (5) minutes in any hour. 2. If the one (1) minute per hour ambient level (L2) exceeds the level in Table 5, then the ambient L2 becomes the interior noise standard which may not be exceeded for a cumulative period of more than one (1) minute in any hour. 3. If the maximum ambient noise level (L0) exceeds the level in Table 5, then the ambient L0 becomes the interior noise standard which may not be exceeded for any period of time.		
Source: City of Manhattan Beach, *Manhattan Beach Municipal Code Section 5.48.170 – Interior Noise Standards*, *Table 7 through 9*.		

Manhattan Beach Municipal Code Section 5.48.250 - Construction Activity. Construction activity as defined in Section 9.4.010 is exempt from the provisions of this chapter except as provided in Chapter 9.44.

Manhattan Beach Municipal Code Section 9.44.030, Construction hours and prohibited days:

B. Construction activity shall occur only between 7:30 a.m. and 6:00 p.m. on weekdays, and between 9:00 a.m. to 6:00 p.m. on Saturdays

C. There shall be no construction activity on Sundays or on City-recognized holidays, including the following:

1. *New Year's Day.*
2. *Martin Luther King Jr's Day*
3. *Presidents' Day.*
4. *Memorial Day.*
5. *Independence Day.*
6. *Labor Day.*
7. *Columbus Day.*
8. *Veterans Day.*
9. *Thanksgiving Day.*
10. *Friday after Thanksgiving.*
11. *Christmas Day.*

D. The presence of workers or delivery trucks at the site of construction, even if no actual work or unloading is being done, constitutes construction activity for purposes of this section.

E. The presence of equipment, tools or supplies, vehicles being started, idled or unloaded and loud talking at the site of construction activity constitutes construction activity for purposes of this section.

F. In connection with any project that requires a discretionary permit, the Planning Commission or City Council may impose more restrictive hours of construction.

G. The City Council or Director may modify construction hours as follows:

1. *Director authorization. Upon request, the Director may modify the hours for interior construction activity on commercial property under limited circumstances. The Director shall consider the noise disturbance criteria listed in Section 5.48.140 in determining whether to modify the hours. The Director may impose conditions to mitigate or eliminate any potential adverse impacts arising from the activities and shall provide prior notice to persons and businesses in the vicinity, at the owner's expense. The Director shall notify the Council of the decision at the next City Council meeting. The Director may forward a request to the City Council for its consideration.*

2. *Council authorization. Upon request, the City Council may modify the hours for construction activity under limited circumstances. The Council shall consider the noise disturbance criteria listed in Section 5.48.140 in determining whether to modify the hours.*

The Council may impose conditions to mitigate or eliminate any potential adverse impacts arising from the activities and shall provide prior notice to persons and businesses in the vicinity, at the owner's expense.

H. Exceptions

1. *An owner-builder who resides on the property while that property is under construction may perform construction activity between the hours of 9:00 a.m. and 6:00 p.m. on Sundays and City-recognized holidays; provided, however, that no subcontractors perform any work on Sundays or City-recognized holidays.*

2. *In the case of an emergency, the Building Official may authorize construction activity at times other than the hours specified in subsection A and on Sundays and City recognized holidays. For the purpose of this subsection 2, an emergency is defined as substantial property damage or a threat to the public health or safety. Such authority shall lapse once the site and structure(s) are safe. The Building Official may require the permitee to notify affected residents.*

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) THRESHOLDS

The environmental analysis in this memorandum is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may have a significant adverse impact related to noise and vibration if it would do any of the following:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (refer to Impact NOI-1);

- Generation of excessive groundborne vibration or groundborne noise levels (refer to Impact NOI-2); and/or

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels (refer to Impact NOI-3).

IMPACT ANALYSIS

Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. The Manhattan Beach Noise Element contains the City's policies on noise. The Manhattan Beach Noise Element is a comprehensive program to limit the exposure of the community to excessive noise levels. The Manhattan Beach Noise Element establishes guidelines for controlling both construction and operational noise in the City. For operational noise standards, the City identifies noise-

sensitive land uses and noise sources with the intent of separating these uses. Noise-sensitive land uses are those that may be subject to stress and/or interference from excessive noise. Noise-sensitive land uses include public schools, hospitals, and institutional uses such as churches, museums, and private schools. Typically, residential uses are also considered noise-sensitive receptors. Industrial and commercial land uses are generally not considered sensitive to noise.

Construction Noise Impacts

Temporary increases in ambient noise levels as a result of the project would predominantly be associated with construction activities. Construction activities would occur over approximately 18 months and would include the following phases: demolition, grading, building construction, paving, and architectural coating. Typical noise levels generated by construction equipment are shown in Table 6, *Maximum Noise Levels Generated by Construction Equipment*.

Table 6
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	L_{max} at 50 Feet (dBA)	L_{max} at 40 Feet (dBA)
Backhoe	80	82
Concrete Mixer	85	87
Crane, Derrick	88	90
Dozer	85	87
Grader	85	87
Jack Hammer	88	90
Loader	85	87
Paver	89	91
Pneumatic Tool	85	87
Roller	74	76
Scraper	89	91
Truck	88	90

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018. Table 7-1 *Construction Equipment Noise Emission Levels.*

Sensitive receptors surrounding the project site include residential uses as close as 40 feet to the east of the project site. These receptors may be exposed to elevated noise levels during project construction. As shown in Table 6, the residential uses located approximately 40 feet away would experience a construction L_{max} of 91 dBA. The Manhattan Beach Municipal Code does not establish quantitative construction noise standards. Instead, the Manhattan Beach Municipal Code has established allowable hours of construction. Per Manhattan Beach Municipal Code Section 9.44.030, the City restricts construction activities to the hours between 7:30 a.m. and 6:00 p.m. on weekdays, 9:00 a.m. and 5:00 p.m. on Saturdays, and at no time on Sundays and City-recognized holidays. Consistent with the City of Manhattan Beach allowable construction hours, project construction would occur between 7:30 a.m. to 6:00 p.m on weekdays and Saturdays from 9:00 a.m. to 5:00 p.m. It should also be noted that due to the high traffic volumes and traffic noise in the project vicinity (70 dBA CNEL contour zone), construction noise at the nearest sensitive receptors would be largely masked by traffic noise. Additionally, a six-foot concrete wall and Chabela Drive separate the project site and the nearby sensitive receptors; further

minimizing short- term construction noise, consistent with the General Plan Policy N-3.6. Thus, impacts in this regard would be less than significant.

Long-Term Operational Noise Impacts

Off-Site Mobile Noise

Future development generated by the proposed project would result in some additional traffic on adjacent roadways, thereby potentially increasing vehicular noise in the vicinity of existing and proposed land uses. The most prominent source of mobile traffic noise in the project vicinity is along Sepulveda Boulevard. As described above, the project site is within a 70 dBA CNEL contour zone.

According to the *Manhattan Beach Hotel Mixed-Use Project Access Evaluation* (Right Turn Memo) developed by Kimley Horn (dated March 8, 2020)[8], the proposed project would generate a maximum of 2,200 average daily trips, including a total of 121 a.m. peak hour trips and 178 p.m. peak hour trips. As described within the Right Turn Memo, peak hour through volumes along Northbound Sepulveda Boulevard near the project site would be 2,982 peak hour trips during the a.m. and 1,314 peak hour trips during the p.m. As discussed within the Right Turn Memo, these peak hour trips would be split along north and south Sepulveda Boulevard, however, It was conservatively assumed in this mobile noise analysis that the project peak hour trips would be added to the Northbound Sepulveda Boulevard traffic volumes. Thus, the proposed project would increase the daily trips in the project vicinity by 4 percent in the a.m. (additional 121 a.m. peak hour trips) and 14 percent in the p.m. (additional 178 p.m. peak hour trips). The maximum peak hour trips from the proposed project (14 percent increase in the p.m.) would represent a small percent increase in daily traffic compared to existing traffic conditions on the surrounding roadways. According to the California Department of Transportation (Caltrans), a doubling of traffic (100 percent increase) on a roadway would result in a perceptible increase in traffic noise levels (3 dBA).[9] As such, the project related increase in traffic volume along surrounding roadways would be small compared to existing traffic, as the project would increase peak hour trips by a maximum of 14 percent in the p.m. and would not result in a perceptible increase traffic noise level (less than 100 percent). Thus, a less than significant impact would occur in this regard.

Stationary Noise

Stationary noise sources associated with the project would include the operation of mechanical equipment, parking lot activities, and outdoor gathering areas.

Mechanical Equipment Noise

Heating Ventilation and Air Conditioning (HVAC) units would be installed on the roof of the proposed buildings. Typically, mechanical equipment noise is 55 dBA at 50 feet from the source.[10] Based upon the Inverse Square Law, sound levels decrease by 6 dBA for each doubling of distance from the source.[11] The

[8] Kimley Horn, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.

[9] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* page 6-5, September 2013.

[10] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

[11] Cyril M. Harris, *Noise Control in Buildings*, 1994.

nearest sensitive receptor to the project site is a single-family residence located approximately 40 feet to the east of the project site. The nearest HVAC units would be located on the roof of the hotel building, approximately 50 feet from the eastern boundary of the project site. As such, the HVAC units would be approximately 90 feet from the nearest sensitive receptor and the noise level would be reduced to approximately 50 dBA. Further, the rooftop HVAC units would be shielded by a parapet, consistent with General Plan Policy N-2.4 and N-2.5. The parapet would completely shield the HVAC units and break the line of sight between the HVAC units and the sensitive receptor, which would further attenuate operational noise from the HVAC units by approximately 8 dBA.[12] Therefore, the proposed HVAC units would generate noise levels of 42 dBA at the nearest sensitive receptor, which would not exceed the City's Municipal Code Section 5.48.160 threshold of 50 dBA during the daytime and 45 dBA during nighttime. . Thus, the proposed project would not result in noise impacts to nearby sensitive receptors from HVAC units, and stationary noise levels from the proposed HVAC units would comply with the City's Municipal Code. Impacts in this regard would be less than significant.

Parking Lot Noise

The proposed project would include a surface parking lot of 28 spaces and a subterranean parking structure with 130 spaces. Access to the basement parking would be provided via a vehicular ingress/egress driveway located on the northwestern portion of the project site, near Sepulveda Boulevard. Estimates of the maximum noise levels associated with the parking lot activities attributed to the project are presented in Table 7, *Typical Noise Levels Generated by Parking Lots*.

Table 7
Maximum Noise Levels Generated by Parking Lots

Noise Source	Maximum Noise Levels at 50 Feet from Source
Car door slamming	61 dBA L_{eq}
Car starting	60 dBA L_{eq}
Car idling	53 dBA L_{eq}
Source: Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.	

As shown in Table 7, parking lot activities can result in noise levels up to 61 dBA at a distance of 50 feet. It is noted that parking lot noise are instantaneous noise levels compared to noise standards in the CNEL scale, which are averaged over time. As a result, actual noise levels over time resulting from parking lot activities would be far lower than what is identified in Table 7. Parking in the basement parking structure would have intermittent parking lot noise due to the movement of vehicles. However, noise generated in the basement parking structure would be inaudible at off-site uses as the structure would be completely enclosed underground. The access driveway to the basement parking structure is located near the northwestern boundary of the project site, to the west of the proposed four-story hotel building, and approximately 300 feet from the closest sensitive receptor. Placement of the subterranean parking structure would be consistent with General Plan Policy N-2.4 and N-2.5. Cars entering and existing the basement parking structure could potentially idle on the access driveway and generate noise level of 53 dBA L_{eq} at 50 feet as identified in Table 7. At the distance of 300 feet, noise level from car idling would

[12] Federal Highway Administration, *Roadway Construction Noise Model User's Guide*, January 2016.

decrease to 37 dBA L_{eq}. Furthermore, car idling noise near the basement parking structure would be completely shielded by the four-story hotel building.

The surface parking lot would be located to the west of the proposed hotel building, approximately 140 feet west of the nearest sensitive receptor. Typical parking lot noise at this distance would range from 44 to 52 dBA. However, any surface parking lot noise at the nearest sensitive receptor to the east of the project site would be completely shielded by the four-story hotel, which would reduce noise levels by at least 8 dBA. As a result, the highest parking lot noise level would be approximately 44 dBA L_{eq} at the closest sensitive receptor, which would not exceed the City's exterior noise threshold of 50 dBA during the daytime and 45 dBA during nighttime. Therefore, parking lot noise associated with the project is not expected to exceed the City's noise standards. Impacts would be less than significant in this regard.

Outdoor Gathering Area Noise

As noted above, the project would include a hotel bar and exterior deck area facing Sepulveda Boulevard. This bar and exterior deck area would be located at least 300 feet away from the nearest sensitive receptors to the east. The placement of the hotel bar and exterior deck area would be consistent with the General Plan Policy N-2.4 through N-2.6. These areas have the potential to be accessed by groups of people intermittently for various occasions (e.g., private parties, events, and other social gatherings, etc.). Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. Crowd noise is estimated at 60 dBA at one meter (3.28 feet) away for raised normal speaking.[13] This noise level would have a +5 dBA adjustment for the impulsiveness of the noise source, and a -3 dBA adjustment for the random orientation of the crowd members.[14] Therefore, crowd noise would be approximately 62 dBA at one meter from the source (i.e., at the gathering plaza).

The bar and exterior deck area would be approximately 300 linear feet from the nearest sensitive receptor located to the east of the project site. Based on the Inverse Square Law, crowd noise would be reduced to approximately 23 dBA at the closest sensitive receptor, which would not exceed the City's exterior noise threshold of 50 dBA during the daytime and 45 dBA during nighttime. It should also be noted that the proposed four-story hotel would be in-between the proposed hotel bar and exterior deck area and the nearest sensitive receptor to the east of the project site, further attenuating outdoor noises. Additionally, any outdoor uses on the exterior deck would be required to comply with all applicable Municipal Code regulations and be consistent with General Plan N-3.2 through N-3.5. As such, the proposed outdoor bar and deck area would not generate noise levels that would exceed the City's noise standards at the closest sensitive receptors. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation required.

Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of some heavy-duty construction equipment generates vibrations that spread through the ground and

[13] M.J. Hayne, et al, *Prediction of Crowd Noise*, Acoustics, November 2006.
[14] Ibid.

diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. For most structures that are non-engineered timber and masonry buildings, the FTA architectural damage criterion for continuous vibrations is 0.2 in/sec. Typical vibration produced by construction equipment is illustrated in Table 8, *Typical Vibration Levels for Construction Equipment*.

Table 8
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inch/second)	Approximate peak particle velocity at 40 feet (inch/second)[1]
Large bulldozer	0.089	0.044
Loaded trucks	0.076	0.038
Small bulldozer	0.003	0.002
Caisson Drilling	0.089	0.044
Jackhammer	0.035	0.017

Notes:
1. Calculated using the following formula:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 7-4 of the FTA *Transit Noise and Vibration Impact Assessment Manual.*
D = the distance from the equipment to the receiver

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018. Table 7-4 *Vibration Source Levels for Construction Equipment.*

As indicated in Table 8, based on the FTA data, vibration velocities from typical heavy construction equipment operations range from 0.003 to 0.089 in/sec PPV at 25 feet and 0.001 to 0.044 in/sec PPV at 40 feet from the source of activity. The nearest structures are a commercial building approximately 40 feet to the north and residential buildings approximately 40 feet to the east of the proposed construction area. As shown in Table 8, vibration velocities due to the construction of the project at 40 feet would be under the 0.2 in/sec PPV significance threshold. Therefore, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport to the project site is the Los Angeles International Airport, located approximately 4.0 miles to the north. The project site is not located within the boundaries of the LAX Noise Contour Zones.[15] Therefore, implementation of the proposed project would not result in exposure of people residing or working in the project area to excessive or high airport noise impact levels. No impacts would occur.

Mitigation Measures: No mitigation is required.

[15] Los Angeles Airport, *Quarterly Noise Report and Noise Contour Map*, https://www.lawa.org/lawa-environment/noise-management/lawa-noise-management-lax/quarterly-noise-reports-and-contour-maps, accessed by August 12, 2020.

REFERENCES

Documents

1. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* September 2013.

2. City of Manhattan Beach, *2003 Final General Plan*, https://www.citymb.info/departments/community-development/planning-zoning/general-plan/final-general-plan, accessed by August 12, 2020.

3. City of Manhattan Beach, *Manhattan Beach Code of Ordinances: Title 10 – Planning and Zoning*, last amended December 6, 2018 https://library.municode.com/ca/manhattan_beach/codes/code_of_ordinances?nodeId=TIT10PLZO_PTIISEDIRE_CH10.16CCODI_10.16.030CLCCCGCDCNDIDERE, accessed by August 10, 2020.

4. City of Manhattan Beach, *City of Manhattan Zoning Designations*¸ https://www.citymb.info/home/showdocument?id=76, accessed by August 10, 2020.

5. Cyril M. Harris, *Noise Control in Buildings*, 1994.

6. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

7. Federal Highway Administration, *Roadway Construction Noise Model User's Guide*, January 2016.

8. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

9. Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

10. Kimley Horn, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.

11. Los Angeles Airport, *Quarterly Noise Report and Noise Contour Map*, https://www.lawa.org/lawa-environment/noise-management/lawa-noise-management-lax/quarterly-noise-reports-and-contour-maps, accessed by August 12, 2020.

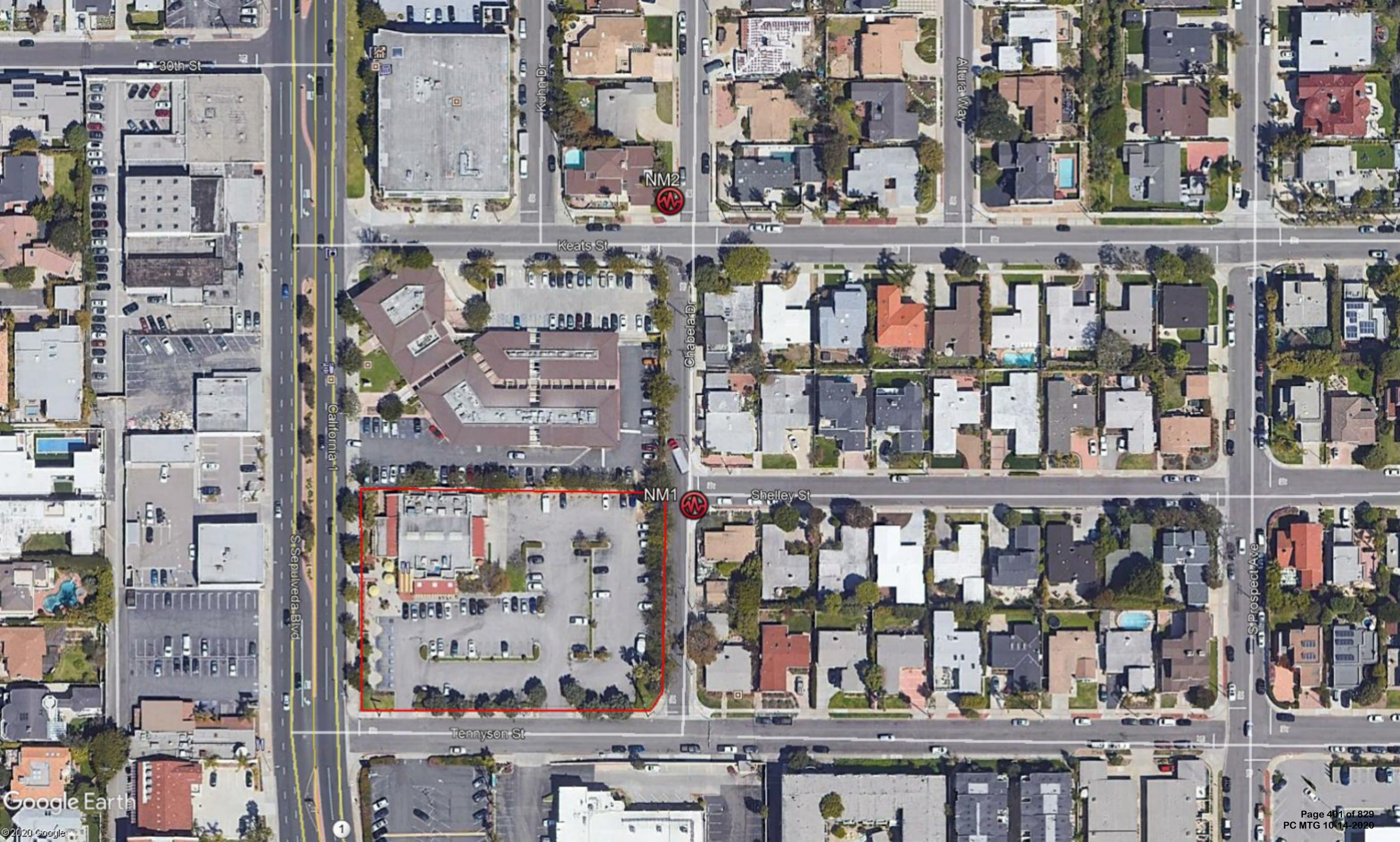
12. Leadership in Energy and Environmental Design, *LEED V4 for Building Design and Construction*, https://www.usgbc.org/sites/default/files/LEED%20v4%20ballot%20version%20%28BDC%29%20-%2013%2011%2013.pdf, accessed by August 12, 2020.

13. M.J. Hayne, et al, *Prediction of Crowd Noise*, Acoustics, November 2006.

Websites / Programs

1. Google Earth, 2020.

Appendix A
Noise Data


30th St
Kuhn Dr
NM2
Keats St
Chabad Dr
Altura Way
California 1
S Sepulveda Blvd
NM1
Shelley St
Tennyson St
S Prospect Ave
Google Earth
© 2020 Google

Site Number: Manhattan Beach Hotel Mixed-Use Project – Site 1	
Recorded By: Pierre Glaize	
Job Number: 179562	
Date: 08/06/2020	
Time: 12:19 p.m.	
Location: Corner of Shelley Street and Chabela Drive, by the nearest sensitive receptor.	
Source of Peak Noise: Traffic along Chabela Drive.	

Noise Data			
Leq (dB)	**Lmax(dB)**	**Lmin (dB)**	**Peak (dB)**
55.8	85.7	43.1	100.1

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Brüel & Kjær**	**2250**	**3011133**	**04/08/2019**	
	Microphone	**Brüel & Kjær**	**4189**	**3086765**	**04/08/2019**	
	Preamp	**Brüel & Kjær**	**ZC 0032**	**25380**	**04/08/2019**	
	Calibrator	**Brüel & Kjær**	**4231**	**2545667**	**04/08/2019**	

Weather Data			
Est.	**Duration:** 10 minutes		**Sky:** Sunny
	Note: dBA Offset = -0.04		**Sensor Height (ft):** 5 ft
	Wind Ave Speed (mph / m/s)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (inches)**
	10 mph	70°	29.94

Photo of Measurement Location

2250

Instrument:		2250
Application:		BZ7225 Version 4.7.4
Start Time:		08/06/2020 12:18:47
End Time:		08/06/2020 12:28:47
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		142.15

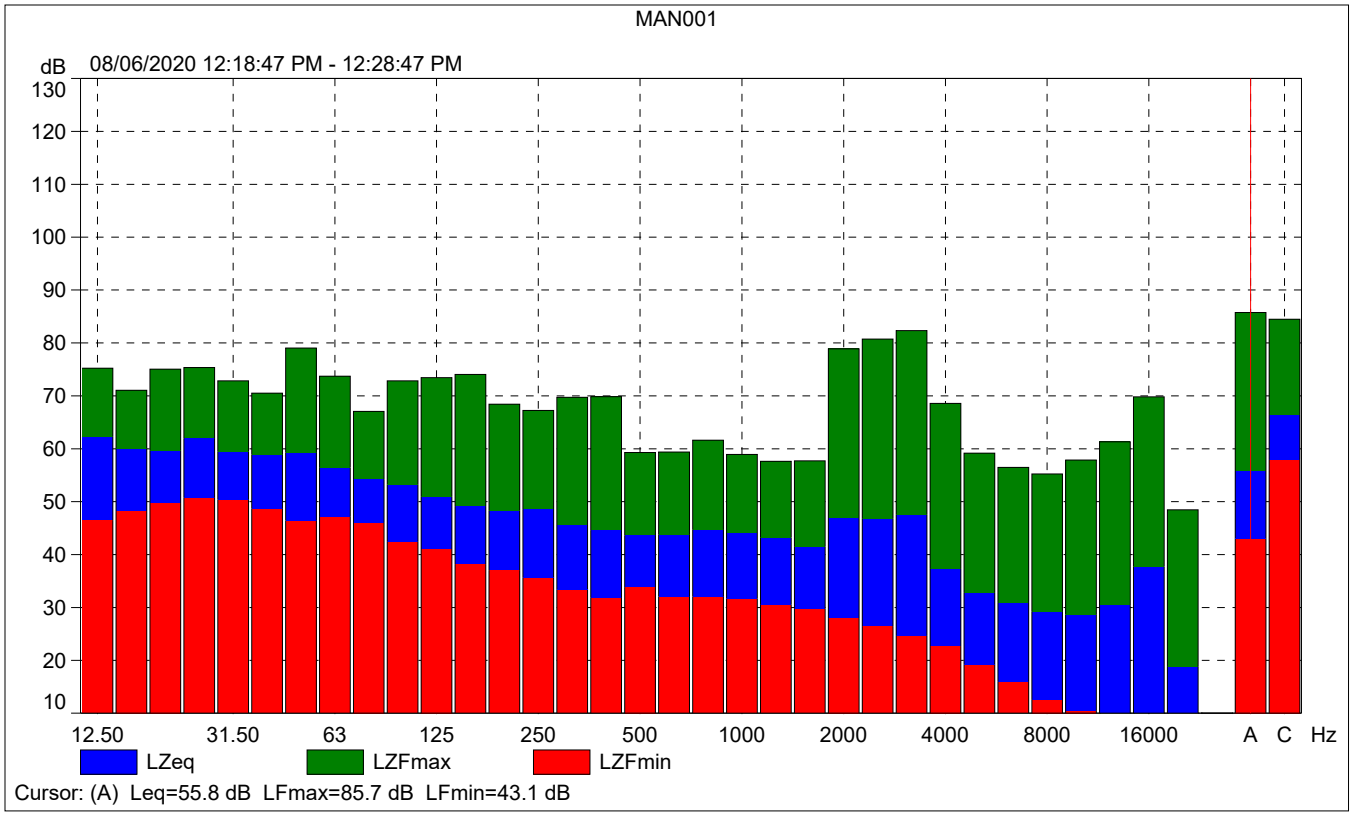
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

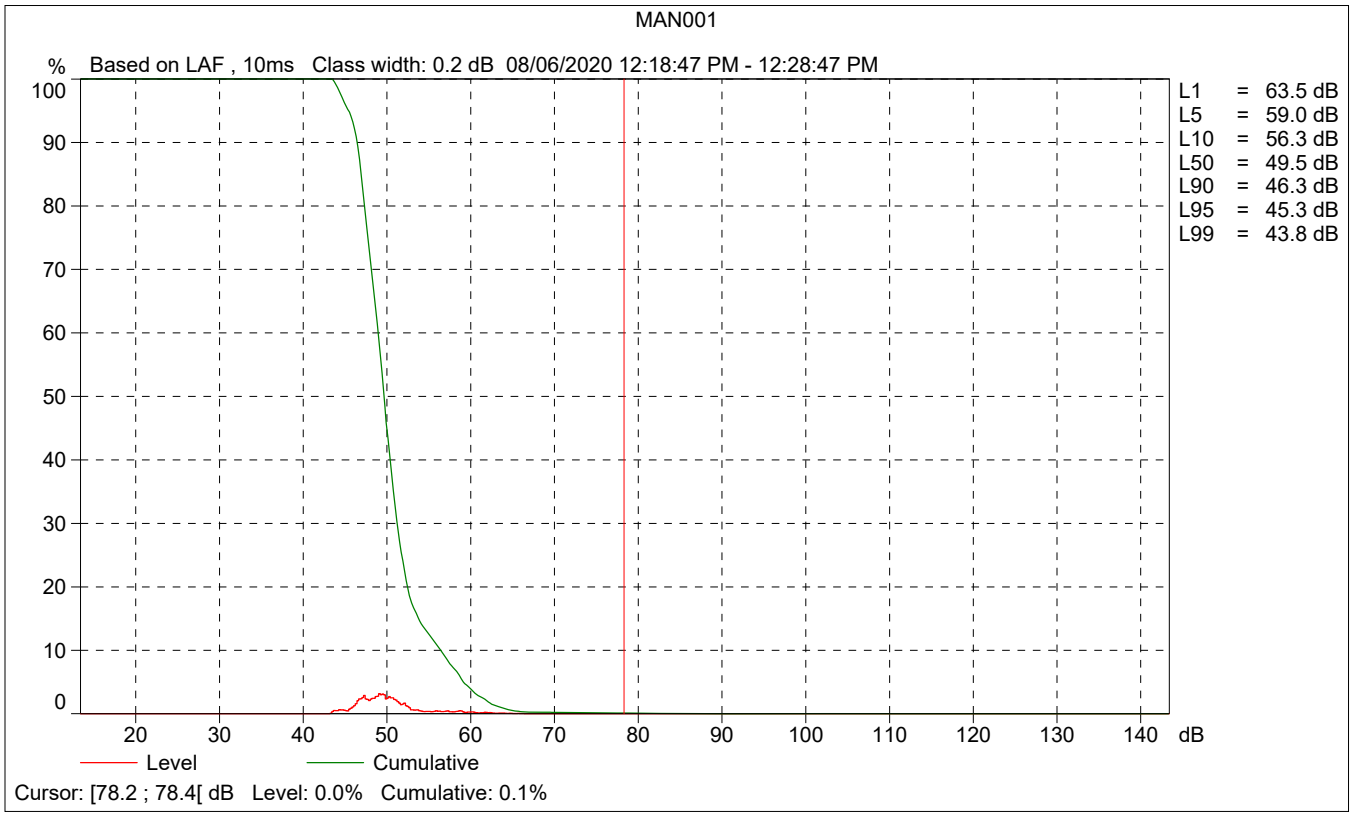
Instrument Serial Number:		3011133
Microphone Serial Number:		3086765
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Free-field

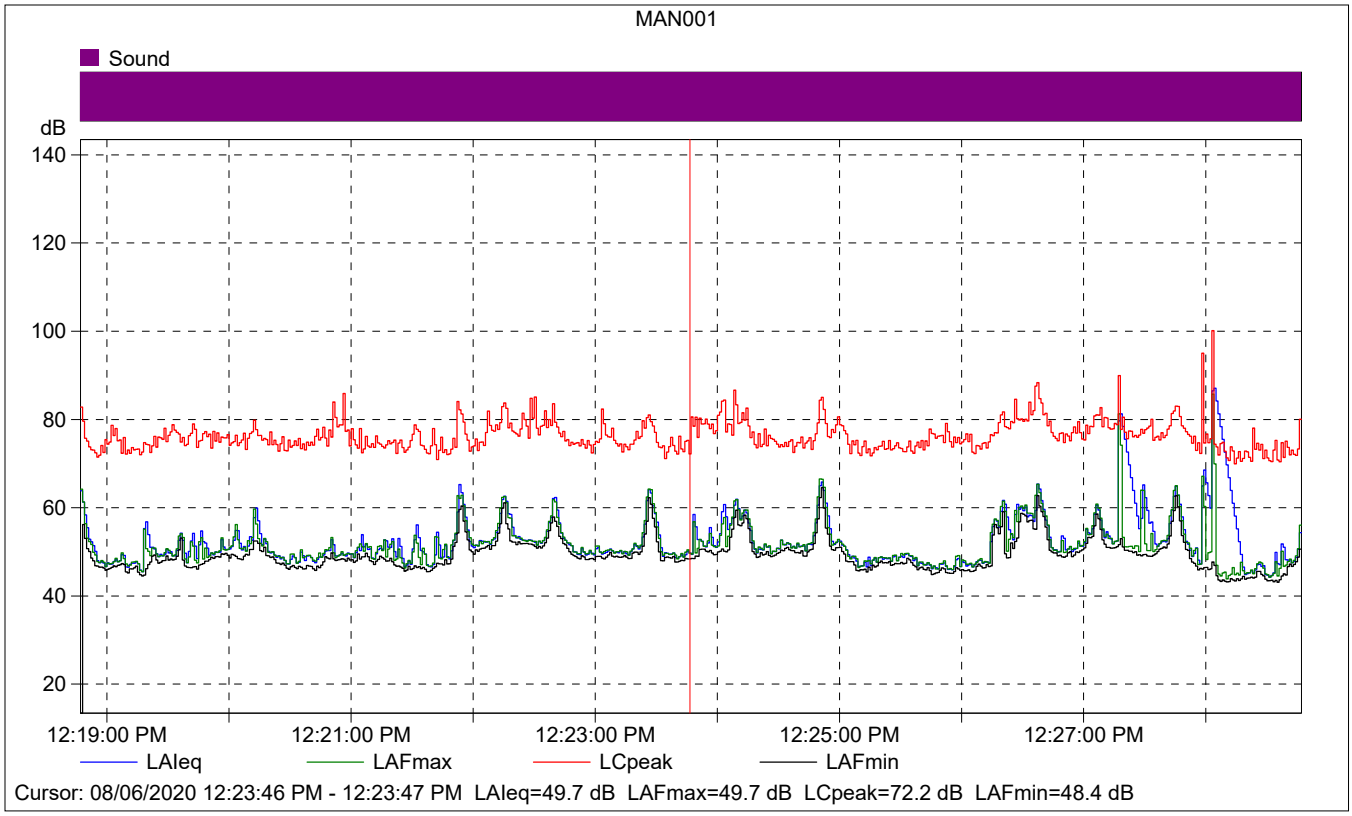
Calibration Time:		08/06/2020 07:46:32
Calibration Type:		External reference
Sensitivity:		43.5005761682987 mV/Pa

MAN001

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	55.8	85.7	43.1
Time	12:18:47 PM	12:28:47 PM	0:10:00				
Date	08/06/2020	08/06/2020					


MAN001
dB
08/06/2020 12:18:47 PM - 12:28:47 PM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=55.8 dB LFmax=85.7 dB LFmin=43.1 dB


MAN001
%
Based on LAF , 10ms Class width: 0.2 dB 08/06/2020 12:18:47 PM - 12:28:47 PM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 63.5 dB
L5 = 59.0 dB
L10 = 56.3 dB
L50 = 49.5 dB
L90 = 46.3 dB
L95 = 45.3 dB
L99 = 43.8 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.1%



MAN001

	Start time	Elapsed time	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
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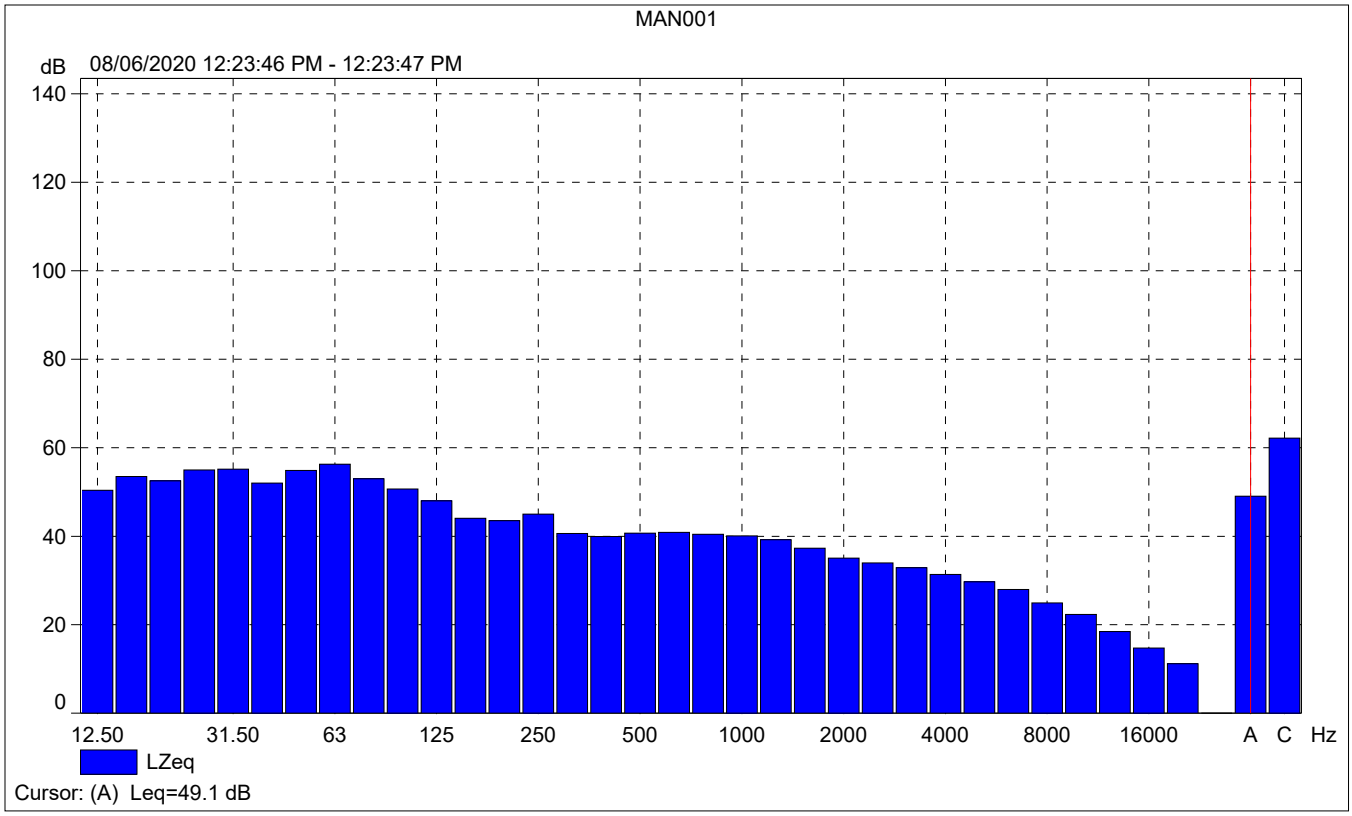
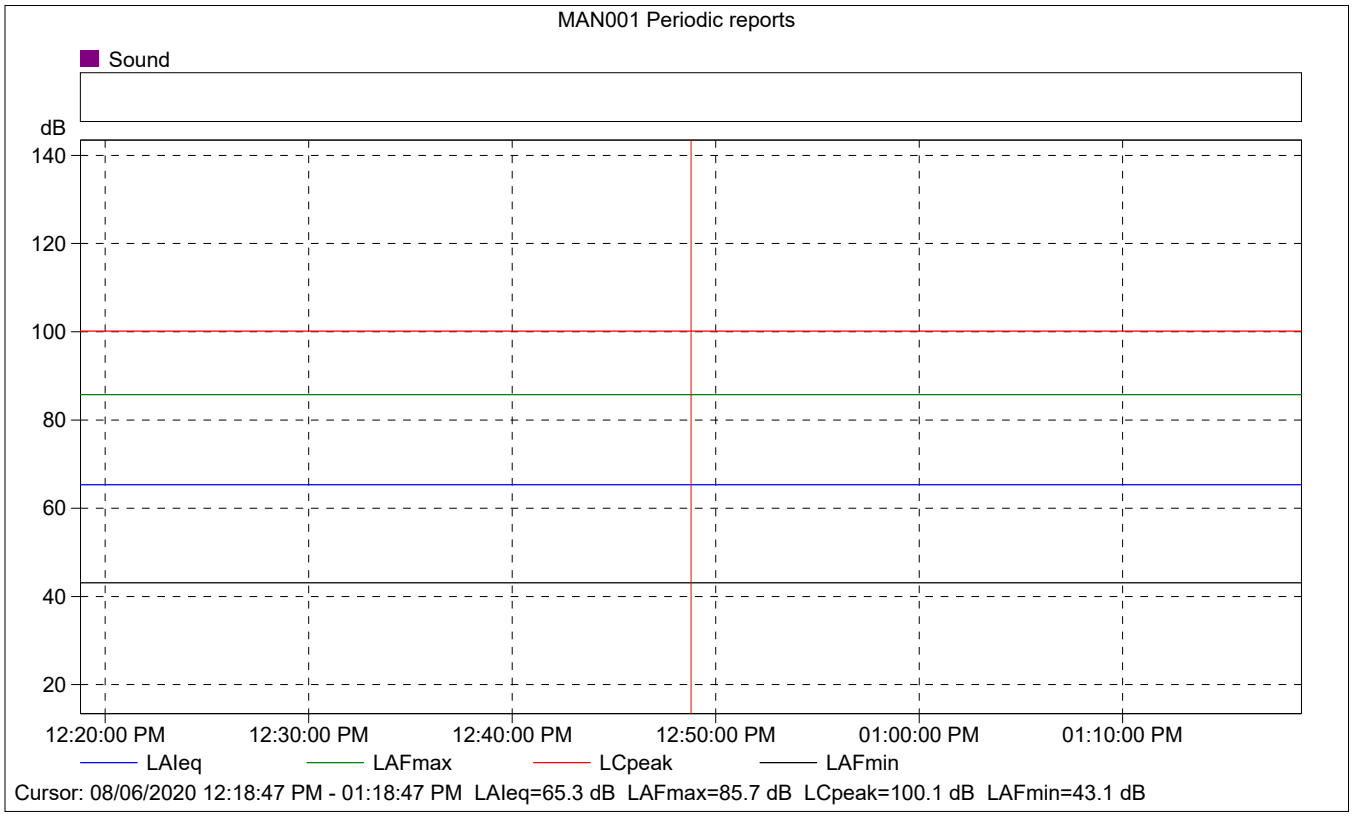
Date	08/06/2020				


MAN001
dB
08/06/2020 12:23:46 PM - 12:23:47 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=49.1 dB


MAN001 Periodic reports
Sound
dB
140
120
100
80
60
40
20
12:20:00 PM
12:30:00 PM
12:40:00 PM
12:50:00 PM
01:00:00 PM
01:10:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 08/06/2020 12:18:47 PM - 01:18:47 PM LAIeq=65.3 dB LAFmax=85.7 dB LCpeak=100.1 dB LAFmin=43.1 dB

MAN001 Periodic reports

	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
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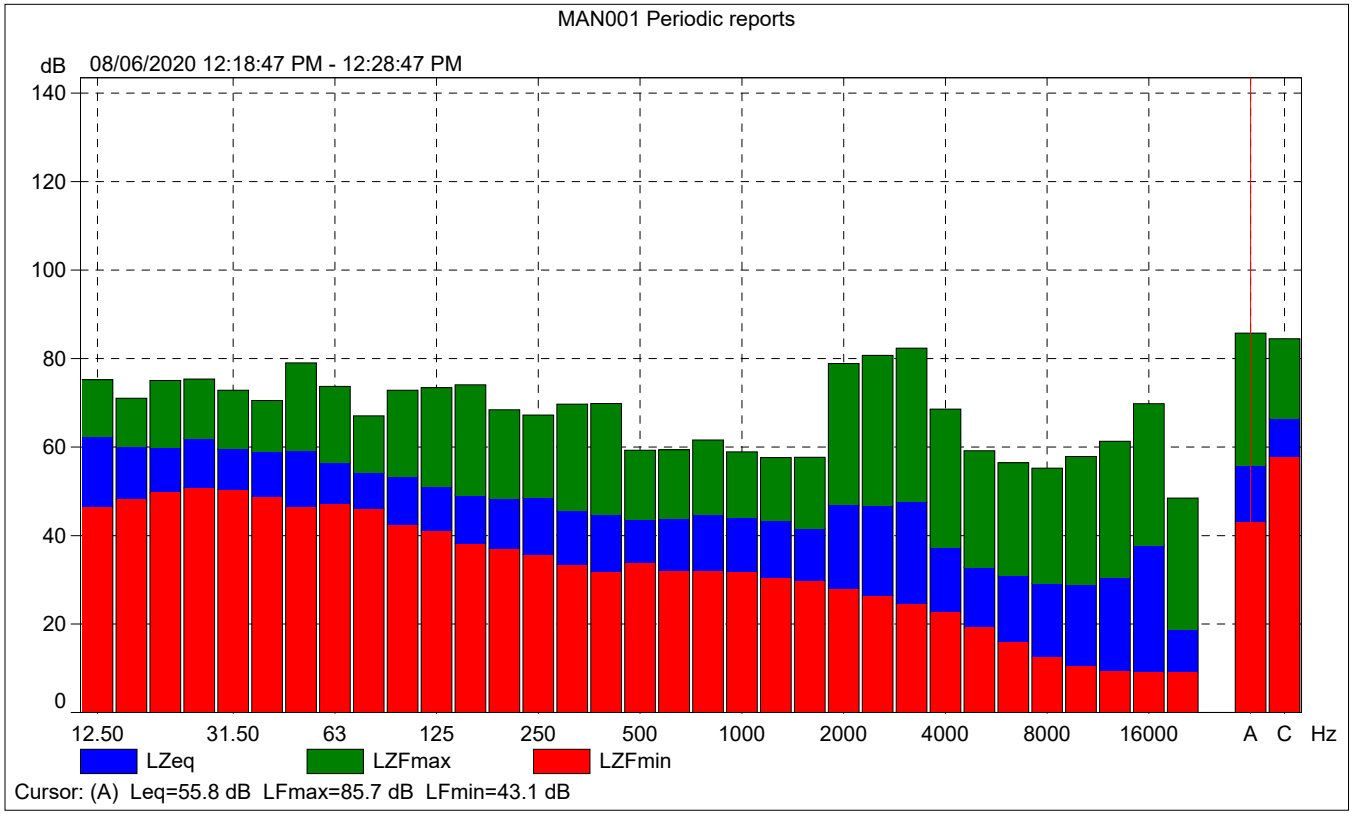
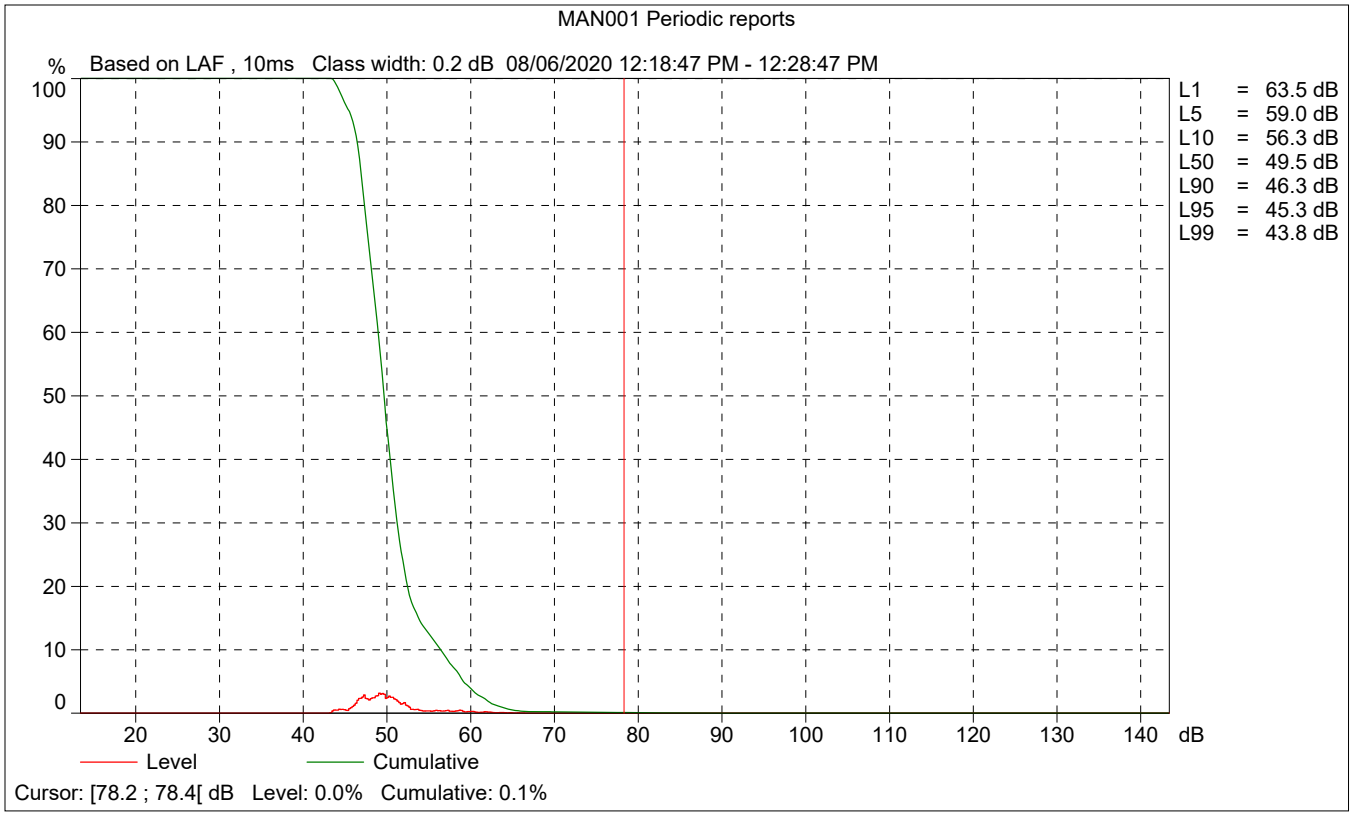
Date	08/06/2020					




MAN001 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 08/06/2020 12:18:47 PM - 12:28:47 PM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 63.5 dB
L5 = 59.0 dB
L10 = 56.3 dB
L50 = 49.5 dB
L90 = 46.3 dB
L95 = 45.3 dB
L99 = 43.8 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.1%

Site Number: Manhattan Beach Hotel Mixed-Use Project Site #2				
Recorded By: Pierre Glaize				
Job Number: 179562				
Date: 8/06/2020				
Time: 12:31 p.m.				
Location: At the northwestern corner of Chabela Drive and Keats Street.				
Source of Peak Noise: Traffic along Chabela Drive and Keats Street.				
Noise Data				
Leq (dB)	**Lmax(dB)**	**Lmin (dB)**	**Peak (dB)**	
60.4	92.8	43.0	127.4	

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Brüel & Kjær**	**2250**	**3011133**	**04/08/2019**	
	Microphone	**Brüel & Kjær**	**4189**	**3086765**	**04/08/2019**	
	Preamp	**Brüel & Kjær**	**ZC 0032**	**25380**	**04/08/2019**	
	Calibrator	**Brüel & Kjær**	**4231**	**2545667**	**04/08/2019**	

Weather Data			
Est.	**Duration:** 10 minutes	**Sky:** Sunny	
	Note: dBA Offset = -0.04	**Sensor Height (ft):** 5 ft	
	Wind Ave Speed (mph / m/s)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (inches)**
	10 mph	70°	29.94

Photo of Measurement Location

2250

Instrument:		2250
Application:		BZ7225 Version 4.7.4
Start Time:		08/06/2020 12:30:55
End Time:		08/06/2020 12:40:55
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		142.15

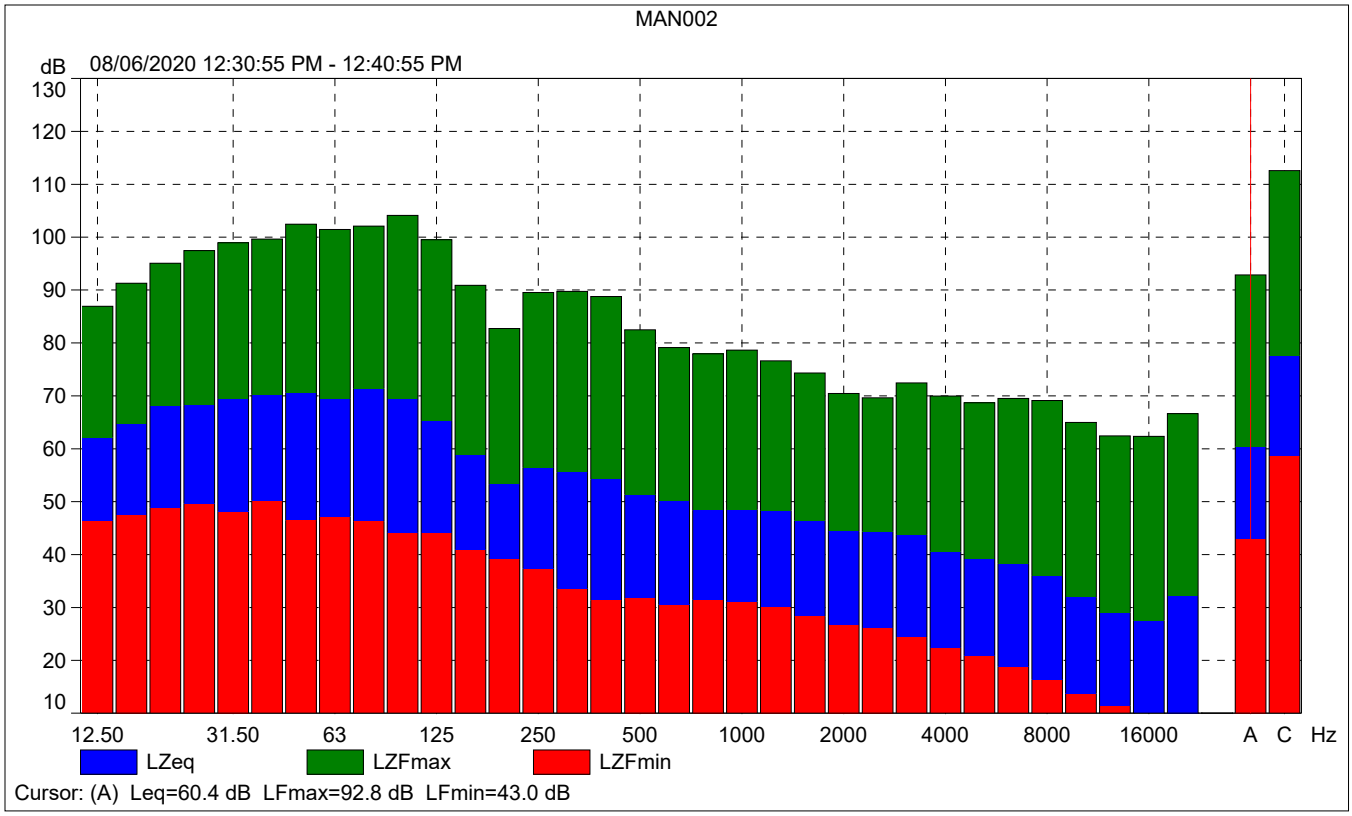
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

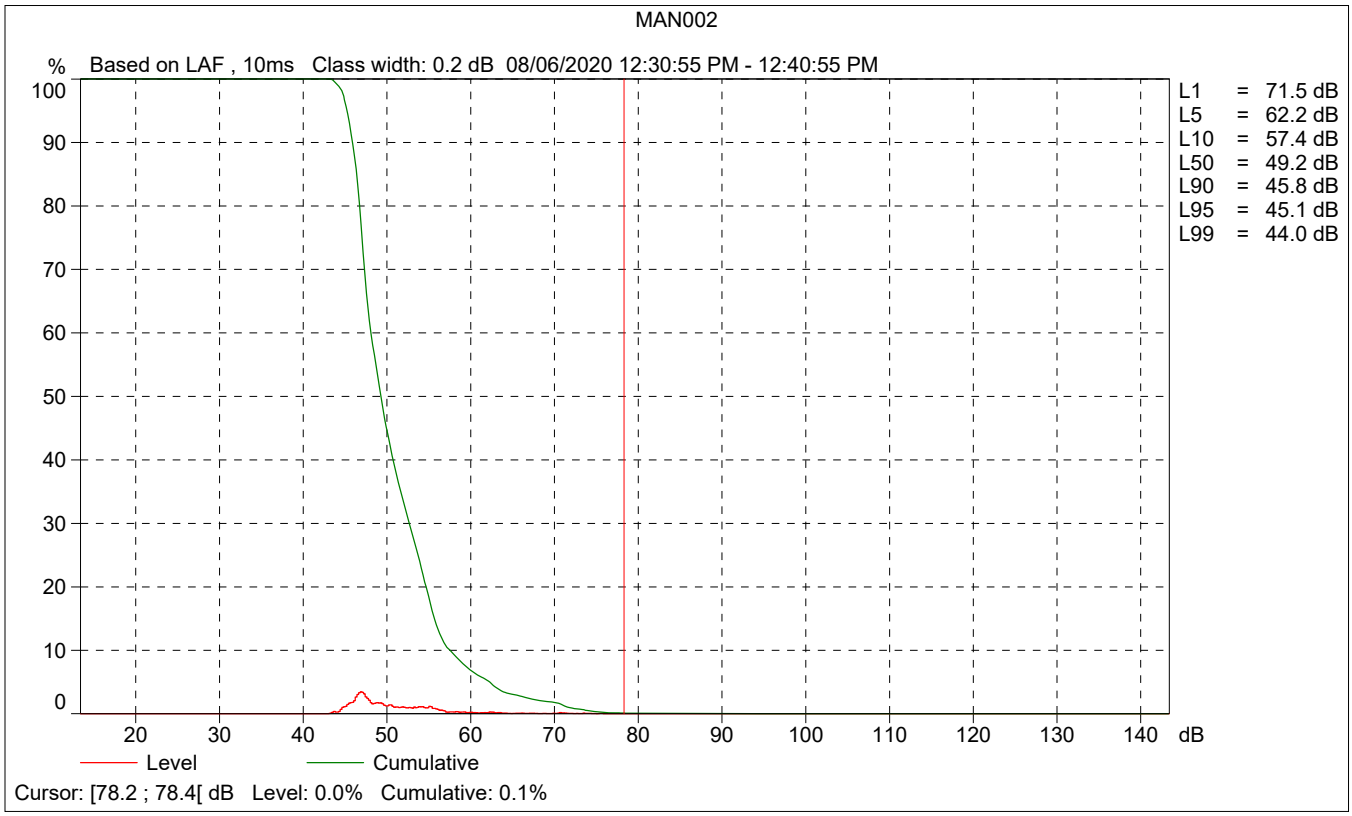
Instrument Serial Number:		3011133
Microphone Serial Number:		3086765
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Free-field

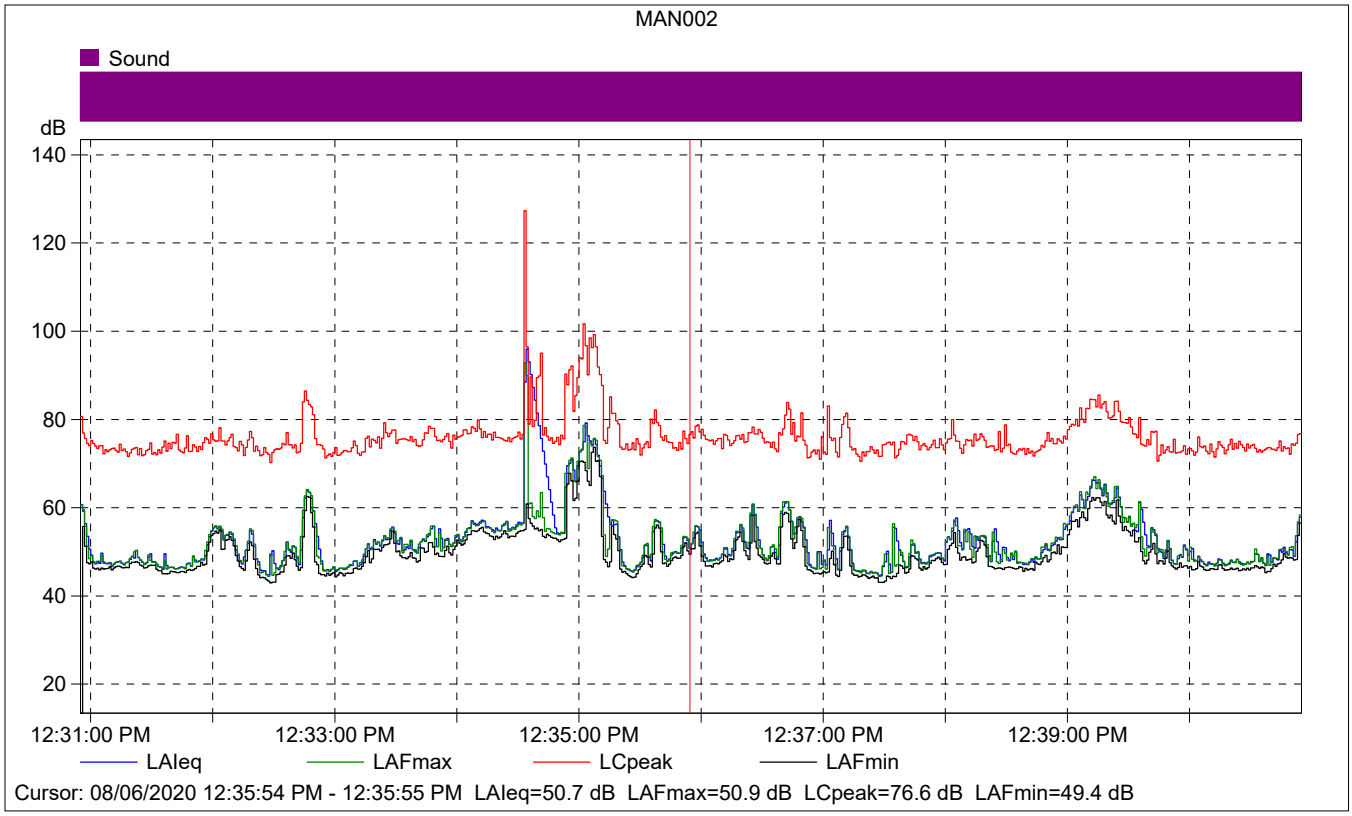
Calibration Time:		08/06/2020 07:46:32
Calibration Type:		External reference
Sensitivity:		43.5005761682987 mV/Pa

MAN002

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	60.4	92.8	43.0
Time	12:30:55 PM	12:40:55 PM	0:10:00				
Date	08/06/2020	08/06/2020					

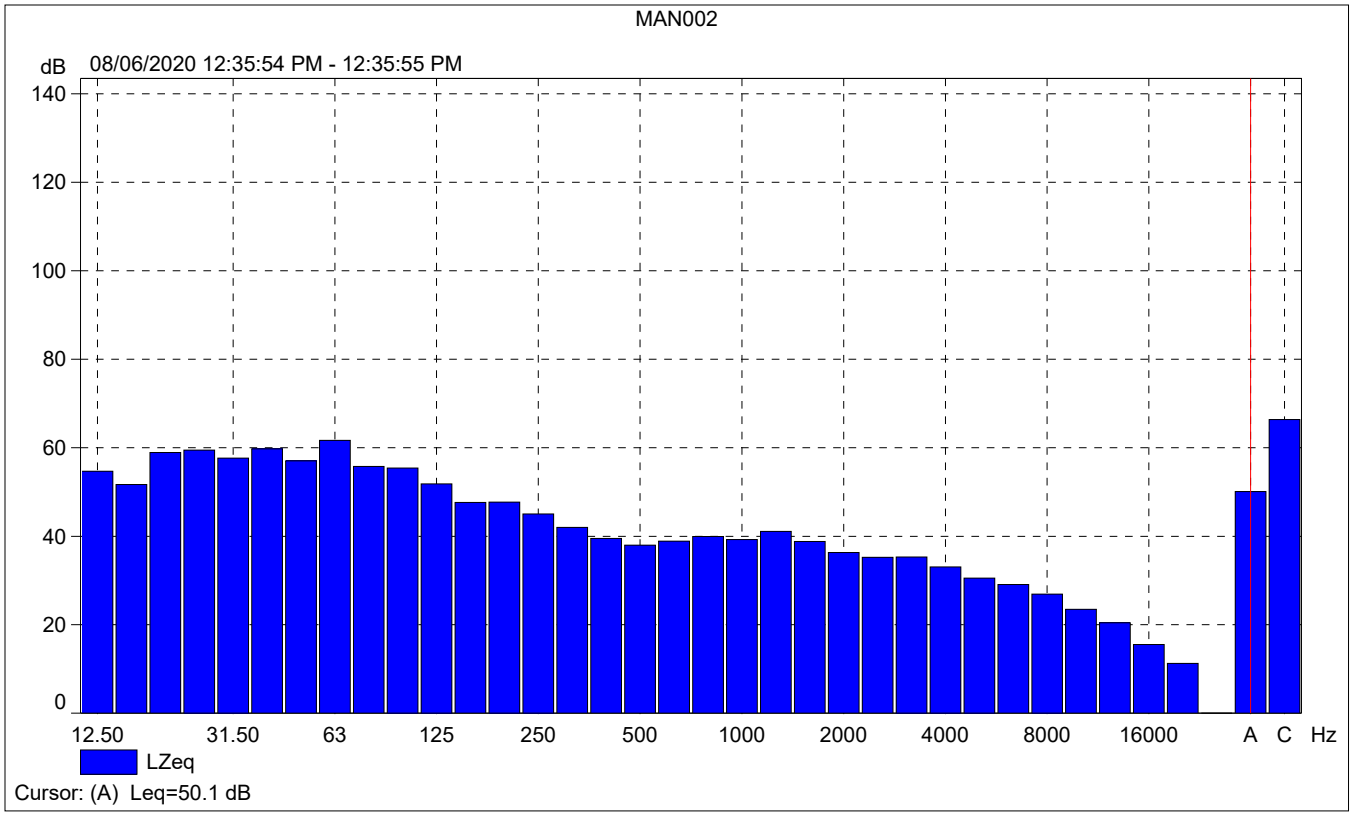

MAN002
dB
08/06/2020 12:30:55 PM - 12:40:55 PM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=60.4 dB LFmax=92.8 dB LFmin=43.0 dB

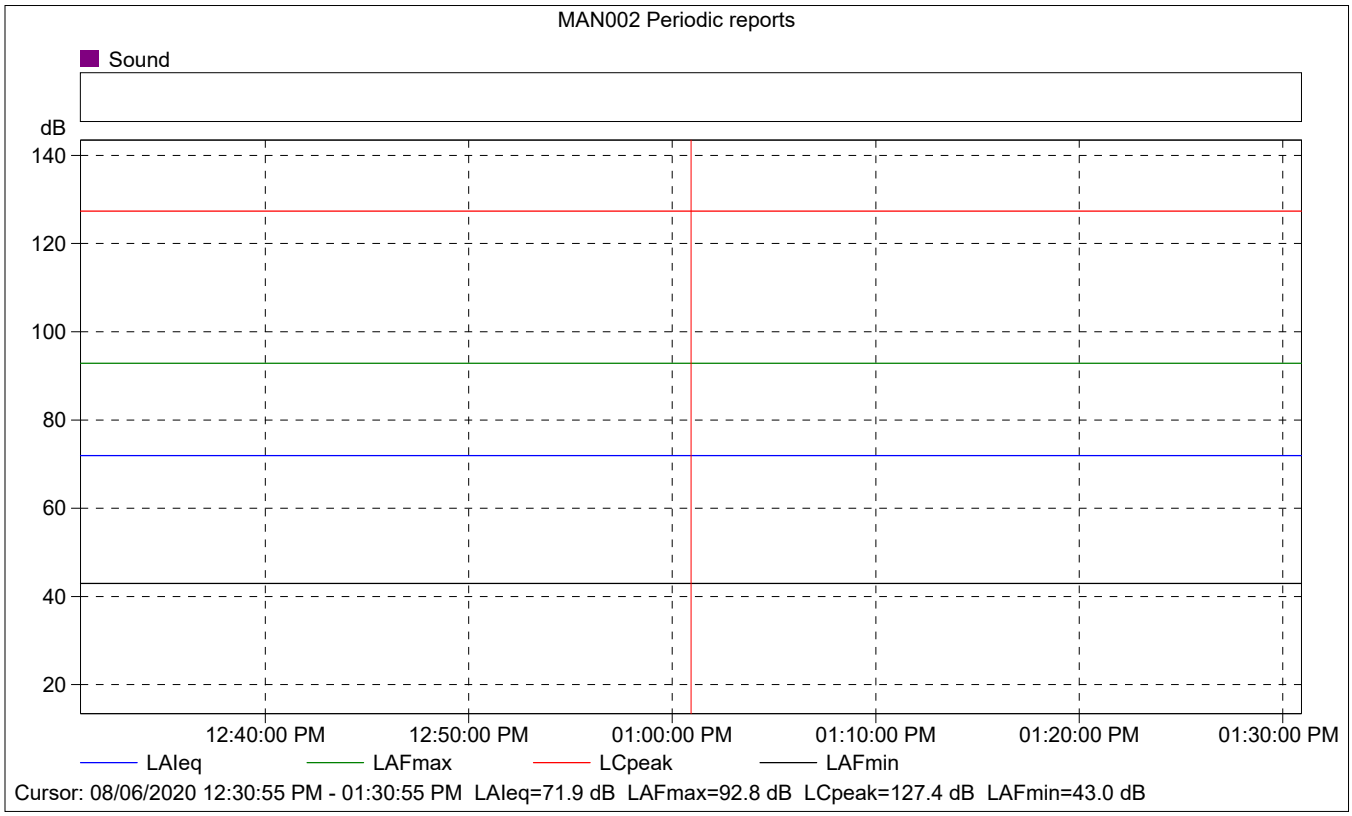

MAN002
%
Based on LAF , 10ms Class width: 0.2 dB 08/06/2020 12:30:55 PM - 12:40:55 PM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 71.5 dB
L5 = 62.2 dB
L10 = 57.4 dB
L50 = 49.2 dB
L90 = 45.8 dB
L95 = 45.1 dB
L99 = 44.0 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.1%



MAN002

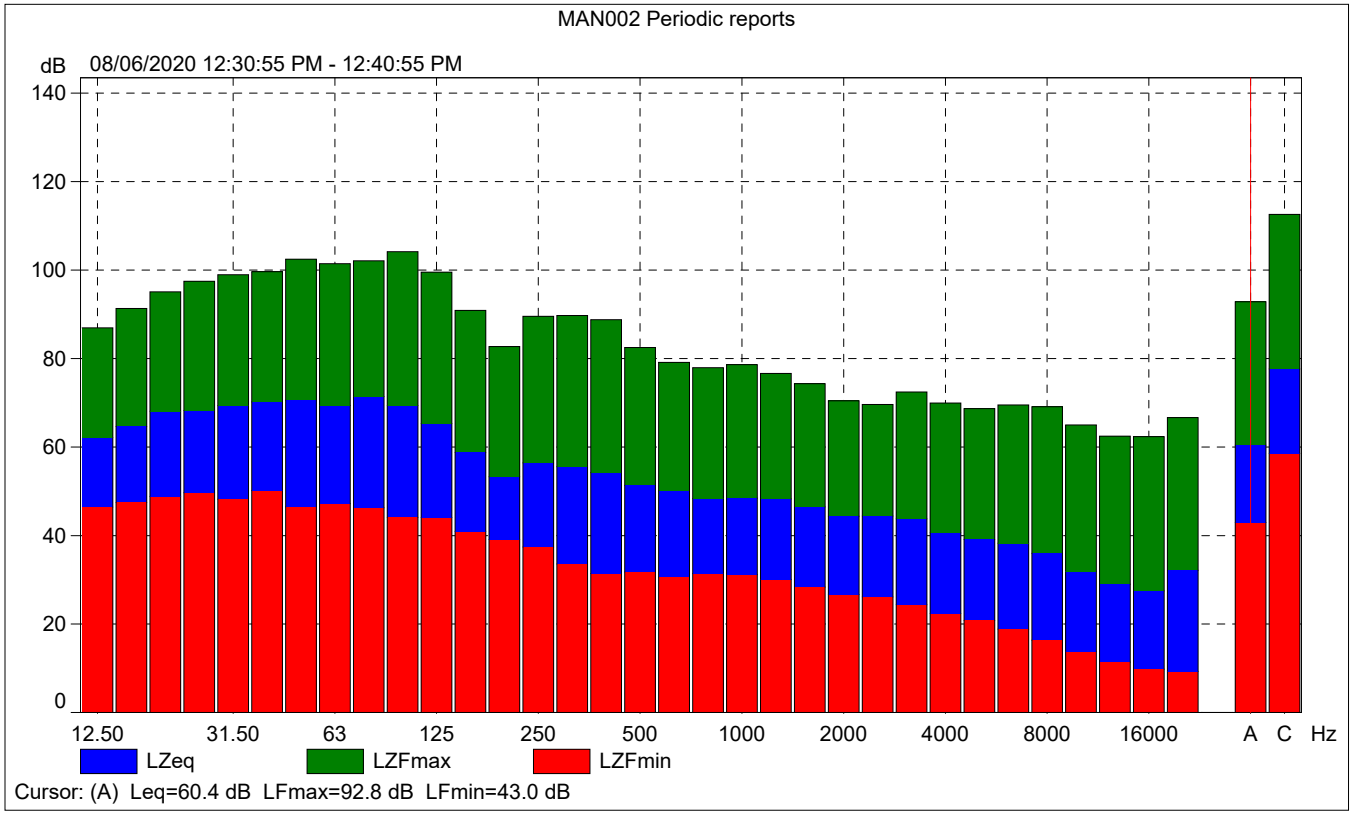
	Start time	Elapsed time	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			50.7	50.9	49.4
Time	12:35:54 PM	0:00:01			
Date	08/06/2020				

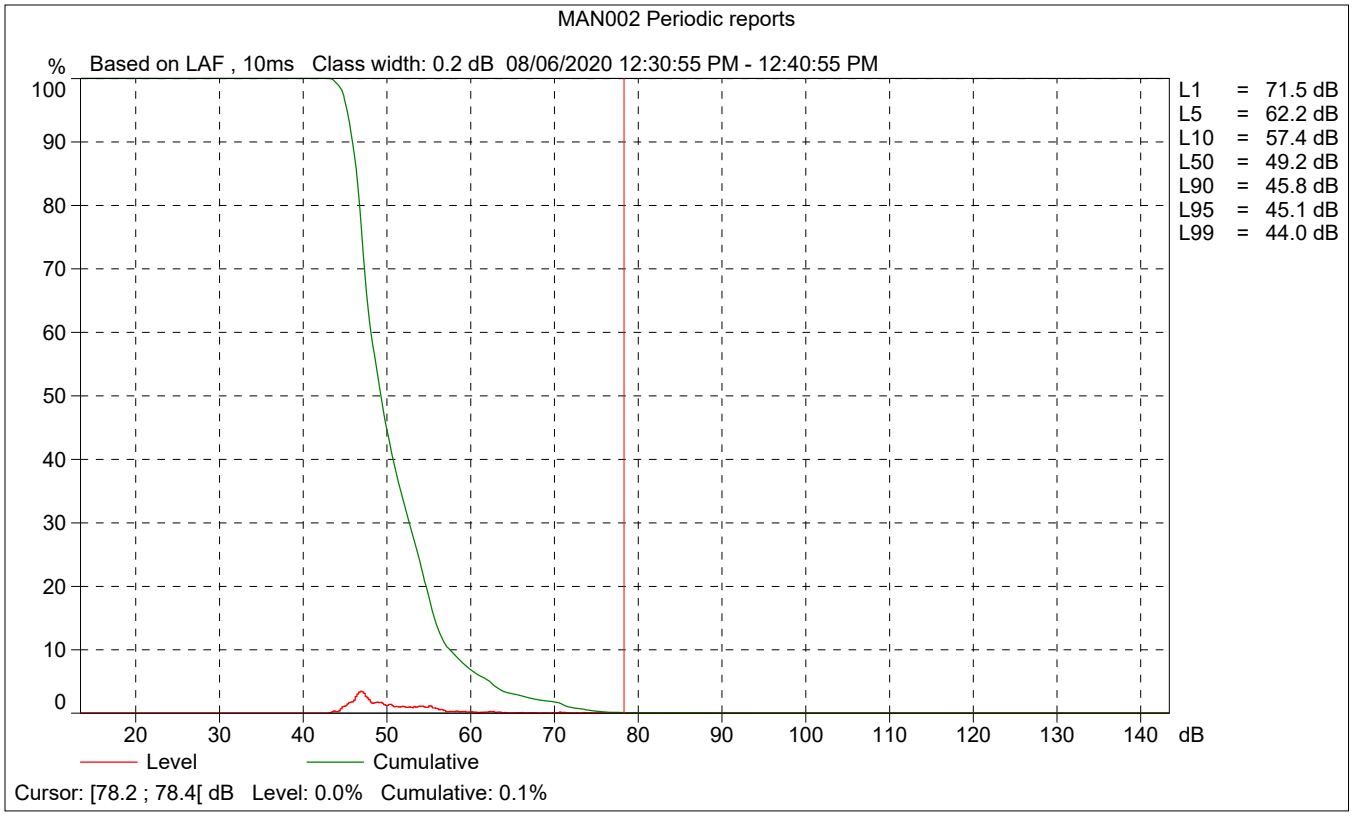

MAN002
dB
08/06/2020 12:35:54 PM - 12:35:55 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=50.1 dB


MAN002 Periodic reports
Sound
dB
140
120
100
80
60
40
20
12:40:00 PM
12:50:00 PM
01:00:00 PM
01:10:00 PM
01:20:00 PM
01:30:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 08/06/2020 12:30:55 PM - 01:30:55 PM LAIeq=71.9 dB LAFmax=92.8 dB LCpeak=127.4 dB LAFmin=43.0 dB

MAN002 Periodic reports

	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	71.9	92.8	43.0
Time	12:30:55 PM	0:10:00				
Date	08/06/2020					




MAN002 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 08/06/2020 12:30:55 PM - 12:40:55 PM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 71.5 dB
L5 = 62.2 dB
L10 = 57.4 dB
L50 = 49.2 dB
L90 = 45.8 dB
L95 = 45.1 dB
L99 = 44.0 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.1%

Appendix C:
Air Quality Technical Memorandum

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Pei-Ming Chou, Michael Baker International

From: Eddie Torres, Michael Baker International
Pierre Glaize, Michael Baker International

Date: September 21, 2020

Subject: Manhattan Beach Hotel Mixed-Use Project – Air Quality Technical Memorandum

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PURPOSE

The purpose of this technical memorandum is to evaluate potential short- and long-term air quality impacts resulting from the construction of the proposed Manhattan Beach Hotel Mixed-Use Project (project), located in the City of Manhattan Beach (City), California.

PROJECT LOCATION

The 1.52- acre project site is located at the northeast corner of the intersection of Sepulveda Boulevard and Tennyson Street, in the City, Los Angeles County (County), California. The project site is bound by Chabela Drive to the east, South Sepulveda Boulevard to the west, a commercial development to the north, and Tennyson Street to the south.

EXISTING SITE CONDITIONS

The project site is currently developed with a commercial building (formerly El Torrito Restaurant) on the northwest corner surrounded by surface parking. Landscaping consists of trees and shrubs around the perimeter of the project site and within the parking medians.

The project site is designated for General Commercial land uses in the City of Manhattan Beach General Plan and zoned CG (General Commercial).[1,2]

Surrounding uses include a commercial office plaza with medical office, retail, and restaurant uses to the north; a commercial plaza to the south across Tennyson Street; a single-family residential neighborhood

[1] City of Manhattan Beach, *City of Manhattan Zoning Designations*, https://www.citymb.info/home/showdocument?id=76, accessed by August 10, 2020.

[2] City of Manhattan Beach, *Manhattan Beach Code of Ordinances: Title 10 – Planning and Zoning*, last amended December 6, 2018, https://library.municode.com/ca/manhattan_beach/codes/code_of_ordinances?nodeId=TIT10PLZO_PTIISEDIRE_CH10.16CCODI_10.16.030CLCCCGCDCNDIDERE, accessed by August 10, 2020.

to the east across Chabela Drive; and the City of Hermosa Beach to the west across South Sepulveda Boulevard with commercial uses fronting Sepulveda Boulevard and residential uses further west.

PROJECT DESCRIPTION

The proposed project is a mixed-use commercial development consisting of two buildings containing hotel, office, and retail uses. A two-story commercial building would be constructed on the southwestern corner of the project site. An L-shaped, four-story hotel building would be constructed along the north and east property lines of the Project Site. Maximum building heights would not exceed 40 feet for the hotel building or 30 feet for the commercial building based on the project site's average grade. Both buildings would be constructed in the contemporary vernacular style featuring large open volumes of space and natural light. Materials used would include glass, wood, metal, tile, stone, brick and stucco.

The 16,109-square foot commercial building would contain approximate 6,845 square feet of retail uses on the ground floor and approximately 9,264 square feet of office uses on Level 2. Entrances to this building would be provided on both the north and south elevations. The 81,941-square foot select-service hotel building would contain a total of 162 hotel rooms and associated hotel amenities. A canopied drop-off area and main entrance is located along the south elevation of the hotel building. The ground floor of the hotel building would include the hotel lobby, lounge area, a bar and dining area, and 39 guest rooms. Back of house uses and 41 guest rooms would be located on Level 2. Level 3 would include back of house uses; 41 guest rooms; and amenities such as a library area, a fitness room, and meeting rooms for hotel guest use. Level 4 of the hotel building would contain back of house uses, 41 guest rooms, and a rooftop bar and lounge with limited food service and an expansive outdoor deck fronting on Sepulveda Boulevard. Although intended primarily for hotel guest use, the rooftop bar, lounge, and deck would be open to the public and would provide ocean views.

The proposed project would provide 28 surface parking spaces and 130 parking spaces within one-level subterranean parking garage, for a total of 158 on site vehicle parking spaces. Of the 130 subterranean parking spaces, one would be for electric vehicle (EV) charging only. The perimeter of the parking garage would be open to the sky to allow for natural light and ventilation. Access to the parking garage would be provided from a ramp and entrance located to the west of the hotel building. The proposed project would also provide a total of 16 bicycle parking spaces within the parking garage and at-grade adjacent to the hotel building and the commercial building.

Primary vehicular access to the project site would be provided via a primary ingress and egress driveway on Tennyson Street, which leads to the hotel's porte-cochere/drop-off area and the ramp to the subterranean parking garage. A secondary right-in and right-out only driveway would be located on Sepulveda Boulevard. Pedestrian access to the project site would be provided from both Sepulveda Boulevard and Tennyson Street.

The proposed project would be designed to meet the equivalent of U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver level or higher for new construction and would provide design features for recycling/waste reduction, energy and water efficiency, and general sustainability including EV charging stations and bicycle racks and lockers.[3]

[3] Leadership in Energy and Environmental Design, *LEED V4 for Building Design and Construction*, https://www.usgbc.org/sites/default/files/LEED%20v4%20ballot%20version%20%28BDC%29%20-%2013%2011%2013.pdf, accessed by August 12, 2020.

Construction of the proposed project is projected to begin in January 2021, with anticipated project completion in June 2022. Project construction (including demolition of 8,483 square feet of existing building, site preparation, and construction) would result in approximately 26,787 cubic yards of soil export and 2,466 tons of demolition materials. Excavation of up to 25 feet below ground surface may be required to construct the subterranean parking level.

The proposed project would require the following discretionary approvals from the City:

- Master Use Permit
- Vesting Tentative Tract Map for a commercial condominium plan for 20 subdivided air-space units

REGULATORY SETTING

South Coast Air Quality Management District

Air Quality Thresholds

Under the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD) is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act (FCAA), the SCAQMD has adopted Federal attainment plans for ozone (O_3) and particulate matter 10 microns in diameter or less (PM_{10}). The SCAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The *CEQA Air Quality Handbook* also provides significance thresholds for both construction and operation of projects within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in Table 1, *South Coast Air Quality Management District Emissions Thresholds*, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 1
South Coast Air Quality Management District Emissions Thresholds

Phase	Pollutant (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55
ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns; lbs = pounds						
Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993.						

City of Manhattan Beach

General Plan

The *City of Manhattan Beach General Plan Community Resource Element* (Manhattan Beach Community Resource Element) outlines the goals and policies for maintaining healthy air quality within the City. Currently, at least fifteen percent of the City's fleet operates on an alternative fuel such as compressed natural gas (CNG), electric power, or propane. In addition, the City sponsors an employee rideshare program that offers incentives to encourage City employees to carpool or use an alternative form of transportation to get to work. The goals, policies, and programs within the Manhattan Beach Community Resource Element are designed to minimize air pollution within the City and help protect public health. The Manhattan Beach Community Resource Element includes the following applicable goals and policies:

Goal CR-6: Improve air quality.

Policy CR-6.1: Encourage alternative modes of transportation, such as walking, biking, and public transportation, to reduce emissions associated with automobile use.

Policy CR-6.2: Encourage the expansion and retention of local serving retail businesses (e.g., restaurants, family medical offices, drug stores) to reduce the number and length of automobile trips to comparable services located in other jurisdictions

Policy CR-6.3: Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan

Policy CR-6.4: Cooperate and participate in regional air quality management planning, programs, and enforcement measures.

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated July 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting carbon monoxide (CO), nitrogen oxides (NO_X), PM_{10}, or particulate matter up to 2.5 microns ($PM_{2.5}$). The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors.

Cumulative Emissions Thresholds

The SCAQMD's *2016 Air Quality Management Plan* (2016 AQMP) was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the SCAQMD *CEQA Air Quality Handbook*, project-

related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the SCAQMD *CEQA Air Quality Handbook* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) THRESHOLDS

The environmental analysis in this memorandum is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact AQ-1);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (refer to Impact AQ-2);
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact AQ-3); and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (refer to Impact AQ-4).

IMPACT ANALYSIS

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The City is located within the South Coast Air Basin (Basin), which is bounded by the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east and by the Pacific Ocean to the south and west. The SCAQMD has jurisdiction in the Basin, which has a history of recorded air quality violations and is an area where both State and Federal ambient air quality standards are exceeded. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The air quality in the Riverside County portion of the Basin does not meet the ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$ and is therefore classified as a nonattainment area for these pollutants. The SCAQMD is required, pursuant to the Federal Clean Air Act, to reduce emissions of the air pollutants for which the Basin is in nonattainment.

In order to reduce emissions, the SCAQMD adopted the 2016 AQMP which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State and Federal air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and the U.S. Environmental Protection Agency (EPA).

The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the *2016-2040 Regional Transportation Plan/Sustainable*

Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The SCAQMD considers projects that are consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants, to also have less than significant cumulative impacts.

Criteria for determining consistency with the AQMP are defined by the following indicators:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

Since the consistency criteria identified under the first criterion pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Impact Statement AQ-3, below, localized concentrations of CO, NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would be less than significant. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gasses (ROGs) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROGs play in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) *Would the project cause or contribute to new air quality violations?*

As discussed below in Impact Statements AQ-2 and AQ-3, the proposed project would result in emissions that would be below the SCAQMD's thresholds for regional and localized emissions. Therefore, the proposed project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to localized concentrations during project construction. As such, the proposed project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or

not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with the 2016 AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the 2016 AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the *City of Manhattan Beach General Plan* (General Plan)[4], SCAG's regional growth forecast, and the SCAG RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The City's General Plan and Zoning Map designates the project site as General Commercial (CG). Pursuant to Manhattan Beach Municipal Code Section 10.16.020, C*L, CC, CG, CD, CNE districts: land use regulations*, the GC Zoning Code allows for hotels, motels, residential hotel land uses with a Master Use Permit and permits offices, businesses, and professional land uses. Therefore, with approval of a Master Use Permit, the proposed four-story hotel building and two-story office building is a permitted use in accordance with the CG zoning and would not differ from the current General Plan Land Use and Zoning Designations. In addition, the project would require a Vesting Tentative Tract Map for a commercial condominium plan for 20 subdivided air-space units. Thus, with the adoption of a Master Use Permit and Vesting Tentative Tract Map, the proposed project is considered consistent with the General Plan and the types, intensity, and patterns of land use envisioned for the site vicinity. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans (i.e., the City's General Plan) and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed project with the discretional approval of a Master Use Permit and Vesting Tentative Tract Map would be consistent with these projections.

b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would not require mitigation and would result in less than significant air quality impacts; refer to Impact Statements AQ-2 and AQ-3. In addition, the project would comply with all applicable SCAQMD rules and regulations, including Rule 403 that requires excessive fugitive dust emissions controlled by regular watering or other dust prevention measures and Rule 1113 that regulates the ROG content of paint. As such, the proposed project meets this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

Land use planning strategies set forth in the 2016 AQMP are primarily based on the 2016-2040 RTP/SCS. The project is an infill development and is located less than 0.12-mile from the Metro 232 and 130 bus lines. Additionally, the project would be consistent with the General Plan Policy CR-6.1 by including vehicle charging stations, bicycle racks and lockers, bicycle and micro mobility rental services availability, and by providing incentives for alternate transportation use. Therefore, the project would be consistent with the actions and strategies of the RTP/SCS. In

[4] City of Manhattan Beach, *2003 Final General Plan*, https://www.citymb.info/departments/community-development/planning-zoning/general-plan/final-general-plan, accessed by August 12, 2020.

addition, as discussed above, the project would be consistent with the General Plan land use designation upon approval of a Master Use Permit and Vesting Tentative Tract Map. Furthermore, project consistency with the SCAG RTP/SCS and the 2016 AQMP would promote the City's goal to improve air quality by incorporating General Plan Policy CR-6.3 and CR-6.4. As such, the proposed project meets this AQMP consistency criterion.

Mitigation Measures: No mitigation is required.

Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

Less Than Significant Impact.

Short-Term Construction

The project involves construction activities associated with demolition, site preparation, construction, paving, and architectural coating applications. The project would be constructed over approximately 18 months, beginning in early 2021. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model version 2016.3.2 (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared using CalEEMod. Refer to Appendix A, *Air Quality Emissions Data*, for the CalEEMod outputs and results. Table 2, *Short-Term Construction Emissions*, presents the anticipated daily short-term construction emissions.

Table 2
Short-Term Construction Emissions

Emissions Source[3]	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1						
Construction Related Emissions[2]	4.60	61.12	30.82	0.16	6.94	3.33
Year 2						
Construction Related Emissions[2]	11.84	15.09	16.66	0.04	1.50	0.82
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, version 2016.3.2, as recommended by SCAQMD. Winter emissions represent worst-case.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Source: Refer to Appendix A, *Air Quality Emissions Data*, for detailed model input/output data.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from demolition, site preparation, and construction is expected to be short-term and would cease upon project completion. It should be noted that most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and sulfur oxides (SO_X) combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Construction activities would comply with SCAQMD Rule 403, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures. Adherence to SCAQMD 403 would greatly reduce PM_{10} and $PM_{2.5}$ concentrations. It should be noted that these reductions were applied in CalEEMod. As depicted in Table 2, total PM_{10} and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during construction. Thus, construction-related air quality impacts would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions (e.g., NO_x and CO) from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 2, construction equipment and worker vehicle exhaust emissions would be below the established SCAQMD thresholds. Therefore, air quality impacts from equipment and vehicle exhaust emission would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates reactive organic gas (ROG) emissions, which are O_3 precursors. As required, all architectural coatings for the proposed project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coating. Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. ROG emissions associated with the proposed project would be less than significant; refer to Table 2.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. As indicated in Table 2, criteria pollutant emissions during construction of the proposed project would not exceed the SCAQMD significance thresholds. Thus, total construction related air emissions would be less than significant.

Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Long-Term (Operational) Emissions

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$); however, CO tends to be a localized pollutant, dispersing rapidly at the source. Based on the *Manhattan Beach Hotel Mixed-Use Project Access Evaluation* developed by Kimley Horn (dated March 8, 2020)[5], typical daily activities are forecast to generate 2,200 average daily trips, including 121 trips during the a.m. peak hour and 178 trips during the p.m. peak hour. The project-generated vehicle emissions have been estimated using CalEEMod as well as the CARB's EMission FACtor Model 2017 (EMFAC2017). Table 3, *Long-Term Operational Air Emissions*, presents the anticipated mobile source emissions. As shown in Table 3, emissions generated by vehicle traffic associated with the project would not exceed established SCAQMD thresholds. Impacts from mobile source air emissions would be less than significant.

[5] Kimley Horn, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.

Table 3
Long-Term Operational Air Emissions

Emissions Source	Pollutant (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project Summer Emissions						
Area Source Emissions	2.09	<0.01	0.03	0.00	<0.01	<0.01
Energy Emissions	0.09	0.78	0.66	<0.01	0.06	0.06
Mobile Emissions[3]	5.22	9.25	46.43	0.12	11.25	3.08
Total Emissions[4]	**7.40**	**10.03**	**47.11**	**0.12**	**11.31**	**3.14**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Proposed Project Winter Emissions[2]						
Area Source Emissions	2.09	<0.01	0.03	0.00	<0.01	<0.01
Energy Emissions	0.05	0.44	0.37	<0.01	0.03	0.03
Mobile Emissions[3]	5.38	9.81	45.14	0.12	11.25	3.09
Total Emissions[4]	**7.52**	**10.24**	**45.54**	**0.12**	**11.28**	**3.12**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, version 2016.3.2 and the California Air Resources Board, Emission FACtor (EMFAC 2017) web database.
2. Winter emissions represent the worst-case scenario for long-term operational emissions; refer to Appendix A.
3. The mobile source emissions were calculated using the trip generation data provided in the Kimley Horn, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.
4. The numbers may be slightly off due to rounding.

Source: Refer to Appendix A, for detailed model input/output data.

Area Source Emissions

Area source emissions would be generated from consumer products, architectural coating, and landscaping. As shown in Table 3, area source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 3, energy source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone precursors VOCs and NO_x affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-

generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD,[6] the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD),[7] SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from ozone, as an example is correlated with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient ozone levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce ozone levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. As such, for the purpose of this analysis, since the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would have a less than significant impact for air quality health impacts as well.

Cumulative Conclusion

With respect to the proposed project's construction-related air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to FCAA mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements and the adopted 2016 AQMP emissions control measures. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted 2016 AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

As indicated in Table 2 and Table 3, the proposed project would not result in short- or long-term air quality impacts, as emissions would not exceed the SCAQMD adopted construction or operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans

[6] South Coast Air Quality Management District, *Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

[7] San Joaquin Valley Air Pollution Control District, *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, the project's incremental operational impacts would be less than cumulatively considerable and impacts in this regard are less than significant.

Mitigation Measures: No mitigation is required.

Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The closest sensitive receptors are single-family residences located approximately 40 feet to the east of the project boundary. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds (LSTs) for construction and operations impacts (area sources only). The CO hotspot analysis, following the LST analysis, addresses localized mobile source impacts.

Localized Significance Thresholds

Local Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for projects that disturb/grade one, two, or five acres per day emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres in size should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors from area source emissions. For LST analysis purposes, SCAQMD is divided into 38 Source Receptor Areas (SRA), each of which contain specific localized air quality emission thresholds for CO, NO_X, $PM_{2.5}$, and PM_{10} to determine local air quality impacts. The project is located in SRA 3 (Southwest Coastal LA County).

Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. SCAQMD provides LST thresholds for one-, two-, and five-acre site disturbance areas; SCAQMD does not provide LST thresholds for projects over five acres. Based on default information provided by CalEEMod, the project is anticipated to disturb up to 30 acres during the grading phase. The grading phase would take approximately 80 days in total to complete. As such, the project would actively disturb an average of approximately 0.38 acres per day (30 acres divided by 80 days). Therefore, the LST thresholds for one acre were conservatively utilized for the construction LST analysis.

The closest sensitive receptors are single-family residences located approximately 40 feet to the east of the project boundary. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. According to SCAQMD LST Methodology, projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. As the nearest sensitive receptor is located approximately 40 feet (12 meters) from the planned construction area, the LST values for 25 meters (82 feet) were used.

Table 4, *Localized Significance of Construction Emissions*, shows the localized construction-related emissions. It is noted that the localized emissions presented in Table 4 are less than those in Table 2 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from worker, vendor, and hauling trips). As seen in Table 4, emissions would not exceed the LSTs for SRA 3. Construction LST impacts would be less than significant in this regard.

Table 4
Localized Significance of Construction Emissions

Maximum Emissions	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions (on-site)[1,2]	19.70	14.49	2.57	1.57
Localized Significance Threshold[3]	*91*	*664*	*5*	*3*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Note:
1. The maximum daily construction emissions includes fugitive dust control measures required by SCAQMD Rule 403, which includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
2. The demolition phase emissions would present the worst-case scenario for NO_x and CO, and the grading phase emissions present the worst-case scenario for PM_{10} and $PM_{2.5}$, during the project construction.
3. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (the thresholds for 1 acre were used), the distance to sensitive receptors (25 meters), and the source receptor area (SRA 3).

Operations

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses. Thus, due to the lack of such emissions, no long-term localized significance threshold analysis is necessary. Operational LST impacts would be less than significant in this regard.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection

may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. Nationwide estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions.[8] CO emissions have continued to decline since this time. The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*, which is the most recent AQMP that addresses CO concentrations. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an ADT volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City near the project site due to the comparatively low volume of traffic (121 daily trips during the a.m. peak hour and 178 daily trips during the p.m. peak hour)[9] that would occur as a result of project implementation. Therefore, impacts would be less than significant in this regard.

[8] United States Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed by August 12, 2020.

[9] Kimley Horn, *Manhattan Beach Hotel Mixed-Use Project Access Evaluation*, March 8, 2020.

Mitigation Measures: No mitigation is required.

Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also comply with the SCAQMD Regulation XI, *Rule 1113 – Architectural Coating*, which would minimize odor impacts from ROG emissions during architectural coating. Any impacts to the nearby land uses would be short-term and are less than significant.

Mitigation Measures: No mitigation is required.

REFERENCES

Documents

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3. City of Manhattan Beach, *City of Manhattan Zoning Designations*¸ https://www.citymb.info/home/showdocument?id=76, accessed by August 10, 2020.

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7. San Joaquin Valley Air Pollution Control District, *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno, 2014.*

8. Southern California Association of Governments, *The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*, adopted April 2016.

9. South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan*, March 2017.

10. South Coast Air Quality Management District, *CEQA Air Quality Handbook,* November 1993.

11. South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2015.

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13. United States Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed by August 12, 2020.

Websites / Programs

1. Google Earth, 2020.

2. South Coast Air Quality Management District, California Emissions Estimator Model (CalEEMod), version 2016.3.2.

3. California Air Resources Board, EMission FACtor Model 2017 (EMFAC2017).

Appendix A
Air Quality Emissions Data

600 S. Sepulveda Blvd. Hotel - Manhattan Beach

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	162.00	Room	0.65	81,941.00	0
Regional Shopping Center	6.85	1000sqft	0.16	6,845.00	0
General Office Building	9.26	1000sqft	0.21	9,264.00	0
Enclosed Parking Structure	130.00	Space	0.25	52,000.00	0
Parking Lot	28.00	Space	0.25	11,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2019 Sustainability Report pg: https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf

Land Use - Total Lot Acreage is 1.52.

Construction Phase - Planned Construction Schedule

Grading - Soil export.

Demolition -

Trips and VMT - Trip length to dump site.

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Poject would generate 2,200 trips.

Area Coating - SCAQMD Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 402 & Rule 403

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Project would nclude Solar Panels, LID design, extensive use of LED lighting and power-efficient devises. The 2019 Title 24 requirement shows a 53% in energy usage with solar panels

Water Mitigation - 2019 Title 24 and CalGreen.

Waste Mitigation - AB 341

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	260.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	4.00	80.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	PhaseEndDate	12/13/2021	6/28/2022
tblConstructionPhase	PhaseEndDate	11/15/2021	5/2/2022

tblConstructionPhase	PhaseEndDate	1/29/2021	2/26/2021
tblConstructionPhase	PhaseEndDate	2/8/2021	6/18/2021
tblConstructionPhase	PhaseEndDate	11/29/2021	2/26/2021
tblConstructionPhase	PhaseStartDate	11/30/2021	5/4/2022
tblConstructionPhase	PhaseStartDate	2/9/2021	5/4/2021
tblConstructionPhase	PhaseStartDate	2/3/2021	2/27/2021
tblConstructionPhase	PhaseStartDate	11/16/2021	1/4/2021
tblGrading	MaterialExported	0.00	26,787.00
tblLandUse	LandUseSquareFeet	235,224.00	81,941.00
tblLandUse	LotAcreage	5.40	0.65
tblLandUse	LotAcreage	1.17	0.25
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	702.44	534
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblTripsAndVMT	HaulingTripLength	20.00	70.00
tblVehicleEF	HHD	0.62	0.03
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.08	1.0000e-006
tblVehicleEF	HHD	2.47	6.32
tblVehicleEF	HHD	1.15	0.58
tblVehicleEF	HHD	3.30	9.3040e-003
tblVehicleEF	HHD	4,690.45	1,186.71
tblVehicleEF	HHD	1,639.83	1,477.44
tblVehicleEF	HHD	10.54	0.09
tblVehicleEF	HHD	20.39	6.38
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tblVehicleEF	HHD	0.01	3.7610e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8380e-003	8.8970e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	8.0000e-005	1.0000e-006
tblVehicleEF	HHD	1.0500e-004	7.0000e-006
tblVehicleEF	HHD	4.6110e-003	2.6800e-004
tblVehicleEF	HHD	0.62	0.46
tblVehicleEF	HHD	7.9000e-005	5.0000e-006
tblVehicleEF	HHD	0.15	0.08
tblVehicleEF	HHD	3.9500e-004	1.4610e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	1.6000e-004	1.0000e-006
tblVehicleEF	HHD	1.0500e-004	7.0000e-006
tblVehicleEF	HHD	4.6110e-003	2.6800e-004
tblVehicleEF	HHD	0.72	0.53
tblVehicleEF	HHD	7.9000e-005	5.0000e-006
tblVehicleEF	HHD	0.25	0.17
tblVehicleEF	HHD	3.9500e-004	1.4610e-003
tblVehicleEF	HHD	0.09	3.0000e-006
tblVehicleEF	HHD	0.58	0.03
tblVehicleEF	HHD	0.10	0.08
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	HHD	1.80	6.18
tblVehicleEF	HHD	1.16	0.58
tblVehicleEF	HHD	3.13	8.8350e-003

tblVehicleEF	HHD	4,968.94	1,182.90
tblVehicleEF	HHD	1,639.83	1,477.44
tblVehicleEF	HHD	10.54	0.09
tblVehicleEF	HHD	21.04	6.19
tblVehicleEF	HHD	3.60	3.38
tblVehicleEF	HHD	19.53	2.07
tblVehicleEF	HHD	0.01	3.4390e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.01	3.2910e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8380e-003	8.8970e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	8.0000e-005	1.0000e-006
tblVehicleEF	HHD	1.6000e-004	1.1000e-005
tblVehicleEF	HHD	4.7280e-003	2.7300e-004
tblVehicleEF	HHD	0.58	0.48
tblVehicleEF	HHD	1.1400e-004	7.0000e-006
tblVehicleEF	HHD	0.15	0.08
tblVehicleEF	HHD	3.8400e-004	1.4410e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	1.5700e-004	1.0000e-006
tblVehicleEF	HHD	1.6000e-004	1.1000e-005
tblVehicleEF	HHD	4.7280e-003	2.7300e-004
tblVehicleEF	HHD	0.68	0.55
tblVehicleEF	HHD	1.1400e-004	7.0000e-006

tblVehicleEF	HHD	0.25	0.17
tblVehicleEF	HHD	3.8400e-004	1.4410e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.67	0.03
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.08	1.0000e-006
tblVehicleEF	HHD	3.41	6.51
tblVehicleEF	HHD	1.15	0.57
tblVehicleEF	HHD	3.33	9.3940e-003
tblVehicleEF	HHD	4,305.87	1,191.98
tblVehicleEF	HHD	1,639.83	1,477.44
tblVehicleEF	HHD	10.54	0.09
tblVehicleEF	HHD	19.48	6.64
tblVehicleEF	HHD	3.75	3.51
tblVehicleEF	HHD	19.55	2.07
tblVehicleEF	HHD	0.02	4.6110e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.02	4.4110e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8380e-003	8.8970e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	8.0000e-005	1.0000e-006
tblVehicleEF	HHD	1.0300e-004	7.0000e-006
tblVehicleEF	HHD	4.9260e-003	3.0500e-004
tblVehicleEF	HHD	0.66	0.43
tblVehicleEF	HHD	7.7000e-005	5.0000e-006
tblVehicleEF	HHD	0.15	0.08

tblVehicleEF	HHD	4.2900e-004	1.5510e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	1.6000e-004	1.0000e-006
tblVehicleEF	HHD	1.0300e-004	7.0000e-006
tblVehicleEF	HHD	4.9260e-003	3.0500e-004
tblVehicleEF	HHD	0.78	0.50
tblVehicleEF	HHD	7.7000e-005	5.0000e-006
tblVehicleEF	HHD	0.25	0.17
tblVehicleEF	HHD	4.2900e-004	1.5510e-003
tblVehicleEF	HHD	0.09	3.0000e-006
tblVehicleEF	LDA	5.3420e-003	3.0340e-003
tblVehicleEF	LDA	5.4040e-003	0.05
tblVehicleEF	LDA	0.66	0.72
tblVehicleEF	LDA	1.15	2.10
tblVehicleEF	LDA	274.33	270.89
tblVehicleEF	LDA	57.08	53.31
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.07	0.18
tblVehicleEF	LDA	2.1700e-003	1.7960e-003
tblVehicleEF	LDA	2.2660e-003	1.8390e-003
tblVehicleEF	LDA	2.0000e-003	1.6540e-003
tblVehicleEF	LDA	2.0830e-003	1.6910e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22

tblVehicleEF	LDA	2.7480e-003	2.6800e-003
tblVehicleEF	LDA	5.9000e-004	5.2800e-004
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	5.6740e-003	3.2480e-003
tblVehicleEF	LDA	4.8010e-003	0.04
tblVehicleEF	LDA	0.72	0.79
tblVehicleEF	LDA	0.98	1.79
tblVehicleEF	LDA	287.10	283.19
tblVehicleEF	LDA	57.08	52.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	2.1700e-003	1.7960e-003
tblVehicleEF	LDA	2.2660e-003	1.8390e-003
tblVehicleEF	LDA	2.0000e-003	1.6540e-003
tblVehicleEF	LDA	2.0830e-003	1.6910e-003
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.11	0.10
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.8760e-003	2.8020e-003
tblVehicleEF	LDA	5.8700e-004	5.2200e-004
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.11	0.10

tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	5.2330e-003	2.9680e-003
tblVehicleEF	LDA	5.5300e-003	0.05
tblVehicleEF	LDA	0.63	0.69
tblVehicleEF	LDA	1.19	2.17
tblVehicleEF	LDA	269.66	266.39
tblVehicleEF	LDA	57.08	53.43
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.07	0.19
tblVehicleEF	LDA	2.1700e-003	1.7960e-003
tblVehicleEF	LDA	2.2660e-003	1.8390e-003
tblVehicleEF	LDA	2.0000e-003	1.6540e-003
tblVehicleEF	LDA	2.0830e-003	1.6910e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.05	0.24
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.7010e-003	2.6350e-003
tblVehicleEF	LDA	5.9100e-004	5.2900e-004
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.05	0.24
tblVehicleEF	LDA	0.08	0.25

tblVehicleEF	LDT1	0.02	7.7890e-003
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tblVehicleEF	LDT1	1.68	1.46
tblVehicleEF	LDT1	2.78	2.27
tblVehicleEF	LDT1	341.15	318.65
tblVehicleEF	LDT1	69.44	63.32
tblVehicleEF	LDT1	0.16	0.12
tblVehicleEF	LDT1	0.16	0.26
tblVehicleEF	LDT1	3.5390e-003	2.7170e-003
tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.26	0.20
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	0.17	0.70
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	3.4330e-003	3.1530e-003
tblVehicleEF	LDT1	7.4300e-004	6.2700e-004
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.26	0.20
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.17	0.70
tblVehicleEF	LDT1	0.21	0.39
tblVehicleEF	LDT1	0.02	8.2630e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.82	1.59
tblVehicleEF	LDT1	2.36	1.93

tblVehicleEF	LDT1	356.02	331.08
tblVehicleEF	LDT1	69.44	62.64
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tblVehicleEF	LDT1	0.15	0.24
tblVehicleEF	LDT1	3.5390e-003	2.7170e-003
tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.20	0.20
tblVehicleEF	LDT1	0.28	0.21
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.16	0.65
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	3.5840e-003	3.2760e-003
tblVehicleEF	LDT1	7.3600e-004	6.2000e-004
tblVehicleEF	LDT1	0.20	0.20
tblVehicleEF	LDT1	0.28	0.21
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.16	0.65
tblVehicleEF	LDT1	0.18	0.35
tblVehicleEF	LDT1	0.02	7.6410e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.63	1.41
tblVehicleEF	LDT1	2.87	2.35
tblVehicleEF	LDT1	335.69	314.09
tblVehicleEF	LDT1	69.44	63.47
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.16	0.26

tblVehicleEF	LDT1	3.5390e-003	2.7170e-003
tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.30	0.23
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tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	0.20	0.83
tblVehicleEF	LDT1	0.20	0.37
tblVehicleEF	LDT1	3.3780e-003	3.1080e-003
tblVehicleEF	LDT1	7.4500e-004	6.2800e-004
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.30	0.23
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.83
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT2	7.2180e-003	4.9910e-003
tblVehicleEF	LDT2	6.3970e-003	0.07
tblVehicleEF	LDT2	0.84	1.02
tblVehicleEF	LDT2	1.35	2.65
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tblVehicleEF	LDT2	78.07	68.34
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	0.11	0.28
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003

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tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.41
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	3.8260e-003	3.3770e-003
tblVehicleEF	LDT2	8.0300e-004	6.7600e-004
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.41
tblVehicleEF	LDT2	0.09	0.34
tblVehicleEF	LDT2	7.6530e-003	5.3200e-003
tblVehicleEF	LDT2	5.6920e-003	0.06
tblVehicleEF	LDT2	0.92	1.12
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tblVehicleEF	LDT2	399.04	353.53
tblVehicleEF	LDT2	78.07	67.60
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.9980e-003	3.4980e-003
tblVehicleEF	LDT2	8.0000e-004	6.6900e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.31
tblVehicleEF	LDT2	7.0750e-003	4.8890e-003
tblVehicleEF	LDT2	6.5470e-003	0.07
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tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.11	0.29
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	3.7630e-003	3.3330e-003
tblVehicleEF	LDT2	8.0400e-004	6.7800e-004

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tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.10	0.35
tblVehicleEF	LHD1	5.5970e-003	5.5830e-003
tblVehicleEF	LHD1	0.01	5.7240e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.84	0.65
tblVehicleEF	LHD1	2.79	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.21
tblVehicleEF	LHD1	33.34	12.43
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.95	0.65
tblVehicleEF	LHD1	1.01	0.33
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003

tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8500e-004	1.2300e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD1	5.5970e-003	5.5950e-003
tblVehicleEF	LHD1	0.01	5.8420e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.85	0.67
tblVehicleEF	LHD1	2.66	1.09
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.23
tblVehicleEF	LHD1	33.34	12.33
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.89	0.61
tblVehicleEF	LHD1	0.96	0.32
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004

tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9310e-003	6.5070e-003
tblVehicleEF	LHD1	3.8300e-004	1.2200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.5970e-003	5.5810e-003
tblVehicleEF	LHD1	0.01	5.6940e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.83	0.65
tblVehicleEF	LHD1	2.81	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.20
tblVehicleEF	LHD1	33.34	12.44
tblVehicleEF	LHD1	0.07	0.05

tblVehicleEF	LHD1	0.94	0.64
tblVehicleEF	LHD1	1.01	0.34
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8600e-004	1.2300e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD2	4.0020e-003	3.9120e-003
tblVehicleEF	LHD2	4.2980e-003	3.9650e-003
tblVehicleEF	LHD2	8.5190e-003	0.01

tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.37	0.76
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.56
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.65	0.84
tblVehicleEF	LHD2	0.55	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
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tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02

tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9200e-003
tblVehicleEF	LHD2	4.3570e-003	4.0120e-003
tblVehicleEF	LHD2	8.2260e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.35	0.44
tblVehicleEF	LHD2	1.31	0.73
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.36
tblVehicleEF	LHD2	27.88	9.50
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.61	0.79
tblVehicleEF	LHD2	0.53	0.22
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003
tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.34

tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0300e-004	9.4000e-005
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.34
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9100e-003
tblVehicleEF	LHD2	4.2820e-003	3.9540e-003
tblVehicleEF	LHD2	8.5780e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.38	0.77
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.57
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.64	0.82
tblVehicleEF	LHD2	0.56	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003

tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.94	19.19
tblVehicleEF	MCY	9.66	8.53
tblVehicleEF	MCY	188.92	223.45
tblVehicleEF	MCY	44.52	59.65
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003

tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.05	1.82
tblVehicleEF	MCY	2.2780e-003	2.2110e-003
tblVehicleEF	MCY	6.6300e-004	5.9000e-004
tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	3.23	3.24
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	0.53	0.37
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	18.24	18.47
tblVehicleEF	MCY	8.82	7.76
tblVehicleEF	MCY	188.92	222.09
tblVehicleEF	MCY	44.52	57.74
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	2.54	2.55

tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.83	1.61
tblVehicleEF	MCY	2.2650e-003	2.1980e-003
tblVehicleEF	MCY	6.4300e-004	5.7100e-004
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	3.16	3.17
tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.99	1.75
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.29
tblVehicleEF	MCY	9.80	8.66
tblVehicleEF	MCY	188.92	223.65
tblVehicleEF	MCY	44.52	59.99
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	2.61	2.62
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.09	1.86
tblVehicleEF	MCY	2.2800e-003	2.2130e-003
tblVehicleEF	MCY	6.6700e-004	5.9400e-004

tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.28	2.02
tblVehicleEF	MDV	0.01	6.5750e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.33	1.22
tblVehicleEF	MDV	2.48	3.11
tblVehicleEF	MDV	512.22	419.24
tblVehicleEF	MDV	103.14	83.18
tblVehicleEF	MDV	0.15	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.19	0.40
tblVehicleEF	MDV	5.1310e-003	4.1450e-003
tblVehicleEF	MDV	1.0750e-003	8.2300e-004
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04

tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.21	0.44
tblVehicleEF	MDV	0.01	6.9930e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.45	1.33
tblVehicleEF	MDV	2.12	2.64
tblVehicleEF	MDV	534.67	432.09
tblVehicleEF	MDV	103.14	82.28
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.17	0.36
tblVehicleEF	MDV	5.3570e-003	4.2720e-003
tblVehicleEF	MDV	1.0680e-003	8.1400e-004
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.18	0.39
tblVehicleEF	MDV	0.01	6.4430e-003
tblVehicleEF	MDV	0.01	0.08

tblVehicleEF	MDV	1.29	1.18
tblVehicleEF	MDV	2.56	3.21
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tblVehicleEF	MDV	103.14	83.37
tblVehicleEF	MDV	0.14	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MDV	5.0480e-003	4.0980e-003
tblVehicleEF	MDV	1.0760e-003	8.2500e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.21	0.45
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.24	1.21
tblVehicleEF	MH	5.78	2.15
tblVehicleEF	MH	1,130.03	1,501.21
tblVehicleEF	MH	60.43	19.42

tblVehicleEF	MH	1.08	1.11
tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.41	0.35
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0500e-004	1.9200e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.41	0.35
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.36	0.11
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.30	1.24
tblVehicleEF	MH	5.44	2.03
tblVehicleEF	MH	1,130.03	1,501.27
tblVehicleEF	MH	60.43	19.21
tblVehicleEF	MH	0.99	1.03
tblVehicleEF	MH	0.76	0.24

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9900e-004	1.9000e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.22	1.20
tblVehicleEF	MH	5.83	2.18
tblVehicleEF	MH	1,130.03	1,501.20
tblVehicleEF	MH	60.43	19.45
tblVehicleEF	MH	1.06	1.09
tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02

tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.54
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.9300e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.54
tblVehicleEF	MH	0.36	0.11
tblVehicleEF	MHD	0.02	4.3860e-003
tblVehicleEF	MHD	4.8560e-003	4.5970e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.37	0.39
tblVehicleEF	MHD	0.37	0.47
tblVehicleEF	MHD	6.14	1.42
tblVehicleEF	MHD	132.92	67.37
tblVehicleEF	MHD	1,150.98	1,069.65
tblVehicleEF	MHD	63.58	12.05
tblVehicleEF	MHD	0.49	0.48
tblVehicleEF	MHD	1.14	1.63
tblVehicleEF	MHD	9.96	1.29

tblVehicleEF	MHD	2.4800e-004	1.0770e-003
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.3800e-004	1.0300e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.37	0.07
tblVehicleEF	MHD	1.2810e-003	6.4000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.4300e-004	1.1900e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.07
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.41	0.07
tblVehicleEF	MHD	0.02	4.1570e-003
tblVehicleEF	MHD	4.9280e-003	4.6490e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	0.38	0.48
tblVehicleEF	MHD	5.83	1.35
tblVehicleEF	MHD	140.78	68.19

tblVehicleEF	MHD	1,150.98	1,069.66
tblVehicleEF	MHD	63.58	11.93
tblVehicleEF	MHD	0.51	0.48
tblVehicleEF	MHD	1.08	1.54
tblVehicleEF	MHD	9.92	1.29
tblVehicleEF	MHD	2.0900e-004	9.1000e-004
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.0000e-004	8.7100e-004
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	1.3550e-003	6.4800e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.3800e-004	1.1800e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
tblVehicleEF	MHD	0.06	0.07
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.39	0.07
tblVehicleEF	MHD	0.02	4.7150e-003
tblVehicleEF	MHD	4.8360e-003	4.5810e-003

tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.52	0.49
tblVehicleEF	MHD	0.37	0.47
tblVehicleEF	MHD	6.20	1.44
tblVehicleEF	MHD	122.05	66.24
tblVehicleEF	MHD	1,150.98	1,069.64
tblVehicleEF	MHD	63.58	12.07
tblVehicleEF	MHD	0.47	0.48
tblVehicleEF	MHD	1.12	1.60
tblVehicleEF	MHD	9.97	1.29
tblVehicleEF	MHD	3.0200e-004	1.3060e-003
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.8900e-004	1.2500e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.2400e-004	4.1600e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	0.38	0.07
tblVehicleEF	MHD	1.1790e-003	6.2900e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.4400e-004	1.1900e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.2400e-004	4.1600e-004

tblVehicleEF	MHD	0.05	0.07
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	0.41	0.07
tblVehicleEF	OBUS	0.01	8.4810e-003
tblVehicleEF	OBUS	7.7220e-003	7.0170e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.60
tblVehicleEF	OBUS	0.53	0.79
tblVehicleEF	OBUS	5.41	2.39
tblVehicleEF	OBUS	112.13	94.60
tblVehicleEF	OBUS	1,260.49	1,392.48
tblVehicleEF	OBUS	67.92	19.23
tblVehicleEF	OBUS	0.51	0.46
tblVehicleEF	OBUS	1.55	1.57
tblVehicleEF	OBUS	2.60	0.76
tblVehicleEF	OBUS	1.1400e-004	7.9300e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.0900e-004	7.5900e-004
tblVehicleEF	OBUS	7.0930e-003	0.02
tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.34	0.11
tblVehicleEF	OBUS	1.0820e-003	9.0000e-004
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	7.7400e-004	1.9000e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.37	0.13
tblVehicleEF	OBUS	0.01	8.5410e-003
tblVehicleEF	OBUS	7.8490e-003	7.1420e-003
tblVehicleEF	OBUS	0.03	0.02
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tblVehicleEF	OBUS	0.54	0.80
tblVehicleEF	OBUS	5.11	2.26
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tblVehicleEF	OBUS	1,260.49	1,392.51
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tblVehicleEF	OBUS	0.53	0.45
tblVehicleEF	OBUS	1.46	1.47
tblVehicleEF	OBUS	2.57	0.75
tblVehicleEF	OBUS	9.6000e-005	6.7400e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	9.2000e-005	6.4500e-004
tblVehicleEF	OBUS	7.0930e-003	0.02
tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	2.1010e-003	2.6890e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003

tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	1.1360e-003	8.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6900e-004	1.8800e-004
tblVehicleEF	OBUS	2.1010e-003	2.6890e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.35	0.12
tblVehicleEF	OBUS	0.01	8.4180e-003
tblVehicleEF	OBUS	7.6880e-003	6.9830e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.30	0.62
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tblVehicleEF	OBUS	104.30	94.79
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tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.3300e-004	9.1600e-004
tblVehicleEF	OBUS	7.0930e-003	0.02

tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
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tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.28
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	1.0070e-003	9.0200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7500e-004	1.9100e-004
tblVehicleEF	OBUS	1.4690e-003	1.9270e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.28
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tblVehicleEF	SBUS	12.12	0.88

tblVehicleEF	SBUS	9.3410e-003	4.1230e-003
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tblVehicleEF	SBUS	0.02	0.03
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tblVehicleEF	SBUS	8.9370e-003	3.9440e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
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tblVehicleEF	SBUS	3.3650e-003	9.0700e-004
tblVehicleEF	SBUS	0.03	7.8550e-003
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tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
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tblVehicleEF	SBUS	0.01	3.3550e-003
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tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
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tblVehicleEF	SBUS	0.01	0.05
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tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.1350e-003
tblVehicleEF	SBUS	0.06	5.5320e-003
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tblVehicleEF	SBUS	0.02	0.03
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tblVehicleEF	SBUS	7.5340e-003	3.3320e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	4.9570e-003	1.3200e-003
tblVehicleEF	SBUS	0.03	7.9970e-003
tblVehicleEF	SBUS	0.97	0.32
tblVehicleEF	SBUS	2.5080e-003	6.7400e-004
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tblVehicleEF	SBUS	0.13	0.11

tblVehicleEF	SBUS	0.01	0.05
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tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.0360e-003
tblVehicleEF	SBUS	0.07	6.3620e-003
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tblVehicleEF	SBUS	0.01	5.0060e-003
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tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	0.01	4.7890e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
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tblVehicleEF	SBUS	0.98	0.32
tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
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tblVehicleEF	SBUS	0.01	3.2500e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.8100e-004	5.2000e-005
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tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
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tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.22	45.07
tblVehicleEF	UBUS	8.87	0.71
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.53
tblVehicleEF	UBUS	9.98	0.48
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tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	9.8600e-003	1.5580e-003
tblVehicleEF	UBUS	1.1250e-003	8.4000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	3.56	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.74	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.27	45.07
tblVehicleEF	UBUS	7.69	0.62
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.38
tblVehicleEF	UBUS	9.41	0.48
tblVehicleEF	UBUS	15.31	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	0.86	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.62	0.04
tblVehicleEF	UBUS	9.8610e-003	1.5580e-003
tblVehicleEF	UBUS	1.1050e-003	8.3000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	3.57	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.21	45.07
tblVehicleEF	UBUS	9.08	0.72
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.56
tblVehicleEF	UBUS	9.79	0.48
tblVehicleEF	UBUS	15.38	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.03	0.07

tblVehicleEF	UBUS	0.69	0.05
tblVehicleEF	UBUS	9.8590e-003	1.5580e-003
tblVehicleEF	UBUS	1.1290e-003	8.5000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	3.55	5.92
tblVehicleEF	UBUS	0.03	0.07
tblVehicleEF	UBUS	0.75	0.05
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	13.58
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	5.95	13.58
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	8.17	13.58
tblVehicleTrips	WD_TR	42.70	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6005	61.1217	30.8192	0.1533	8.5047	1.4637	9.9563	3.4999	1.3712	4.8711	0.0000	15,995.7729	15,995.7729	1.5538	0.0000	16,034.6174
2022	11.8440	15.0915	15.6560	0.0353	0.9042	0.5993	1.5035	0.2436	0.5786	0.8222	0.0000	3,373.2814	3,373.2814	0.4107	0.0000	3,383.5491

Maximum	**11.8440**	**61.1217**	**30.8192**	**0.1533**	**8.5047**	**1.4637**	**9.9563**	**3.4999**	**1.3712**	**4.8711**	**0.0000**	**15,995.7729**	**15,995.7729**	**1.5538**	**0.0000**	**16,034.6174**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6005	61.1217	30.8192	0.1533	5.4839	1.4637	6.9355	1.9558	1.3712	3.3270	0.0000	15,995.7729	15,995.7729	1.5538	0.0000	16,034.6174
2022	11.8440	15.0915	15.6560	0.0353	0.9042	0.5993	1.5035	0.2436	0.5786	0.8222	0.0000	3,373.2814	3,373.2814	0.4107	0.0000	3,383.5491
Maximum	**11.8440**	**61.1217**	**30.8192**	**0.1533**	**5.4839**	**1.4637**	**6.9355**	**1.9558**	**1.3712**	**3.3270**	**0.0000**	**15,995.7729**	**15,995.7729**	**1.5538**	**0.0000**	**16,034.6174**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.11**	**0.00**	**26.36**	**41.25**	**0.00**	**27.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Energy	0.0858	0.7802	0.6554	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.2908	936.2908	0.0180	0.0172	941.8547
Mobile	5.3814	9.8056	45.1398	0.1184	11.1264	0.1211	11.2475	2.9715	0.1135	3.0850		12,256.6597	12,256.6597	0.9550		12,280.5336
Total	**7.5612**	**10.5862**	**45.8296**	**0.1231**	**11.1264**	**0.1805**	**11.3069**	**2.9715**	**0.1729**	**3.1444**		**13,193.0240**	**13,193.0240**	**0.9731**	**0.0172**	**13,222.4667**

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	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Energy	0.0479	0.4352	0.3656	2.6100e-003		0.0331	0.0331		0.0331	0.0331		522.2076	522.2076	0.0100	9.5700e-003	525.3108
Mobile	5.3814	9.8056	45.1398	0.1184	11.1264	0.1211	11.2475	2.9715	0.1135	3.0850		12,256.6597	12,256.6597	0.9550		12,280.5336
Total	**7.5232**	**10.2411**	**45.5397**	**0.1210**	**11.1264**	**0.1543**	**11.2807**	**2.9715**	**0.1467**	**3.1182**		**12,778.9408**	**12,778.9408**	**0.9652**	**9.5700e-003**	**12,805.9229**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.50**	**3.26**	**0.63**	**1.68**	**0.00**	**14.53**	**0.23**	**0.00**	**15.17**	**0.83**	**0.00**	**3.14**	**3.14**	**0.82**	**44.26**	**3.15**

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	1/4/2021	2/26/2021	5	40	
2	Grading	Grading	2/27/2021	6/18/2021	5	80	
3	Building Construction	Building Construction	5/4/2021	5/2/2022	5	260	
4	Paving	Paving	1/4/2021	2/26/2021	5	40	
5	Architectural Coating	Architectural Coating	5/4/2022	6/28/2022	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 147,075; Non-Residential Outdoor: 49,025; Striped Parking Area:

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	244.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	3,348.00	14.70	6.90	70.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	66.00	26.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3193	0.0000	1.3193	0.1998	0.0000	0.1998			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**1.3193**	**1.0409**	**2.3602**	**0.1998**	**0.9715**	**1.1712**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0521	1.6563	0.4068	4.6800e-003	0.1067	5.1000e-003	0.1118	0.0292	4.8800e-003	0.0341		507.3877	507.3877	0.0363		508.2946
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	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.1141**	**1.6987**	**0.8856**	**6.0800e-003**	**0.2520**	**6.2700e-003**	**0.2582**	**0.0678**	**5.9600e-003**	**0.0737**		**646.7803**	**646.7803**	**0.0404**		**647.7898**

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					0.5145	0.0000	0.5145	0.0779	0.0000	0.0779			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.5145**	**1.0409**	**1.5554**	**0.0779**	**0.9715**	**1.0494**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0521	1.6563	0.4068	4.6800e-003	0.1067	5.1000e-003	0.1118	0.0292	4.8800e-003	0.0341		507.3877	507.3877	0.0363		508.2946
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	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.1141**	**1.6987**	**0.8856**	**6.0800e-003**	**0.2520**	**6.2700e-003**	**0.2582**	**0.0678**	**5.9600e-003**	**0.0737**		**646.7803**	**646.7803**	**0.0404**		**647.7898**

3.3 Grading - 2021

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Fugitive Dust					4.9521	0.0000	4.9521	2.5314	0.0000	2.5314			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9521**	**0.6379**	**5.5900**	**2.5314**	**0.5869**	**3.1182**		**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

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	1.0638	30.3945	8.1333	0.1026	2.5590	0.1174	2.6763	0.7013	0.1123	0.8136		11,140.9239	11,140.9239	0.6868		11,158.0939
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	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**1.1019**	**30.4206**	**8.4279**	**0.1035**	**2.6484**	**0.1181**	**2.7665**	**0.7250**	**0.1130**	**0.8379**		**11,226.7040**	**11,226.7040**	**0.6893**		**11,243.9371**

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					1.9313	0.0000	1.9313	0.9872	0.0000	0.9872			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020

Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**1.9313**	**0.6379**	**2.5692**	**0.9872**	**0.5869**	**1.5741**	**0.0000**	**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

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	1.0638	30.3945	8.1333	0.1026	2.5590	0.1174	2.6763	0.7013	0.1123	0.8136		11,140.9239	11,140.9239	0.6868		11,158.0939
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	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	**1.1019**	**30.4206**	**8.4279**	**0.1035**	**2.6484**	**0.1181**	**2.7665**	**0.7250**	**0.1130**	**0.8379**		**11,226.7040**	**11,226.7040**	**0.6893**		**11,243.9371**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

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	0.0830	2.5191	0.7300	6.5100e-003	0.1665	5.3300e-003	0.1718	0.0479	5.0900e-003	0.0530		695.0984	695.0984	0.0449		696.2202
Worker	0.3147	0.2153	2.4305	7.1000e-003	0.7377	5.9600e-003	0.7437	0.1957	5.4900e-003	0.2011		707.6857	707.6857	0.0208		708.2063
Total	**0.3977**	**2.7344**	**3.1605**	**0.0136**	**0.9042**	**0.0113**	**0.9155**	**0.2436**	**0.0106**	**0.2542**		**1,402.7841**	**1,402.7841**	**0.0657**		**1,404.4265**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

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	0.0830	2.5191	0.7300	6.5100e-003	0.1665	5.3300e-003	0.1718	0.0479	5.0900e-003	0.0530		695.0984	695.0984	0.0449		696.2202
Worker	0.3147	0.2153	2.4305	7.1000e-003	0.7377	5.9600e-003	0.7437	0.1957	5.4900e-003	0.2011		707.6857	707.6857	0.0208		708.2063
Total	**0.3977**	**2.7344**	**3.1605**	**0.0136**	**0.9042**	**0.0113**	**0.9155**	**0.2436**	**0.0106**	**0.2542**		**1,402.7841**	**1,402.7841**	**0.0657**		**1,404.4265**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0779	2.3941	0.6910	6.4400e-003	0.1665	4.6600e-003	0.1711	0.0479	4.4600e-003	0.0524		688.9227	688.9227	0.0433		690.0052
Worker	0.2956	0.1944	2.2386	6.8500e-003	0.7377	5.7700e-003	0.7435	0.1957	5.3200e-003	0.2010		682.8158	682.8158	0.0188		683.2859
Total	**0.3735**	**2.5885**	**2.9296**	**0.0133**	**0.9042**	**0.0104**	**0.9146**	**0.2436**	**9.7800e-003**	**0.2534**		**1,371.7386**	**1,371.7386**	**0.0621**		**1,373.2910**

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0779	2.3941	0.6910	6.4400e-003	0.1665	4.6600e-003	0.1711	0.0479	4.4600e-003	0.0524		688.9227	688.9227	0.0433		690.0052
Worker	0.2956	0.1944	2.2386	6.8500e-003	0.7377	5.7700e-003	0.7435	0.1957	5.3200e-003	0.2010		682.8158	682.8158	0.0188		683.2859
Total	**0.3735**	**2.5885**	**2.9296**	**0.0133**	**0.9042**	**0.0104**	**0.9146**	**0.2436**	**9.7800e-003**	**0.2534**		**1,371.7386**	**1,371.7386**	**0.0621**		**1,373.2910**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0164					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

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	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

Paving	0.0164					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

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	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
Total	**0.0620**	**0.0424**	**0.4787**	**1.4000e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**139.3926**	**139.3926**	**4.1000e-003**		**139.4952**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.5812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**11.7858**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive 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	0.0582	0.0383	0.4409	1.3500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.4940	134.4940	3.7000e-003		134.5866
Total	**0.0582**	**0.0383**	**0.4409**	**1.3500e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**134.4940**	**134.4940**	**3.7000e-003**		**134.5866**

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	11.5812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**11.7858**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0582	0.0383	0.4409	1.3500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.4940	134.4940	3.7000e-003		134.5866
Total	**0.0582**	**0.0383**	**0.4409**	**1.3500e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**134.4940**	**134.4940**	**3.7000e-003**		**134.5866**

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	5.3814	9.8056	45.1398	0.1184	11.1264	0.1211	11.2475	2.9715	0.1135	3.0850		12,256.6597	12,256.6597	0.9550		12,280.5336
Unmitigated	5.3814	9.8056	45.1398	0.1184	11.1264	0.1211	11.2475	2.9715	0.1135	3.0850		12,256.6597	12,256.6597	0.9550		12,280.5336

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Hotel	2,199.96	2,199.96	2199.96	5,249,481	5,249,481
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	2,199.96	2,199.96	2,199.96	5,249,481	5,249,481

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Regional Shopping Center	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0479	0.4352	0.3656	2.6100e-003		0.0331	0.0331		0.0331	0.0331		522.2076	522.2076	0.0100	9.5700e-003	525.3108
NaturalGas Unmitigated	0.0858	0.7802	0.6554	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.2908	936.2908	0.0180	0.0172	941.8547

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					
Enclosed Parking Structure	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
General Office Building	231.981	2.5000e-003	0.0227	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.2919	27.2919	5.2000e-004	5.0000e-004	27.4540
Hotel	7688.98	0.0829	0.7538	0.6332	4.5200e-003		0.0573	0.0573		0.0573	0.0573		904.5864	904.5864	0.0173	0.0166	909.9619
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
Regional Shopping Center	37.5068	4.0000e-004	3.6800e-003	3.0900e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4126	4.4126	8.0000e-005	8.0000e-005	4.4388
Total		**0.0858**	**0.7802**	**0.6554**	**4.6800e-003**		**0.0593**	**0.0593**		**0.0593**	**0.0593**		**936.2908**	**936.2908**	**0.0179**	**0.0172**	**941.8547**

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					
Enclosed Parking Structure	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
General Office Building	0.11861	1.2800e-003	0.0116	9.7700e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		13.9541	13.9541	2.7000e-004	2.6000e-004	14.0370
Hotel	4.29191	0.0463	0.4208	0.3535	2.5200e-003		0.0320	0.0320		0.0320	0.0320		504.9309	504.9309	9.6800e-003	9.2600e-003	507.9314
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

Regional Shopping Center	0.0282427	3.0000e-004	2.7700e-003	2.3300e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3227	3.3227	6.0000e-005	6.0000e-005	3.3424
Total		**0.0479**	**0.4352**	**0.3656**	**2.6100e-003**		**0.0331**	**0.0331**		**0.0331**	**0.0331**		**522.2076**	**522.2076**	**0.0100**	**9.5800e-003**	**525.3108**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Unmitigated	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784

Total	**2.0939**	**3.1000e-004**	**0.0344**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**		**0.0736**	**0.0736**	**1.9000e-004**		**0.0784**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Total	**2.0939**	**3.1000e-004**	**0.0344**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**		**0.0736**	**0.0736**	**1.9000e-004**		**0.0784**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

600 S. Sepulveda Blvd. Hotel - Manhattan Beach - Los Angeles-South Coast County, Summer

600 S. Sepulveda Blvd. Hotel - Manhattan Beach

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	162.00	Room	0.65	81,941.00	0
Regional Shopping Center	6.85	1000sqft	0.16	6,845.00	0
General Office Building	9.26	1000sqft	0.21	9,264.00	0
Enclosed Parking Structure	130.00	Space	0.25	52,000.00	0
Parking Lot	28.00	Space	0.25	11,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2019 Sustainability Report pg: https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf

Land Use - Total Lot Acreage is 1.52.

Construction Phase - Planned Construction Schedule

Grading - Soil export.

Demolition -

Trips and VMT - Trip length to dump site.

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Poject would generate 2,200 trips.

Area Coating - SCAQMD Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 402 & Rule 403

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Project would nclude Solar Panels, LID design, extensive use of LED lighting and power-efficient devises. The 2019 Title 24 requirement shows a 53% in energy usage with solar panels

Water Mitigation - 2019 Title 24 and CalGreen.

Waste Mitigation - AB 341

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
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tblConstructionPhase	PhaseEndDate	2/8/2021	6/18/2021
tblConstructionPhase	PhaseEndDate	11/29/2021	2/26/2021
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tblConstructionPhase	PhaseStartDate	2/9/2021	5/4/2021
tblConstructionPhase	PhaseStartDate	2/3/2021	2/27/2021
tblConstructionPhase	PhaseStartDate	11/16/2021	1/4/2021
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tblLandUse	LotAcreage	1.17	0.25
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tblProjectCharacteristics	CO2IntensityFactor	702.44	534
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
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tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.9980e-003	3.4980e-003
tblVehicleEF	LDT2	8.0000e-004	6.6900e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.31
tblVehicleEF	LDT2	7.0750e-003	4.8890e-003
tblVehicleEF	LDT2	6.5470e-003	0.07
tblVehicleEF	LDT2	0.81	0.99
tblVehicleEF	LDT2	1.39	2.74
tblVehicleEF	LDT2	375.62	336.92
tblVehicleEF	LDT2	78.07	68.50
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.11	0.29
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	3.7630e-003	3.3330e-003
tblVehicleEF	LDT2	8.0400e-004	6.7800e-004

tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.10	0.35
tblVehicleEF	LHD1	5.5970e-003	5.5830e-003
tblVehicleEF	LHD1	0.01	5.7240e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.84	0.65
tblVehicleEF	LHD1	2.79	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.21
tblVehicleEF	LHD1	33.34	12.43
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.95	0.65
tblVehicleEF	LHD1	1.01	0.33
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003

tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8500e-004	1.2300e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD1	5.5970e-003	5.5950e-003
tblVehicleEF	LHD1	0.01	5.8420e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.85	0.67
tblVehicleEF	LHD1	2.66	1.09
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.23
tblVehicleEF	LHD1	33.34	12.33
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.89	0.61
tblVehicleEF	LHD1	0.96	0.32
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004

tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9310e-003	6.5070e-003
tblVehicleEF	LHD1	3.8300e-004	1.2200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.5970e-003	5.5810e-003
tblVehicleEF	LHD1	0.01	5.6940e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.83	0.65
tblVehicleEF	LHD1	2.81	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.20
tblVehicleEF	LHD1	33.34	12.44
tblVehicleEF	LHD1	0.07	0.05

tblVehicleEF	LHD1	0.94	0.64
tblVehicleEF	LHD1	1.01	0.34
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8600e-004	1.2300e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD2	4.0020e-003	3.9120e-003
tblVehicleEF	LHD2	4.2980e-003	3.9650e-003
tblVehicleEF	LHD2	8.5190e-003	0.01

tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.37	0.76
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.56
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.65	0.84
tblVehicleEF	LHD2	0.55	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003
tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02

tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9200e-003
tblVehicleEF	LHD2	4.3570e-003	4.0120e-003
tblVehicleEF	LHD2	8.2260e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.35	0.44
tblVehicleEF	LHD2	1.31	0.73
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.36
tblVehicleEF	LHD2	27.88	9.50
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.61	0.79
tblVehicleEF	LHD2	0.53	0.22
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003
tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.34

tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0300e-004	9.4000e-005
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.34
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9100e-003
tblVehicleEF	LHD2	4.2820e-003	3.9540e-003
tblVehicleEF	LHD2	8.5780e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.38	0.77
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.57
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.64	0.82
tblVehicleEF	LHD2	0.56	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003

tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.94	19.19
tblVehicleEF	MCY	9.66	8.53
tblVehicleEF	MCY	188.92	223.45
tblVehicleEF	MCY	44.52	59.65
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003

tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.05	1.82
tblVehicleEF	MCY	2.2780e-003	2.2110e-003
tblVehicleEF	MCY	6.6300e-004	5.9000e-004
tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	3.23	3.24
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	0.53	0.37
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	18.24	18.47
tblVehicleEF	MCY	8.82	7.76
tblVehicleEF	MCY	188.92	222.09
tblVehicleEF	MCY	44.52	57.74
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	2.54	2.55

tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.83	1.61
tblVehicleEF	MCY	2.2650e-003	2.1980e-003
tblVehicleEF	MCY	6.4300e-004	5.7100e-004
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	3.16	3.17
tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.99	1.75
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.29
tblVehicleEF	MCY	9.80	8.66
tblVehicleEF	MCY	188.92	223.65
tblVehicleEF	MCY	44.52	59.99
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	2.61	2.62
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.09	1.86
tblVehicleEF	MCY	2.2800e-003	2.2130e-003
tblVehicleEF	MCY	6.6700e-004	5.9400e-004

tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.28	2.02
tblVehicleEF	MDV	0.01	6.5750e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.33	1.22
tblVehicleEF	MDV	2.48	3.11
tblVehicleEF	MDV	512.22	419.24
tblVehicleEF	MDV	103.14	83.18
tblVehicleEF	MDV	0.15	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.19	0.40
tblVehicleEF	MDV	5.1310e-003	4.1450e-003
tblVehicleEF	MDV	1.0750e-003	8.2300e-004
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04

tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.21	0.44
tblVehicleEF	MDV	0.01	6.9930e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.45	1.33
tblVehicleEF	MDV	2.12	2.64
tblVehicleEF	MDV	534.67	432.09
tblVehicleEF	MDV	103.14	82.28
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.17	0.36
tblVehicleEF	MDV	5.3570e-003	4.2720e-003
tblVehicleEF	MDV	1.0680e-003	8.1400e-004
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.18	0.39
tblVehicleEF	MDV	0.01	6.4430e-003
tblVehicleEF	MDV	0.01	0.08

tblVehicleEF	MDV	1.29	1.18
tblVehicleEF	MDV	2.56	3.21
tblVehicleEF	MDV	503.99	414.54
tblVehicleEF	MDV	103.14	83.37
tblVehicleEF	MDV	0.14	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MDV	5.0480e-003	4.0980e-003
tblVehicleEF	MDV	1.0760e-003	8.2500e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.21	0.45
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.24	1.21
tblVehicleEF	MH	5.78	2.15
tblVehicleEF	MH	1,130.03	1,501.21
tblVehicleEF	MH	60.43	19.42

tblVehicleEF	MH	1.08	1.11
tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.41	0.35
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0500e-004	1.9200e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.41	0.35
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.36	0.11
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.30	1.24
tblVehicleEF	MH	5.44	2.03
tblVehicleEF	MH	1,130.03	1,501.27
tblVehicleEF	MH	60.43	19.21
tblVehicleEF	MH	0.99	1.03
tblVehicleEF	MH	0.76	0.24

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9900e-004	1.9000e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.22	1.20
tblVehicleEF	MH	5.83	2.18
tblVehicleEF	MH	1,130.03	1,501.20
tblVehicleEF	MH	60.43	19.45
tblVehicleEF	MH	1.06	1.09
tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02

tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.54
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.9300e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.54
tblVehicleEF	MH	0.36	0.11
tblVehicleEF	MHD	0.02	4.3860e-003
tblVehicleEF	MHD	4.8560e-003	4.5970e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.37	0.39
tblVehicleEF	MHD	0.37	0.47
tblVehicleEF	MHD	6.14	1.42
tblVehicleEF	MHD	132.92	67.37
tblVehicleEF	MHD	1,150.98	1,069.65
tblVehicleEF	MHD	63.58	12.05
tblVehicleEF	MHD	0.49	0.48
tblVehicleEF	MHD	1.14	1.63
tblVehicleEF	MHD	9.96	1.29

tblVehicleEF	MHD	2.4800e-004	1.0770e-003
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.3800e-004	1.0300e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.37	0.07
tblVehicleEF	MHD	1.2810e-003	6.4000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.4300e-004	1.1900e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.07
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.41	0.07
tblVehicleEF	MHD	0.02	4.1570e-003
tblVehicleEF	MHD	4.9280e-003	4.6490e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	0.38	0.48
tblVehicleEF	MHD	5.83	1.35
tblVehicleEF	MHD	140.78	68.19

tblVehicleEF	MHD	1,150.98	1,069.66
tblVehicleEF	MHD	63.58	11.93
tblVehicleEF	MHD	0.51	0.48
tblVehicleEF	MHD	1.08	1.54
tblVehicleEF	MHD	9.92	1.29
tblVehicleEF	MHD	2.0900e-004	9.1000e-004
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.0000e-004	8.7100e-004
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	1.3550e-003	6.4800e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.3800e-004	1.1800e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
tblVehicleEF	MHD	0.06	0.07
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.39	0.07
tblVehicleEF	MHD	0.02	4.7150e-003
tblVehicleEF	MHD	4.8360e-003	4.5810e-003

tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.52	0.49
tblVehicleEF	MHD	0.37	0.47
tblVehicleEF	MHD	6.20	1.44
tblVehicleEF	MHD	122.05	66.24
tblVehicleEF	MHD	1,150.98	1,069.64
tblVehicleEF	MHD	63.58	12.07
tblVehicleEF	MHD	0.47	0.48
tblVehicleEF	MHD	1.12	1.60
tblVehicleEF	MHD	9.97	1.29
tblVehicleEF	MHD	3.0200e-004	1.3060e-003
tblVehicleEF	MHD	5.1090e-003	0.03
tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.8900e-004	1.2500e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.2400e-004	4.1600e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	0.38	0.07
tblVehicleEF	MHD	1.1790e-003	6.2900e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.4400e-004	1.1900e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.2400e-004	4.1600e-004

tblVehicleEF	MHD	0.05	0.07
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	0.41	0.07
tblVehicleEF	OBUS	0.01	8.4810e-003
tblVehicleEF	OBUS	7.7220e-003	7.0170e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.60
tblVehicleEF	OBUS	0.53	0.79
tblVehicleEF	OBUS	5.41	2.39
tblVehicleEF	OBUS	112.13	94.60
tblVehicleEF	OBUS	1,260.49	1,392.48
tblVehicleEF	OBUS	67.92	19.23
tblVehicleEF	OBUS	0.51	0.46
tblVehicleEF	OBUS	1.55	1.57
tblVehicleEF	OBUS	2.60	0.76
tblVehicleEF	OBUS	1.1400e-004	7.9300e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.0900e-004	7.5900e-004
tblVehicleEF	OBUS	7.0930e-003	0.02
tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.34	0.11
tblVehicleEF	OBUS	1.0820e-003	9.0000e-004
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	7.7400e-004	1.9000e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.37	0.13
tblVehicleEF	OBUS	0.01	8.5410e-003
tblVehicleEF	OBUS	7.8490e-003	7.1420e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.58
tblVehicleEF	OBUS	0.54	0.80
tblVehicleEF	OBUS	5.11	2.26
tblVehicleEF	OBUS	117.81	94.47
tblVehicleEF	OBUS	1,260.49	1,392.51
tblVehicleEF	OBUS	67.92	19.00
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tblVehicleEF	OBUS	1.46	1.47
tblVehicleEF	OBUS	2.57	0.75
tblVehicleEF	OBUS	9.6000e-005	6.7400e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	9.2000e-005	6.4500e-004
tblVehicleEF	OBUS	7.0930e-003	0.02
tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	2.1010e-003	2.6890e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003

tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	1.1360e-003	8.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6900e-004	1.8800e-004
tblVehicleEF	OBUS	2.1010e-003	2.6890e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.35	0.12
tblVehicleEF	OBUS	0.01	8.4180e-003
tblVehicleEF	OBUS	7.6880e-003	6.9830e-003
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tblVehicleEF	OBUS	0.53	0.79
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tblVehicleEF	OBUS	104.30	94.79
tblVehicleEF	OBUS	1,260.49	1,392.48
tblVehicleEF	OBUS	67.92	19.27
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tblVehicleEF	OBUS	1.52	1.54
tblVehicleEF	OBUS	2.61	0.76
tblVehicleEF	OBUS	1.3900e-004	9.5800e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.3300e-004	9.1600e-004
tblVehicleEF	OBUS	7.0930e-003	0.02

tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	1.4690e-003	1.9270e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.06	0.06
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tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	1.0070e-003	9.0200e-004
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tblVehicleEF	OBUS	1.4690e-003	1.9270e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.28
tblVehicleEF	OBUS	0.37	0.13
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.0580e-003
tblVehicleEF	SBUS	0.06	6.2120e-003
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tblVehicleEF	SBUS	0.72	0.59
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tblVehicleEF	SBUS	1,121.00	351.72
tblVehicleEF	SBUS	1,079.30	1,109.67
tblVehicleEF	SBUS	55.06	5.24
tblVehicleEF	SBUS	9.20	3.22
tblVehicleEF	SBUS	4.17	4.87
tblVehicleEF	SBUS	12.12	0.88

tblVehicleEF	SBUS	9.3410e-003	4.1230e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	8.9370e-003	3.9440e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	3.3650e-003	9.0700e-004
tblVehicleEF	SBUS	0.03	7.8550e-003
tblVehicleEF	SBUS	0.97	0.32
tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3550e-003
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tblVehicleEF	SBUS	6.7700e-004	5.2000e-005
tblVehicleEF	SBUS	3.3650e-003	9.0700e-004
tblVehicleEF	SBUS	0.03	7.8550e-003
tblVehicleEF	SBUS	1.40	0.46
tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.42	0.04
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.1350e-003
tblVehicleEF	SBUS	0.06	5.5320e-003
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tblVehicleEF	SBUS	0.73	0.60

tblVehicleEF	SBUS	5.94	0.69
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tblVehicleEF	SBUS	1,079.30	1,109.69
tblVehicleEF	SBUS	55.06	4.98
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tblVehicleEF	SBUS	12.09	0.87
tblVehicleEF	SBUS	7.8750e-003	3.4830e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	7.5340e-003	3.3320e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	4.9570e-003	1.3200e-003
tblVehicleEF	SBUS	0.03	7.9970e-003
tblVehicleEF	SBUS	0.97	0.32
tblVehicleEF	SBUS	2.5080e-003	6.7400e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.03
tblVehicleEF	SBUS	0.01	3.4310e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5400e-004	4.9000e-005
tblVehicleEF	SBUS	4.9570e-003	1.3200e-003
tblVehicleEF	SBUS	0.03	7.9970e-003
tblVehicleEF	SBUS	1.40	0.45
tblVehicleEF	SBUS	2.5080e-003	6.7400e-004
tblVehicleEF	SBUS	0.13	0.11

tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.37	0.03
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.0360e-003
tblVehicleEF	SBUS	0.07	6.3620e-003
tblVehicleEF	SBUS	8.31	2.83
tblVehicleEF	SBUS	0.72	0.58
tblVehicleEF	SBUS	7.56	0.88
tblVehicleEF	SBUS	1,051.30	340.60
tblVehicleEF	SBUS	1,079.30	1,109.67
tblVehicleEF	SBUS	55.06	5.29
tblVehicleEF	SBUS	8.80	3.13
tblVehicleEF	SBUS	4.10	4.79
tblVehicleEF	SBUS	12.13	0.88
tblVehicleEF	SBUS	0.01	5.0060e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	0.01	4.7890e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	3.4320e-003	9.2000e-004
tblVehicleEF	SBUS	0.03	8.2560e-003
tblVehicleEF	SBUS	0.98	0.32
tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.39	0.04
tblVehicleEF	SBUS	0.01	3.2500e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.8100e-004	5.2000e-005
tblVehicleEF	SBUS	3.4320e-003	9.2000e-004
tblVehicleEF	SBUS	0.03	8.2560e-003
tblVehicleEF	SBUS	1.41	0.46
tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.22	45.07
tblVehicleEF	UBUS	8.87	0.71
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.53
tblVehicleEF	UBUS	9.98	0.48
tblVehicleEF	UBUS	15.36	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	9.8600e-003	1.5580e-003
tblVehicleEF	UBUS	1.1250e-003	8.4000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	3.56	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.74	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.27	45.07
tblVehicleEF	UBUS	7.69	0.62
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.38
tblVehicleEF	UBUS	9.41	0.48
tblVehicleEF	UBUS	15.31	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	0.86	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.62	0.04
tblVehicleEF	UBUS	9.8610e-003	1.5580e-003
tblVehicleEF	UBUS	1.1050e-003	8.3000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	3.57	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.21	45.07
tblVehicleEF	UBUS	9.08	0.72
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.56
tblVehicleEF	UBUS	9.79	0.48
tblVehicleEF	UBUS	15.38	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.03	0.07

tblVehicleEF	UBUS	0.69	0.05
tblVehicleEF	UBUS	9.8590e-003	1.5580e-003
tblVehicleEF	UBUS	1.1290e-003	8.5000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	3.55	5.92
tblVehicleEF	UBUS	0.03	0.07
tblVehicleEF	UBUS	0.75	0.05
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	13.58
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	5.95	13.58
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	8.17	13.58
tblVehicleTrips	WD_TR	42.70	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.5528	60.2497	30.8839	0.1545	8.5047	1.4636	9.9556	3.4999	1.3706	4.8705	0.0000	16,125.9534	16,125.9534	1.5442	0.0000	16,164.5593
2022	11.8380	15.0793	15.8034	0.0360	0.9042	0.5992	1.5033	0.2436	0.5785	0.8221	0.0000	3,435.1563	3,435.1563	0.4093	0.0000	3,445.3883

Maximum	**11.8380**	**60.2497**	**30.8839**	**0.1545**	**8.5047**	**1.4636**	**9.9556**	**3.4999**	**1.3706**	**4.8705**	**0.0000**	**16,125.9534**	**16,125.9534**	**1.5442**	**0.0000**	**16,164.5593**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.5528	60.2497	30.8839	0.1545	5.4839	1.4636	6.9348	1.9558	1.3706	3.3263	0.0000	16,125.9534	16,125.9534	1.5442	0.0000	16,164.5593
2022	11.8380	15.0793	15.8034	0.0360	0.9042	0.5992	1.5033	0.2436	0.5785	0.8221	0.0000	3,435.1563	3,435.1563	0.4093	0.0000	3,445.3883
Maximum	**11.8380**	**60.2497**	**30.8839**	**0.1545**	**5.4839**	**1.4636**	**6.9348**	**1.9558**	**1.3706**	**3.3263**	**0.0000**	**16,125.9534**	**16,125.9534**	**1.5442**	**0.0000**	**16,164.5593**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.11**	**0.00**	**26.36**	**41.25**	**0.00**	**27.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Energy	0.0858	0.7802	0.6554	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.2908	936.2908	0.0180	0.0172	941.8547
Mobile	5.2231	9.2495	46.4239	0.1233	11.1264	0.1209	11.2473	2.9715	0.1133	3.0848		12,742.7341	12,742.7341	0.9312		12,766.0144
Total	**7.4028**	**10.0301**	**47.1136**	**0.1279**	**11.1264**	**0.1803**	**11.3067**	**2.9715**	**0.1727**	**3.1442**		**13,679.0985**	**13,679.0985**	**0.9494**	**0.0172**	**13,707.9475**

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	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Energy	0.0479	0.4352	0.3656	2.6100e-003		0.0331	0.0331		0.0331	0.0331		522.2076	522.2076	0.0100	9.5700e-003	525.3108
Mobile	5.2231	9.2495	46.4239	0.1233	11.1264	0.1209	11.2473	2.9715	0.1133	3.0848		12,742.7341	12,742.7341	0.9312		12,766.0144
Total	**7.3649**	**9.6850**	**46.8238**	**0.1259**	**11.1264**	**0.1541**	**11.2805**	**2.9715**	**0.1465**	**3.1180**		**13,265.0153**	**13,265.0153**	**0.9414**	**9.5700e-003**	**13,291.4037**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.51**	**3.44**	**0.62**	**1.62**	**0.00**	**14.55**	**0.23**	**0.00**	**15.19**	**0.83**	**0.00**	**3.03**	**3.03**	**0.84**	**44.26**	**3.04**

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	1/4/2021	2/26/2021	5	40	
2	Grading	Grading	2/27/2021	6/18/2021	5	80	
3	Building Construction	Building Construction	5/4/2021	5/2/2022	5	260	
4	Paving	Paving	1/4/2021	2/26/2021	5	40	
5	Architectural Coating	Architectural Coating	5/4/2022	6/28/2022	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 147,075; Non-Residential Outdoor: 49,025; Striped Parking Area:

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	244.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	3,348.00	14.70	6.90	70.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	66.00	26.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3193	0.0000	1.3193	0.1998	0.0000	0.1998			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**1.3193**	**1.0409**	**2.3602**	**0.1998**	**0.9715**	**1.1712**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0509	1.6363	0.3837	4.7600e-003	0.1067	5.0200e-003	0.1117	0.0292	4.8100e-003	0.0340		516.3322	516.3322	0.0350		517.2082
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	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.1066**	**1.6746**	**0.9073**	**6.2500e-003**	**0.2520**	**6.1900e-003**	**0.2582**	**0.0678**	**5.8900e-003**	**0.0737**		**664.3723**	**664.3723**	**0.0394**		**665.3574**

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					0.5145	0.0000	0.5145	0.0779	0.0000	0.0779			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.5145**	**1.0409**	**1.5554**	**0.0779**	**0.9715**	**1.0494**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0509	1.6363	0.3837	4.7600e-003	0.1067	5.0200e-003	0.1117	0.0292	4.8100e-003	0.0340		516.3322	516.3322	0.0350		517.2082
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	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.1066**	**1.6746**	**0.9073**	**6.2500e-003**	**0.2520**	**6.1900e-003**	**0.2582**	**0.0678**	**5.8900e-003**	**0.0737**		**664.3723**	**664.3723**	**0.0394**		**665.3574**

3.3 Grading - 2021

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Fugitive Dust					4.9521	0.0000	4.9521	2.5314	0.0000	2.5314			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**4.9521**	**0.6379**	**5.5900**	**2.5314**	**0.5869**	**3.1182**		**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

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	1.0557	29.5406	8.0126	0.1032	2.5590	0.1169	2.6758	0.7013	0.1118	0.8131		11,202.2893	11,202.2893	0.6785		11,219.2529
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	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**1.0900**	**29.5642**	**8.3348**	**0.1041**	**2.6484**	**0.1176**	**2.7659**	**0.7250**	**0.1125**	**0.8374**		**11,293.3909**	**11,293.3909**	**0.6812**		**11,310.4216**

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					1.9313	0.0000	1.9313	0.9872	0.0000	0.9872			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020

Total	**1.2884**	**14.3307**	**6.3314**	**0.0141**	**1.9313**	**0.6379**	**2.5692**	**0.9872**	**0.5869**	**1.5741**	**0.0000**	**1,365.0648**	**1,365.0648**	**0.4415**		**1,376.1020**

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	1.0557	29.5406	8.0126	0.1032	2.5590	0.1169	2.6758	0.7013	0.1118	0.8131		11,202.2893	11,202.2893	0.6785		11,219.2529
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	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	**1.0900**	**29.5642**	**8.3348**	**0.1041**	**2.6484**	**0.1176**	**2.7659**	**0.7250**	**0.1125**	**0.8374**		**11,293.3909**	**11,293.3909**	**0.6812**		**11,310.4216**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

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	0.0790	2.5243	0.6599	6.6900e-003	0.1665	5.1600e-003	0.1716	0.0479	4.9400e-003	0.0529		714.6896	714.6896	0.0421		715.7423
Worker	0.2829	0.1945	2.6583	7.5500e-003	0.7377	5.9600e-003	0.7437	0.1957	5.4900e-003	0.2011		751.5881	751.5881	0.0222		752.1417
Total	**0.3619**	**2.7188**	**3.3182**	**0.0142**	**0.9042**	**0.0111**	**0.9153**	**0.2436**	**0.0104**	**0.2540**		**1,466.2777**	**1,466.2777**	**0.0643**		**1,467.8840**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

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	0.0790	2.5243	0.6599	6.6900e-003	0.1665	5.1600e-003	0.1716	0.0479	4.9400e-003	0.0529		714.6896	714.6896	0.0421		715.7423
Worker	0.2829	0.1945	2.6583	7.5500e-003	0.7377	5.9600e-003	0.7437	0.1957	5.4900e-003	0.2011		751.5881	751.5881	0.0222		752.1417
Total	**0.3619**	**2.7188**	**3.3182**	**0.0142**	**0.9042**	**0.0111**	**0.9153**	**0.2436**	**0.0104**	**0.2540**		**1,466.2777**	**1,466.2777**	**0.0643**		**1,467.8840**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0742	2.4006	0.6244	6.6200e-003	0.1665	4.5100e-003	0.1710	0.0479	4.3200e-003	0.0522		708.4633	708.4633	0.0407		709.4797
Worker	0.2650	0.1757	2.4526	7.2800e-003	0.7377	5.7700e-003	0.7435	0.1957	5.3200e-003	0.2010		725.1501	725.1501	0.0200		725.6505
Total	**0.3392**	**2.5762**	**3.0770**	**0.0139**	**0.9042**	**0.0103**	**0.9145**	**0.2436**	**9.6400e-003**	**0.2532**		**1,433.6134**	**1,433.6134**	**0.0607**		**1,435.1302**

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0742	2.4006	0.6244	6.6200e-003	0.1665	4.5100e-003	0.1710	0.0479	4.3200e-003	0.0522		708.4633	708.4633	0.0407		709.4797
Worker	0.2650	0.1757	2.4526	7.2800e-003	0.7377	5.7700e-003	0.7435	0.1957	5.3200e-003	0.2010		725.1501	725.1501	0.0200		725.6505
Total	**0.3392**	**2.5762**	**3.0770**	**0.0139**	**0.9042**	**0.0103**	**0.9145**	**0.2436**	**9.6400e-003**	**0.2532**		**1,433.6134**	**1,433.6134**	**0.0607**		**1,435.1302**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0164					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

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	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

Paving	0.0164					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7903**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

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	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
Total	**0.0557**	**0.0383**	**0.5236**	**1.4900e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.0401**	**148.0401**	**4.3600e-003**		**148.1491**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.5812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**11.7858**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive 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	0.0522	0.0346	0.4831	1.4300e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		142.8326	142.8326	3.9400e-003		142.9312
Total	**0.0522**	**0.0346**	**0.4831**	**1.4300e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**142.8326**	**142.8326**	**3.9400e-003**		**142.9312**

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	11.5812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**11.7858**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0522	0.0346	0.4831	1.4300e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		142.8326	142.8326	3.9400e-003		142.9312
Total	**0.0522**	**0.0346**	**0.4831**	**1.4300e-003**	**0.1453**	**1.1400e-003**	**0.1465**	**0.0385**	**1.0500e-003**	**0.0396**		**142.8326**	**142.8326**	**3.9400e-003**		**142.9312**

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	5.2231	9.2495	46.4239	0.1233	11.1264	0.1209	11.2473	2.9715	0.1133	3.0848		12,742.7341	12,742.7341	0.9312		12,766.0144
Unmitigated	5.2231	9.2495	46.4239	0.1233	11.1264	0.1209	11.2473	2.9715	0.1133	3.0848		12,742.7341	12,742.7341	0.9312		12,766.0144

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Hotel	2,199.96	2,199.96	2199.96	5,249,481	5,249,481
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	2,199.96	2,199.96	2,199.96	5,249,481	5,249,481

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Regional Shopping Center	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0479	0.4352	0.3656	2.6100e-003		0.0331	0.0331		0.0331	0.0331		522.2076	522.2076	0.0100	9.5700e-003	525.3108
NaturalGas Unmitigated	0.0858	0.7802	0.6554	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.2908	936.2908	0.0180	0.0172	941.8547

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					
Enclosed Parking Structure	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
General Office Building	231.981	2.5000e-003	0.0227	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.2919	27.2919	5.2000e-004	5.0000e-004	27.4540
Hotel	7688.98	0.0829	0.7538	0.6332	4.5200e-003		0.0573	0.0573		0.0573	0.0573		904.5864	904.5864	0.0173	0.0166	909.9619
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
Regional Shopping Center	37.5068	4.0000e-004	3.6800e-003	3.0900e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4126	4.4126	8.0000e-005	8.0000e-005	4.4388
Total		**0.0858**	**0.7802**	**0.6554**	**4.6800e-003**		**0.0593**	**0.0593**		**0.0593**	**0.0593**		**936.2908**	**936.2908**	**0.0179**	**0.0172**	**941.8547**

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					
Enclosed Parking Structure	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
General Office Building	0.11861	1.2800e-003	0.0116	9.7700e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		13.9541	13.9541	2.7000e-004	2.6000e-004	14.0370
Hotel	4.29191	0.0463	0.4208	0.3535	2.5200e-003		0.0320	0.0320		0.0320	0.0320		504.9309	504.9309	9.6800e-003	9.2600e-003	507.9314
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

Regional Shopping Center	0.0282427	3.0000e-004	2.7700e-003	2.3300e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3227	3.3227	6.0000e-005	6.0000e-005	3.3424
Total		**0.0479**	**0.4352**	**0.3656**	**2.6100e-003**		**0.0331**	**0.0331**		**0.0331**	**0.0331**		**522.2076**	**522.2076**	**0.0100**	**9.5800e-003**	**525.3108**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Unmitigated	2.0939	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784

Total	**2.0939**	**3.1000e-004**	**0.0344**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**		**0.0736**	**0.0736**	**1.9000e-004**		**0.0784**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0344	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0736	0.0736	1.9000e-004		0.0784
Total	**2.0939**	**3.1000e-004**	**0.0344**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**		**0.0736**	**0.0736**	**1.9000e-004**		**0.0784**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

600 S. Sepulveda Blvd. Hotel - Manhattan Beach

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	162.00	Room	0.65	81,941.00	0
Regional Shopping Center	6.85	1000sqft	0.16	6,845.00	0
General Office Building	9.26	1000sqft	0.21	9,264.00	0
Enclosed Parking Structure	130.00	Space	0.25	52,000.00	0
Parking Lot	28.00	Space	0.25	11,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2019 Sustainability Report pg: https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf

Land Use - Total Lot Acreage is 1.52.

Construction Phase - Planned Construction Schedule

Grading - Soil export.

Demolition -

Trips and VMT - Trip length to dump site.

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Poject would generate 2,200 trips.

Area Coating - SCAQMD Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 402 & Rule 403

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation - Project would nclude Solar Panels, LID design, extensive use of LED lighting and power-efficient devises. The 2019 Title 24 requirement shows a 53% in energy usage with solar panels.

Water Mitigation - 2019 Title 24 and CalGreen.

Waste Mitigation - AB 341

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Vehicle Emission Factors - EMFAC2017 LA County 2022

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	EF_Parking	100.00	50.00
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tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
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tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.26	0.20
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	0.17	0.70
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	3.4330e-003	3.1530e-003
tblVehicleEF	LDT1	7.4300e-004	6.2700e-004
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.26	0.20
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.17	0.70
tblVehicleEF	LDT1	0.21	0.39
tblVehicleEF	LDT1	0.02	8.2630e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.82	1.59
tblVehicleEF	LDT1	2.36	1.93

tblVehicleEF	LDT1	356.02	331.08
tblVehicleEF	LDT1	69.44	62.64
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.15	0.24
tblVehicleEF	LDT1	3.5390e-003	2.7170e-003
tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.20	0.20
tblVehicleEF	LDT1	0.28	0.21
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.16	0.65
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	3.5840e-003	3.2760e-003
tblVehicleEF	LDT1	7.3600e-004	6.2000e-004
tblVehicleEF	LDT1	0.20	0.20
tblVehicleEF	LDT1	0.28	0.21
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.16	0.65
tblVehicleEF	LDT1	0.18	0.35
tblVehicleEF	LDT1	0.02	7.6410e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.63	1.41
tblVehicleEF	LDT1	2.87	2.35
tblVehicleEF	LDT1	335.69	314.09
tblVehicleEF	LDT1	69.44	63.47
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.16	0.26

tblVehicleEF	LDT1	3.5390e-003	2.7170e-003
tblVehicleEF	LDT1	3.4320e-003	2.6330e-003
tblVehicleEF	LDT1	3.2590e-003	2.5000e-003
tblVehicleEF	LDT1	3.1560e-003	2.4210e-003
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.30	0.23
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	0.20	0.83
tblVehicleEF	LDT1	0.20	0.37
tblVehicleEF	LDT1	3.3780e-003	3.1080e-003
tblVehicleEF	LDT1	7.4500e-004	6.2800e-004
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.30	0.23
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.83
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT2	7.2180e-003	4.9910e-003
tblVehicleEF	LDT2	6.3970e-003	0.07
tblVehicleEF	LDT2	0.84	1.02
tblVehicleEF	LDT2	1.35	2.65
tblVehicleEF	LDT2	381.91	341.38
tblVehicleEF	LDT2	78.07	68.34
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	0.11	0.28
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003

tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.41
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	3.8260e-003	3.3770e-003
tblVehicleEF	LDT2	8.0300e-004	6.7600e-004
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.41
tblVehicleEF	LDT2	0.09	0.34
tblVehicleEF	LDT2	7.6530e-003	5.3200e-003
tblVehicleEF	LDT2	5.6920e-003	0.06
tblVehicleEF	LDT2	0.92	1.12
tblVehicleEF	LDT2	1.15	2.26
tblVehicleEF	LDT2	399.04	353.53
tblVehicleEF	LDT2	78.07	67.60
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.9980e-003	3.4980e-003
tblVehicleEF	LDT2	8.0000e-004	6.6900e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.31
tblVehicleEF	LDT2	7.0750e-003	4.8890e-003
tblVehicleEF	LDT2	6.5470e-003	0.07
tblVehicleEF	LDT2	0.81	0.99
tblVehicleEF	LDT2	1.39	2.74
tblVehicleEF	LDT2	375.62	336.92
tblVehicleEF	LDT2	78.07	68.50
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.11	0.29
tblVehicleEF	LDT2	2.1510e-003	1.9050e-003
tblVehicleEF	LDT2	2.3580e-003	1.8880e-003
tblVehicleEF	LDT2	1.9790e-003	1.7530e-003
tblVehicleEF	LDT2	2.1690e-003	1.7360e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	3.7630e-003	3.3330e-003
tblVehicleEF	LDT2	8.0400e-004	6.7800e-004

tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.48
tblVehicleEF	LDT2	0.10	0.35
tblVehicleEF	LHD1	5.5970e-003	5.5830e-003
tblVehicleEF	LHD1	0.01	5.7240e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.84	0.65
tblVehicleEF	LHD1	2.79	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.21
tblVehicleEF	LHD1	33.34	12.43
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.95	0.65
tblVehicleEF	LHD1	1.01	0.33
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003

tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8500e-004	1.2300e-004
tblVehicleEF	LHD1	3.1460e-003	2.5670e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9140e-003	1.5640e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.56
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD1	5.5970e-003	5.5950e-003
tblVehicleEF	LHD1	0.01	5.8420e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.85	0.67
tblVehicleEF	LHD1	2.66	1.09
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.23
tblVehicleEF	LHD1	33.34	12.33
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.89	0.61
tblVehicleEF	LHD1	0.96	0.32
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004

tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9310e-003	6.5070e-003
tblVehicleEF	LHD1	3.8300e-004	1.2200e-004
tblVehicleEF	LHD1	4.7100e-003	3.8550e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.6900e-003	2.2100e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.30	0.54
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.5970e-003	5.5810e-003
tblVehicleEF	LHD1	0.01	5.6940e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	0.83	0.65
tblVehicleEF	LHD1	2.81	1.14
tblVehicleEF	LHD1	8.92	8.89
tblVehicleEF	LHD1	603.81	666.20
tblVehicleEF	LHD1	33.34	12.44
tblVehicleEF	LHD1	0.07	0.05

tblVehicleEF	LHD1	0.94	0.64
tblVehicleEF	LHD1	1.01	0.34
tblVehicleEF	LHD1	8.2600e-004	7.5700e-004
tblVehicleEF	LHD1	0.01	9.6790e-003
tblVehicleEF	LHD1	9.1270e-003	6.4420e-003
tblVehicleEF	LHD1	1.0140e-003	2.8500e-004
tblVehicleEF	LHD1	7.9000e-004	7.2400e-004
tblVehicleEF	LHD1	2.5160e-003	2.4200e-003
tblVehicleEF	LHD1	8.7050e-003	6.1330e-003
tblVehicleEF	LHD1	9.3300e-004	2.6200e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.0000e-005	8.6000e-005
tblVehicleEF	LHD1	5.9300e-003	6.5060e-003
tblVehicleEF	LHD1	3.8600e-004	1.2300e-004
tblVehicleEF	LHD1	3.3080e-003	2.7050e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8850e-003	1.5420e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.60
tblVehicleEF	LHD1	0.29	0.09
tblVehicleEF	LHD2	4.0020e-003	3.9120e-003
tblVehicleEF	LHD2	4.2980e-003	3.9650e-003
tblVehicleEF	LHD2	8.5190e-003	0.01

tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.37	0.76
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.56
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.65	0.84
tblVehicleEF	LHD2	0.55	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003
tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1380e-003	1.5680e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02

tblVehicleEF	LHD2	7.4500e-004	9.7100e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9200e-003
tblVehicleEF	LHD2	4.3570e-003	4.0120e-003
tblVehicleEF	LHD2	8.2260e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.35	0.44
tblVehicleEF	LHD2	1.31	0.73
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.36
tblVehicleEF	LHD2	27.88	9.50
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.61	0.79
tblVehicleEF	LHD2	0.53	0.22
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003
tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.08	0.34

tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0300e-004	9.4000e-005
tblVehicleEF	LHD2	1.6960e-003	2.3400e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0400e-003	1.3640e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.34
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	4.0020e-003	3.9100e-003
tblVehicleEF	LHD2	4.2820e-003	3.9540e-003
tblVehicleEF	LHD2	8.5780e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.34	0.44
tblVehicleEF	LHD2	1.38	0.77
tblVehicleEF	LHD2	13.57	13.45
tblVehicleEF	LHD2	617.83	667.35
tblVehicleEF	LHD2	27.88	9.57
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.64	0.82
tblVehicleEF	LHD2	0.56	0.23
tblVehicleEF	LHD2	1.1620e-003	1.2520e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.8510e-003	0.01
tblVehicleEF	LHD2	4.6900e-004	1.6200e-004
tblVehicleEF	LHD2	1.1110e-003	1.1980e-003
tblVehicleEF	LHD2	2.6540e-003	2.6330e-003
tblVehicleEF	LHD2	8.4540e-003	9.5770e-003

tblVehicleEF	LHD2	4.3100e-004	1.4900e-004
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.12	0.06
tblVehicleEF	LHD2	1.3300e-004	1.2900e-004
tblVehicleEF	LHD2	6.0210e-003	6.4600e-003
tblVehicleEF	LHD2	3.0400e-004	9.5000e-005
tblVehicleEF	LHD2	1.1610e-003	1.6250e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	9.4300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.09	0.38
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.94	19.19
tblVehicleEF	MCY	9.66	8.53
tblVehicleEF	MCY	188.92	223.45
tblVehicleEF	MCY	44.52	59.65
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003

tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.05	1.82
tblVehicleEF	MCY	2.2780e-003	2.2110e-003
tblVehicleEF	MCY	6.6300e-004	5.9000e-004
tblVehicleEF	MCY	1.06	1.09
tblVehicleEF	MCY	0.63	0.66
tblVehicleEF	MCY	0.65	0.67
tblVehicleEF	MCY	3.23	3.24
tblVehicleEF	MCY	0.60	1.99
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	0.53	0.37
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	18.24	18.47
tblVehicleEF	MCY	8.82	7.76
tblVehicleEF	MCY	188.92	222.09
tblVehicleEF	MCY	44.52	57.74
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	2.54	2.55

tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.83	1.61
tblVehicleEF	MCY	2.2650e-003	2.1980e-003
tblVehicleEF	MCY	6.4300e-004	5.7100e-004
tblVehicleEF	MCY	1.73	1.77
tblVehicleEF	MCY	0.70	0.73
tblVehicleEF	MCY	1.07	1.10
tblVehicleEF	MCY	3.16	3.17
tblVehicleEF	MCY	0.56	1.87
tblVehicleEF	MCY	1.99	1.75
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.29
tblVehicleEF	MCY	9.80	8.66
tblVehicleEF	MCY	188.92	223.65
tblVehicleEF	MCY	44.52	59.99
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.4360e-003	2.4320e-003
tblVehicleEF	MCY	3.8630e-003	3.2970e-003
tblVehicleEF	MCY	2.2770e-003	2.2730e-003
tblVehicleEF	MCY	3.6360e-003	3.1040e-003
tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	2.61	2.62
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.09	1.86
tblVehicleEF	MCY	2.2800e-003	2.2130e-003
tblVehicleEF	MCY	6.6700e-004	5.9400e-004

tblVehicleEF	MCY	1.16	1.18
tblVehicleEF	MCY	0.82	0.85
tblVehicleEF	MCY	0.62	0.64
tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.69	2.29
tblVehicleEF	MCY	2.28	2.02
tblVehicleEF	MDV	0.01	6.5750e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.33	1.22
tblVehicleEF	MDV	2.48	3.11
tblVehicleEF	MDV	512.22	419.24
tblVehicleEF	MDV	103.14	83.18
tblVehicleEF	MDV	0.15	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.19	0.40
tblVehicleEF	MDV	5.1310e-003	4.1450e-003
tblVehicleEF	MDV	1.0750e-003	8.2300e-004
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.15	0.14
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04

tblVehicleEF	MDV	0.09	0.43
tblVehicleEF	MDV	0.21	0.44
tblVehicleEF	MDV	0.01	6.9930e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.45	1.33
tblVehicleEF	MDV	2.12	2.64
tblVehicleEF	MDV	534.67	432.09
tblVehicleEF	MDV	103.14	82.28
tblVehicleEF	MDV	0.13	0.10
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.17	0.36
tblVehicleEF	MDV	5.3570e-003	4.2720e-003
tblVehicleEF	MDV	1.0680e-003	8.1400e-004
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.08	0.40
tblVehicleEF	MDV	0.18	0.39
tblVehicleEF	MDV	0.01	6.4430e-003
tblVehicleEF	MDV	0.01	0.08

tblVehicleEF	MDV	1.29	1.18
tblVehicleEF	MDV	2.56	3.21
tblVehicleEF	MDV	503.99	414.54
tblVehicleEF	MDV	103.14	83.37
tblVehicleEF	MDV	0.14	0.11
tblVehicleEF	MDV	0.22	0.35
tblVehicleEF	MDV	2.3560e-003	2.0820e-003
tblVehicleEF	MDV	2.5140e-003	2.0580e-003
tblVehicleEF	MDV	2.1720e-003	1.9190e-003
tblVehicleEF	MDV	2.3120e-003	1.8920e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.19	0.41
tblVehicleEF	MDV	5.0480e-003	4.0980e-003
tblVehicleEF	MDV	1.0760e-003	8.2500e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.16	0.15
tblVehicleEF	MDV	0.07	0.09
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.21	0.45
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.24	1.21
tblVehicleEF	MH	5.78	2.15
tblVehicleEF	MH	1,130.03	1,501.21
tblVehicleEF	MH	60.43	19.42

tblVehicleEF	MH	1.08	1.11
tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.41	0.35
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0500e-004	1.9200e-004
tblVehicleEF	MH	0.95	0.84
tblVehicleEF	MH	0.07	0.06
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tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.46
tblVehicleEF	MH	0.36	0.11
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.30	1.24
tblVehicleEF	MH	5.44	2.03
tblVehicleEF	MH	1,130.03	1,501.27
tblVehicleEF	MH	60.43	19.21
tblVehicleEF	MH	0.99	1.03
tblVehicleEF	MH	0.76	0.24

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9900e-004	1.9000e-004
tblVehicleEF	MH	1.41	1.24
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.58	0.50
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.43
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.22	1.20
tblVehicleEF	MH	5.83	2.18
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tblVehicleEF	MH	60.43	19.45
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tblVehicleEF	MH	0.80	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02

tblVehicleEF	MH	1.1280e-003	2.8400e-004
tblVehicleEF	MH	3.2020e-003	3.2450e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.0370e-003	2.6100e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.54
tblVehicleEF	MH	0.33	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.9300e-004
tblVehicleEF	MH	1.08	0.94
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.42	0.36
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.02	1.54
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tblVehicleEF	MHD	4.8560e-003	4.5970e-003
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tblVehicleEF	MHD	1.14	1.63
tblVehicleEF	MHD	9.96	1.29

tblVehicleEF	MHD	2.4800e-004	1.0770e-003
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tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.3800e-004	1.0300e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.37	0.07
tblVehicleEF	MHD	1.2810e-003	6.4000e-004
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tblVehicleEF	MHD	7.4300e-004	1.1900e-004
tblVehicleEF	MHD	1.1350e-003	6.6200e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.4200e-004	4.2600e-004
tblVehicleEF	MHD	0.05	0.07
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.41	0.07
tblVehicleEF	MHD	0.02	4.1570e-003
tblVehicleEF	MHD	4.9280e-003	4.6490e-003
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tblVehicleEF	MHD	9.92	1.29
tblVehicleEF	MHD	2.0900e-004	9.1000e-004
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tblVehicleEF	MHD	8.4300e-004	1.3700e-004
tblVehicleEF	MHD	2.0000e-004	8.7100e-004
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	1.3550e-003	6.4800e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.3800e-004	1.1800e-004
tblVehicleEF	MHD	1.7000e-003	9.9300e-004
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.0480e-003	6.0400e-004
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tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.39	0.07
tblVehicleEF	MHD	0.02	4.7150e-003
tblVehicleEF	MHD	4.8360e-003	4.5810e-003

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tblVehicleEF	MHD	9.97	1.29
tblVehicleEF	MHD	3.0200e-004	1.3060e-003
tblVehicleEF	MHD	5.1090e-003	0.03
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tblVehicleEF	MHD	2.8900e-004	1.2500e-003
tblVehicleEF	MHD	4.8830e-003	0.03
tblVehicleEF	MHD	7.7600e-004	1.2600e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
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tblVehicleEF	MHD	0.03	0.02
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tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	0.38	0.07
tblVehicleEF	MHD	1.1790e-003	6.2900e-004
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tblVehicleEF	MHD	7.4400e-004	1.1900e-004
tblVehicleEF	MHD	1.1690e-003	6.8600e-004
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tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.2400e-004	4.1600e-004

tblVehicleEF	MHD	0.05	0.07
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tblVehicleEF	MHD	0.41	0.07
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tblVehicleEF	OBUS	1.55	1.57
tblVehicleEF	OBUS	2.60	0.76
tblVehicleEF	OBUS	1.1400e-004	7.9300e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.0900e-004	7.5900e-004
tblVehicleEF	OBUS	7.0930e-003	0.02
tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.34	0.11
tblVehicleEF	OBUS	1.0820e-003	9.0000e-004
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	7.7400e-004	1.9000e-004
tblVehicleEF	OBUS	1.4340e-003	1.8440e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6800e-004	9.4300e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.37	0.13
tblVehicleEF	OBUS	0.01	8.5410e-003
tblVehicleEF	OBUS	7.8490e-003	7.1420e-003
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tblVehicleEF	OBUS	2.57	0.75
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tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003

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tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	1.1360e-003	8.9900e-004
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tblVehicleEF	OBUS	2.1010e-003	2.6890e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0830e-003	1.3250e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.35	0.12
tblVehicleEF	OBUS	0.01	8.4180e-003
tblVehicleEF	OBUS	7.6880e-003	6.9830e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.30	0.62
tblVehicleEF	OBUS	0.53	0.79
tblVehicleEF	OBUS	5.47	2.42
tblVehicleEF	OBUS	104.30	94.79
tblVehicleEF	OBUS	1,260.49	1,392.48
tblVehicleEF	OBUS	67.92	19.27
tblVehicleEF	OBUS	0.49	0.47
tblVehicleEF	OBUS	1.52	1.54
tblVehicleEF	OBUS	2.61	0.76
tblVehicleEF	OBUS	1.3900e-004	9.5800e-004
tblVehicleEF	OBUS	7.4300e-003	0.02
tblVehicleEF	OBUS	8.0700e-004	1.9700e-004
tblVehicleEF	OBUS	1.3300e-004	9.1600e-004
tblVehicleEF	OBUS	7.0930e-003	0.02

tblVehicleEF	OBUS	7.4200e-004	1.8100e-004
tblVehicleEF	OBUS	1.4690e-003	1.9270e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.28
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	1.0070e-003	9.0200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7500e-004	1.9100e-004
tblVehicleEF	OBUS	1.4690e-003	1.9270e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	7.4700e-004	9.2500e-004
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	0.04	0.28
tblVehicleEF	OBUS	0.37	0.13
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.0580e-003
tblVehicleEF	SBUS	0.06	6.2120e-003
tblVehicleEF	SBUS	8.15	2.77
tblVehicleEF	SBUS	0.72	0.59
tblVehicleEF	SBUS	7.31	0.85
tblVehicleEF	SBUS	1,121.00	351.72
tblVehicleEF	SBUS	1,079.30	1,109.67
tblVehicleEF	SBUS	55.06	5.24
tblVehicleEF	SBUS	9.20	3.22
tblVehicleEF	SBUS	4.17	4.87
tblVehicleEF	SBUS	12.12	0.88

tblVehicleEF	SBUS	9.3410e-003	4.1230e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	8.9370e-003	3.9440e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	3.3650e-003	9.0700e-004
tblVehicleEF	SBUS	0.03	7.8550e-003
tblVehicleEF	SBUS	0.97	0.32
tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3550e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7700e-004	5.2000e-005
tblVehicleEF	SBUS	3.3650e-003	9.0700e-004
tblVehicleEF	SBUS	0.03	7.8550e-003
tblVehicleEF	SBUS	1.40	0.46
tblVehicleEF	SBUS	1.7650e-003	4.8200e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.42	0.04
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.1350e-003
tblVehicleEF	SBUS	0.06	5.5320e-003
tblVehicleEF	SBUS	8.04	2.74
tblVehicleEF	SBUS	0.73	0.60

tblVehicleEF	SBUS	5.94	0.69
tblVehicleEF	SBUS	1,171.46	359.77
tblVehicleEF	SBUS	1,079.30	1,109.69
tblVehicleEF	SBUS	55.06	4.98
tblVehicleEF	SBUS	9.50	3.29
tblVehicleEF	SBUS	3.93	4.59
tblVehicleEF	SBUS	12.09	0.87
tblVehicleEF	SBUS	7.8750e-003	3.4830e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	7.5340e-003	3.3320e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	4.9570e-003	1.3200e-003
tblVehicleEF	SBUS	0.03	7.9970e-003
tblVehicleEF	SBUS	0.97	0.32
tblVehicleEF	SBUS	2.5080e-003	6.7400e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.03
tblVehicleEF	SBUS	0.01	3.4310e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5400e-004	4.9000e-005
tblVehicleEF	SBUS	4.9570e-003	1.3200e-003
tblVehicleEF	SBUS	0.03	7.9970e-003
tblVehicleEF	SBUS	1.40	0.45
tblVehicleEF	SBUS	2.5080e-003	6.7400e-004
tblVehicleEF	SBUS	0.13	0.11

tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.37	0.03
tblVehicleEF	SBUS	0.84	0.07
tblVehicleEF	SBUS	0.01	7.0360e-003
tblVehicleEF	SBUS	0.07	6.3620e-003
tblVehicleEF	SBUS	8.31	2.83
tblVehicleEF	SBUS	0.72	0.58
tblVehicleEF	SBUS	7.56	0.88
tblVehicleEF	SBUS	1,051.30	340.60
tblVehicleEF	SBUS	1,079.30	1,109.67
tblVehicleEF	SBUS	55.06	5.29
tblVehicleEF	SBUS	8.80	3.13
tblVehicleEF	SBUS	4.10	4.79
tblVehicleEF	SBUS	12.13	0.88
tblVehicleEF	SBUS	0.01	5.0060e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	8.1500e-004	5.1000e-005
tblVehicleEF	SBUS	0.01	4.7890e-003
tblVehicleEF	SBUS	2.6670e-003	2.6820e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	7.5000e-004	4.7000e-005
tblVehicleEF	SBUS	3.4320e-003	9.2000e-004
tblVehicleEF	SBUS	0.03	8.2560e-003
tblVehicleEF	SBUS	0.98	0.32
tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
tblVehicleEF	SBUS	0.10	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.39	0.04
tblVehicleEF	SBUS	0.01	3.2500e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.8100e-004	5.2000e-005
tblVehicleEF	SBUS	3.4320e-003	9.2000e-004
tblVehicleEF	SBUS	0.03	8.2560e-003
tblVehicleEF	SBUS	1.41	0.46
tblVehicleEF	SBUS	1.6940e-003	4.6300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.43	0.04
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.22	45.07
tblVehicleEF	UBUS	8.87	0.71
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.53
tblVehicleEF	UBUS	9.98	0.48
tblVehicleEF	UBUS	15.36	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	9.8600e-003	1.5580e-003
tblVehicleEF	UBUS	1.1250e-003	8.4000e-005
tblVehicleEF	UBUS	4.1440e-003	6.1100e-004
tblVehicleEF	UBUS	0.07	8.4590e-003
tblVehicleEF	UBUS	2.3870e-003	4.9000e-004
tblVehicleEF	UBUS	3.56	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.74	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.27	45.07
tblVehicleEF	UBUS	7.69	0.62
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.38
tblVehicleEF	UBUS	9.41	0.48
tblVehicleEF	UBUS	15.31	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	0.86	0.08
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.62	0.04
tblVehicleEF	UBUS	9.8610e-003	1.5580e-003
tblVehicleEF	UBUS	1.1050e-003	8.3000e-005
tblVehicleEF	UBUS	5.9080e-003	8.9300e-004
tblVehicleEF	UBUS	0.07	8.7350e-003
tblVehicleEF	UBUS	3.2830e-003	6.8000e-004
tblVehicleEF	UBUS	3.57	5.92
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.68	0.05
tblVehicleEF	UBUS	2.61	5.80
tblVehicleEF	UBUS	0.05	0.01
tblVehicleEF	UBUS	11.21	45.07
tblVehicleEF	UBUS	9.08	0.72
tblVehicleEF	UBUS	1,968.89	1,988.80
tblVehicleEF	UBUS	96.56	8.56
tblVehicleEF	UBUS	9.79	0.48
tblVehicleEF	UBUS	15.38	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.13	3.2120e-003
tblVehicleEF	UBUS	1.0870e-003	4.6000e-005
tblVehicleEF	UBUS	0.26	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9830e-003
tblVehicleEF	UBUS	0.13	3.0700e-003
tblVehicleEF	UBUS	9.9900e-004	4.2000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	0.85	0.08
tblVehicleEF	UBUS	0.03	0.07

tblVehicleEF	UBUS	0.69	0.05
tblVehicleEF	UBUS	9.8590e-003	1.5580e-003
tblVehicleEF	UBUS	1.1290e-003	8.5000e-005
tblVehicleEF	UBUS	4.7000e-003	5.9500e-004
tblVehicleEF	UBUS	0.08	9.0200e-003
tblVehicleEF	UBUS	2.5010e-003	4.6500e-004
tblVehicleEF	UBUS	3.55	5.92
tblVehicleEF	UBUS	0.03	0.07
tblVehicleEF	UBUS	0.75	0.05
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	13.58
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	5.95	13.58
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	8.17	13.58
tblVehicleTrips	WD_TR	42.70	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3436	3.8254	2.4819	8.7400e-003	0.4136	0.1200	0.5336	0.1567	0.1136	0.2703	0.0000	808.8683	808.8683	0.0932	0.0000	811.1979
2022	0.3224	0.6800	0.7198	1.6200e-003	0.0410	0.0274	0.0684	0.0111	0.0265	0.0376	0.0000	140.0606	140.0606	0.0164	0.0000	140.4700

Maximum	**0.3436**	**3.8254**	**2.4819**	**8.7400e-003**	**0.4136**	**0.1200**	**0.5336**	**0.1567**	**0.1136**	**0.2703**	**0.0000**	**808.8683**	**808.8683**	**0.0932**	**0.0000**	**811.1979**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3436	3.8254	2.4819	8.7400e-003	0.2766	0.1200	0.3966	0.0925	0.1136	0.2061	0.0000	808.8680	808.8680	0.0932	0.0000	811.1976
2022	0.3224	0.6800	0.7198	1.6200e-003	0.0410	0.0274	0.0684	0.0111	0.0265	0.0376	0.0000	140.0605	140.0605	0.0164	0.0000	140.4699
Maximum	**0.3436**	**3.8254**	**2.4819**	**8.7400e-003**	**0.2766**	**0.1200**	**0.3966**	**0.0925**	**0.1136**	**0.2061**	**0.0000**	**808.8680**	**808.8680**	**0.0932**	**0.0000**	**811.1976**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.12**	**0.00**	**22.75**	**38.27**	**0.00**	**20.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-4-2021**	**4-3-2021**	1.2250	1.2250
2	**4-4-2021**	**7-3-2021**	1.6597	1.6597
3	**7-4-2021**	**10-3-2021**	0.6089	0.6089
4	**10-4-2021**	**1-3-2022**	0.6089	0.6089
5	**1-4-2022**	**4-3-2022**	0.5500	0.5500
6	**4-4-2022**	**7-3-2022**	0.4424	0.4424
		Highest	1.6597	1.6597

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	0.3820	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-003
Energy	0.0157	0.1424	0.1196	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	457.1607	457.1607	2.9700e-003	2.8400e-003	458.0818
Mobile	0.9303	1.8006	8.2981	0.0218	1.9858	0.0220	2.0078	0.5312	0.0206	0.5518	0.0000	2,042.7171	2,042.7171	0.1569	0.0000	2,046.6406
Waste						0.0000	0.0000		0.0000	0.0000	21.2085	0.0000	21.2085	1.2534	0.0000	52.5432
Water						0.0000	0.0000		0.0000	0.0000	1.9866	24.5284	26.5150	0.2040	4.8200e-003	33.0519
Total	**1.3279**	**1.9430**	**8.4220**	**0.0226**	**1.9858**	**0.0328**	**2.0186**	**0.5312**	**0.0315**	**0.5626**	**23.1951**	**2,524.4146**	**2,547.6097**	**1.6174**	**7.6600e-003**	**2,590.3263**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3820	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-003
Energy	8.7400e-003	0.0794	0.0667	4.8000e-004		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	326.3198	326.3198	1.6600e-003	1.5900e-003	326.8336
Mobile	0.9303	1.8006	8.2981	0.0218	1.9858	0.0220	2.0078	0.5312	0.0206	0.5518	0.0000	2,042.7171	2,042.7171	0.1569	0.0000	2,046.6406
Waste						0.0000	0.0000		0.0000	0.0000	5.3021	0.0000	5.3021	0.3134	0.0000	13.1358
Water						0.0000	0.0000		0.0000	0.0000	1.5893	20.2870	21.8763	0.1632	3.8500e-003	27.1058
Total	**1.3210**	**1.8800**	**8.3691**	**0.0222**	**1.9858**	**0.0281**	**2.0138**	**0.5312**	**0.0267**	**0.5579**	**6.8914**	**2,389.3323**	**2,396.2237**	**0.6352**	**5.4400e-003**	**2,413.7246**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.52**	**3.24**	**0.63**	**1.64**	**0.00**	**14.56**	**0.24**	**0.00**	**15.20**	**0.85**	**70.29**	**5.35**	**5.94**	**60.73**	**28.98**	**6.82**

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	1/4/2021	2/26/2021	5	40	
2	Grading	Grading	2/27/2021	6/18/2021	5	80	
3	Building Construction	Building Construction	5/4/2021	5/2/2022	5	260	
4	Paving	Paving	1/4/2021	2/26/2021	5	40	
5	Architectural Coating	Architectural Coating	5/4/2022	6/28/2022	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 147,075; Non-Residential Outdoor: 49,025; Striped Parking Area:

OffRoad Equipment

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

Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	244.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	3,348.00	14.70	6.90	70.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	66.00	26.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0264	0.0000	0.0264	3.9900e-003	0.0000	3.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.3939	0.2899	4.8000e-004		0.0208	0.0208		0.0194	0.0194	0.0000	42.1427	42.1427	0.0108	0.0000	42.4121

Total	**0.0399**	**0.3939**	**0.2899**	**4.8000e-004**	**0.0264**	**0.0208**	**0.0472**	**3.9900e-003**	**0.0194**	**0.0234**	**0.0000**	**42.1427**	**42.1427**	**0.0108**	**0.0000**	**42.4121**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0300e-003	0.0338	7.8700e-003	9.0000e-005	2.1000e-003	1.0000e-004	2.2000e-003	5.8000e-004	1.0000e-004	6.7000e-004	0.0000	9.3000	9.3000	6.5000e-004	0.0000	9.3162
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	1.1200e-003	8.7000e-004	9.8300e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5712	2.5712	8.0000e-005	0.0000	2.5731
Total	**2.1500e-003**	**0.0346**	**0.0177**	**1.2000e-004**	**4.9500e-003**	**1.2000e-004**	**5.0700e-003**	**1.3400e-003**	**1.2000e-004**	**1.4500e-003**	**0.0000**	**11.8712**	**11.8712**	**7.3000e-004**	**0.0000**	**11.8892**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0103	0.0000	0.0103	1.5600e-003	0.0000	1.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.3939	0.2899	4.8000e-004		0.0208	0.0208		0.0194	0.0194	0.0000	42.1426	42.1426	0.0108	0.0000	42.4120
Total	**0.0399**	**0.3939**	**0.2899**	**4.8000e-004**	**0.0103**	**0.0208**	**0.0311**	**1.5600e-003**	**0.0194**	**0.0210**	**0.0000**	**42.1426**	**42.1426**	**0.0108**	**0.0000**	**42.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0300e-003	0.0338	7.8700e-003	9.0000e-005	2.1000e-003	1.0000e-004	2.2000e-003	5.8000e-004	1.0000e-004	6.7000e-004	0.0000	9.3000	9.3000	6.5000e-004	0.0000	9.3162
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	1.1200e-003	8.7000e-004	9.8300e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5712	2.5712	8.0000e-005	0.0000	2.5731
Total	**2.1500e-003**	**0.0346**	**0.0177**	**1.2000e-004**	**4.9500e-003**	**1.2000e-004**	**5.0700e-003**	**1.3400e-003**	**1.2000e-004**	**1.4500e-003**	**0.0000**	**11.8712**	**11.8712**	**7.3000e-004**	**0.0000**	**11.8892**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1981	0.0000	0.1981	0.1013	0.0000	0.1013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0515	0.5732	0.2533	5.6000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	49.5346	49.5346	0.0160	0.0000	49.9352
Total	**0.0515**	**0.5732**	**0.2533**	**5.6000e-004**	**0.1981**	**0.0255**	**0.2236**	**0.1013**	**0.0235**	**0.1247**	**0.0000**	**49.5346**	**49.5346**	**0.0160**	**0.0000**	**49.9352**

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	0.0424	1.2380	0.3221	4.1200e-003	0.1006	4.6800e-003	0.1053	0.0276	4.4800e-003	0.0321	0.0000	405.5666	405.5666	0.0248	0.0000	406.1853
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	1.3800e-003	1.0700e-003	0.0121	4.0000e-005	3.5100e-003	3.0000e-005	3.5400e-003	9.3000e-004	3.0000e-005	9.6000e-004	0.0000	3.1645	3.1645	9.0000e-005	0.0000	3.1669
Total	**0.0437**	**1.2390**	**0.3342**	**4.1600e-003**	**0.1041**	**4.7100e-003**	**0.1088**	**0.0286**	**4.5100e-003**	**0.0331**	**0.0000**	**408.7311**	**408.7311**	**0.0248**	**0.0000**	**409.3522**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0773	0.0000	0.0773	0.0395	0.0000	0.0395	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0515	0.5732	0.2533	5.6000e-004		0.0255	0.0255		0.0235	0.0235	0.0000	49.5346	49.5346	0.0160	0.0000	49.9351
Total	**0.0515**	**0.5732**	**0.2533**	**5.6000e-004**	**0.0773**	**0.0255**	**0.1028**	**0.0395**	**0.0235**	**0.0630**	**0.0000**	**49.5346**	**49.5346**	**0.0160**	**0.0000**	**49.9351**

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	0.0424	1.2380	0.3221	4.1200e-003	0.1006	4.6800e-003	0.1053	0.0276	4.4800e-003	0.0321	0.0000	405.5666	405.5666	0.0248	0.0000	406.1853
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	1.3800e-003	1.0700e-003	0.0121	4.0000e-005	3.5100e-003	3.0000e-005	3.5400e-003	9.3000e-004	3.0000e-005	9.6000e-004	0.0000	3.1645	3.1645	9.0000e-005	0.0000	3.1669
Total	**0.0437**	**1.2390**	**0.3342**	**4.1600e-003**	**0.1041**	**4.7100e-003**	**0.1088**	**0.0286**	**4.5100e-003**	**0.0331**	**0.0000**	**408.7311**	**408.7311**	**0.0248**	**0.0000**	**409.3522**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1577	1.1863	1.1223	1.9200e-003		0.0595	0.0595		0.0575	0.0575	0.0000	157.9464	157.9464	0.0282	0.0000	158.6514
Total	**0.1577**	**1.1863**	**1.1223**	**1.9200e-003**		**0.0595**	**0.0595**		**0.0575**	**0.0575**	**0.0000**	**157.9464**	**157.9464**	**0.0282**	**0.0000**	**158.6514**

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	7.0200e-003	0.2232	0.0605	5.8000e-004	0.0143	4.6000e-004	0.0147	4.1100e-003	4.4000e-004	4.5500e-003	0.0000	55.7575	55.7575	3.4200e-003	0.0000	55.8430
Worker	0.0247	0.0192	0.2171	6.3000e-004	0.0629	5.2000e-004	0.0634	0.0167	4.8000e-004	0.0172	0.0000	56.7836	56.7836	1.6700e-003	0.0000	56.8254
Total	**0.0317**	**0.2425**	**0.2777**	**1.2100e-003**	**0.0772**	**9.8000e-004**	**0.0781**	**0.0208**	**9.2000e-004**	**0.0217**	**0.0000**	**112.5412**	**112.5412**	**5.0900e-003**	**0.0000**	**112.6684**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1577	1.1863	1.1222	1.9200e-003		0.0595	0.0595		0.0575	0.0575	0.0000	157.9463	157.9463	0.0282	0.0000	158.6512
Total	**0.1577**	**1.1863**	**1.1222**	**1.9200e-003**		**0.0595**	**0.0595**		**0.0575**	**0.0575**	**0.0000**	**157.9463**	**157.9463**	**0.0282**	**0.0000**	**158.6512**

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	7.0200e-003	0.2232	0.0605	5.8000e-004	0.0143	4.6000e-004	0.0147	4.1100e-003	4.4000e-004	4.5500e-003	0.0000	55.7575	55.7575	3.4200e-003	0.0000	55.8430
Worker	0.0247	0.0192	0.2171	6.3000e-004	0.0629	5.2000e-004	0.0634	0.0167	4.8000e-004	0.0172	0.0000	56.7836	56.7836	1.6700e-003	0.0000	56.8254
Total	**0.0317**	**0.2425**	**0.2777**	**1.2100e-003**	**0.0772**	**9.8000e-004**	**0.0781**	**0.0208**	**9.2000e-004**	**0.0217**	**0.0000**	**112.5412**	**112.5412**	**5.0900e-003**	**0.0000**	**112.6684**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0709	0.5376	0.5472	9.5000e-004		0.0253	0.0253		0.0245	0.0245	0.0000	78.0781	78.0781	0.0136	0.0000	78.4180

Total	**0.0709**	**0.5376**	**0.5472**	**9.5000e-004**		**0.0253**	**0.0253**		**0.0245**	**0.0245**	**0.0000**	**78.0781**	**78.0781**	**0.0136**	**0.0000**	**78.4180**

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	3.2600e-003	0.1048	0.0283	2.8000e-004	7.0400e-003	2.0000e-004	7.2400e-003	2.0300e-003	1.9000e-004	2.2200e-003	0.0000	27.3163	27.3163	1.6300e-003	0.0000	27.3571
Worker	0.0115	8.5900e-003	0.0989	3.0000e-004	0.0311	2.5000e-004	0.0314	8.2600e-003	2.3000e-004	8.4900e-003	0.0000	27.0789	27.0789	7.5000e-004	0.0000	27.0976
Total	**0.0147**	**0.1134**	**0.1272**	**5.8000e-004**	**0.0381**	**4.5000e-004**	**0.0386**	**0.0103**	**4.2000e-004**	**0.0107**	**0.0000**	**54.3952**	**54.3952**	**2.3800e-003**	**0.0000**	**54.4546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0709	0.5376	0.5472	9.5000e-004		0.0253	0.0253		0.0245	0.0245	0.0000	78.0780	78.0780	0.0136	0.0000	78.4180
Total	**0.0709**	**0.5376**	**0.5472**	**9.5000e-004**		**0.0253**	**0.0253**		**0.0245**	**0.0245**	**0.0000**	**78.0780**	**78.0780**	**0.0136**	**0.0000**	**78.4180**

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	3.2600e-003	0.1048	0.0283	2.8000e-004	7.0400e-003	2.0000e-004	7.2400e-003	2.0300e-003	1.9000e-004	2.2200e-003	0.0000	27.3163	27.3163	1.6300e-003	0.0000	27.3571
Worker	0.0115	8.5900e-003	0.0989	3.0000e-004	0.0311	2.5000e-004	0.0314	8.2600e-003	2.3000e-004	8.4900e-003	0.0000	27.0789	27.0789	7.5000e-004	0.0000	27.0976
Total	**0.0147**	**0.1134**	**0.1272**	**5.8000e-004**	**0.0381**	**4.5000e-004**	**0.0386**	**0.0103**	**4.2000e-004**	**0.0107**	**0.0000**	**54.3952**	**54.3952**	**2.3800e-003**	**0.0000**	**54.4546**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1548	0.1771	2.7000e-004		8.3100e-003	8.3100e-003		7.6600e-003	7.6600e-003	0.0000	23.5300	23.5300	7.4600e-003	0.0000	23.7164
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0158**	**0.1548**	**0.1771**	**2.7000e-004**		**8.3100e-003**	**8.3100e-003**		**7.6600e-003**	**7.6600e-003**	**0.0000**	**23.5300**	**23.5300**	**7.4600e-003**	**0.0000**	**23.7164**

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	1.1200e-003	8.7000e-004	9.8300e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5712	2.5712	8.0000e-005	0.0000	2.5731
Total	**1.1200e-003**	**8.7000e-004**	**9.8300e-003**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5712**	**2.5712**	**8.0000e-005**	**0.0000**	**2.5731**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1548	0.1771	2.7000e-004		8.3100e-003	8.3100e-003		7.6600e-003	7.6600e-003	0.0000	23.5299	23.5299	7.4600e-003	0.0000	23.7164
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0158**	**0.1548**	**0.1771**	**2.7000e-004**		**8.3100e-003**	**8.3100e-003**		**7.6600e-003**	**7.6600e-003**	**0.0000**	**23.5299**	**23.5299**	**7.4600e-003**	**0.0000**	**23.7164**

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	1.1200e-003	8.7000e-004	9.8300e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5712	2.5712	8.0000e-005	0.0000	2.5731
Total	**1.1200e-003**	**8.7000e-004**	**9.8300e-003**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5712**	**2.5712**	**8.0000e-005**	**0.0000**	**2.5731**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2316					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0900e-003	0.0282	0.0363	6.0000e-005		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	5.1065	5.1065	3.3000e-004	0.0000	5.1148
Total	**0.2357**	**0.0282**	**0.0363**	**6.0000e-005**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**5.1065**	**5.1065**	**3.3000e-004**	**0.0000**	**5.1148**

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	1.0500e-003	7.9000e-004	9.0600e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4808	2.4808	7.0000e-005	0.0000	2.4825
Total	**1.0500e-003**	**7.9000e-004**	**9.0600e-003**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.4808**	**2.4808**	**7.0000e-005**	**0.0000**	**2.4825**

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	0.2316					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0900e-003	0.0282	0.0363	6.0000e-005		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	5.1065	5.1065	3.3000e-004	0.0000	5.1148
Total	**0.2357**	**0.0282**	**0.0363**	**6.0000e-005**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**5.1065**	**5.1065**	**3.3000e-004**	**0.0000**	**5.1148**

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	1.0500e-003	7.9000e-004	9.0600e-003	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4808	2.4808	7.0000e-005	0.0000	2.4825
Total	**1.0500e-003**	**7.9000e-004**	**9.0600e-003**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.4808**	**2.4808**	**7.0000e-005**	**0.0000**	**2.4825**

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	0.9303	1.8006	8.2981	0.0218	1.9858	0.0220	2.0078	0.5312	0.0206	0.5518	0.0000	2,042.7171	2,042.7171	0.1569	0.0000	2,046.6406
Unmitigated	0.9303	1.8006	8.2981	0.0218	1.9858	0.0220	2.0078	0.5312	0.0206	0.5518	0.0000	2,042.7171	2,042.7171	0.1569	0.0000	2,046.6406

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Hotel	2,199.96	2,199.96	2199.96	5,249,481	5,249,481
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	2,199.96	2,199.96	2,199.96	5,249,481	5,249,481

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Regional Shopping Center	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	239.8625	239.8625	0.0000	0.0000	239.8625
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	302.1472	302.1472	0.0000	0.0000	302.1472
NaturalGas Mitigated	8.7400e-003	0.0794	0.0667	4.8000e-004		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	86.4573	86.4573	1.6600e-003	1.5900e-003	86.9711
NaturalGas Unmitigated	0.0157	0.1424	0.1196	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.0134	155.0134	2.9700e-003	2.8400e-003	155.9346

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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
General Office Building	84673	4.6000e-004	4.1500e-003	3.4900e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5185	4.5185	9.0000e-005	8.0000e-005	4.5453
Hotel	2.80648e+006	0.0151	0.1376	0.1156	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.7644	149.7644	2.8700e-003	2.7500e-003	150.6544
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

Regional Shopping Center	13690	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7306	0.7306	1.0000e-005	1.0000e-005	0.7349
Total		**0.0157**	**0.1424**	**0.1196**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**155.0134**	**155.0134**	**2.9700e-003**	**2.8400e-003**	**155.9346**

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					
Enclosed Parking Structure	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
General Office Building	43292.5	2.3000e-004	2.1200e-003	1.7800e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3103	2.3103	4.0000e-005	4.0000e-005	2.3240
Hotel	1.56655e+006	8.4500e-003	0.0768	0.0645	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003	0.0000	83.5970	83.5970	1.6000e-003	1.5300e-003	84.0937
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
Regional Shopping Center	10308.6	6.0000e-005	5.1000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5501	0.5501	1.0000e-005	1.0000e-005	0.5534
Total		**8.7400e-003**	**0.0794**	**0.0667**	**4.7000e-004**		**6.0400e-003**	**6.0400e-003**		**6.0400e-003**	**6.0400e-003**	**0.0000**	**86.4573**	**86.4573**	**1.6500e-003**	**1.5800e-003**	**86.9711**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	294840	71.4157	0.0000	0.0000	71.4157
General Office Building	129603	31.3923	0.0000	0.0000	31.3923
Hotel	740747	179.4224	0.0000	0.0000	179.4224

Parking Lot	3920	0.9495	0.0000	0.0000	0.9495
Regional Shopping Center	78306.8	18.9673	0.0000	0.0000	18.9673
Total		**302.1472**	**0.0000**	**0.0000**	**302.1472**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	188843	45.7413	0.0000	0.0000	45.7413
General Office Building	106914	25.8965	0.0000	0.0000	25.8965
Hotel	622719	150.8339	0.0000	0.0000	150.8339
Parking Lot	3920	0.9495	0.0000	0.0000	0.9495
Regional Shopping Center	67877.8	16.4412	0.0000	0.0000	16.4412
Total		**239.8625**	**0.0000**	**0.0000**	**239.8625**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

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

Category	tons/yr										MT/yr					
Mitigated	0.3820	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-003
Unmitigated	0.3820	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-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	0.0232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3584					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-003
Total	**0.3820**	**4.0000e-005**	**4.3000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.3400e-003**	**8.3400e-003**	**2.0000e-005**	**0.0000**	**8.8900e-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	0.0232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3584					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.3000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.3400e-003	8.3400e-003	2.0000e-005	0.0000	8.8900e-003

Total	**0.3820**	**4.0000e-005**	**4.3000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.3400e-003**	**8.3400e-003**	**2.0000e-005**	**0.0000**	**8.8900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.8763	0.1632	3.8500e-003	27.1058
Unmitigated	26.5150	0.2040	4.8200e-003	33.0519

7.2 Water by Land Use

Unmitigated

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

General Office Building	1.64581 / 1.00873	8.4274	0.0536	1.2700e-003	10.1455
Hotel	4.10942 / 0.456602	15.4933	0.1339	3.1600e-003	19.7831
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.506656 / 0.310531	2.5944	0.0165	3.9000e-004	3.1233
Total		**26.5151**	**0.2041**	**4.8200e-003**	**33.0519**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	1.31665 / 0.947193	7.1193	0.0429	1.0100e-003	8.4937
Hotel	3.28753 / 0.428749	12.5654	0.1071	2.5300e-003	15.9973
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.405325 / 0.291589	2.1916	0.0132	3.1000e-004	2.6148
Total		**21.8763**	**0.1632**	**3.8500e-003**	**27.1058**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.3021	0.3134	0.0000	13.1358
Unmitigated	21.2085	1.2534	0.0000	52.5432

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	8.61	1.7478	0.1033	0.0000	4.3300
Hotel	88.69	18.0033	1.0640	0.0000	44.6023
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.18	1.4575	0.0861	0.0000	3.6108
Total		**21.2085**	**1.2534**	**0.0000**	**52.5432**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.1525	0.4369	0.0258	0.0000	1.0825
Hotel	22.1725	4.5008	0.2660	0.0000	11.1506
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.795	0.3644	0.0215	0.0000	0.9027
Total		**5.3021**	**0.3133**	**0.0000**	**13.1358**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D:
Drainage Technical Report

DRAINAGE TECHNICAL REPORT

FOR

MANHATTAN HOTEL
600 SOUTH SEPULVEDA
MANHATTAN BEACH, CA

Date: July 24, 2020

PREPARED FOR:

Live Oak Properties
1219 Morningside Avenue, Suite 201
Manhattan Beach, CA 90266

PREPARED BY:

Barbara L. Hall, P.E., Inc.
318 West Evergreen Avenue
Monrovia, CA 91016
626-256-3220
Fax: 626-256-3218

Table of Contents

PURPOSE

The purpose of the Drainage Technical Report is to determine the volume of runoff from the Manhattan Hotel (Project) site in both the existing and proposed project conditions and determine any impacts to the existing public storm drain system. This report also includes Preliminary Low Impact Development Calculations (LID) for compliance with the recent update to the MS4 Permit.

EXISTING CONDITIONS

The proposed Manhattan Hotel (Project) project site is located at 600 South Sepulveda Boulevard, Manhattan Beach. The project is located at the north east corner of South Sepulveda and Tennyson Street, in the Eastside Neighborhood of Manhattan Beach. The east boundary of the site is Chabela Drive. The Assessor's Parcel number for the site is 4168-013-015.

Existing zoning for this site is General Commercial per the City of Manhattan Beach (City) Zoning Map, and the General Plan Land Use Designation is General Commercial. Existing facilities at the site includes a 8392 SF restaurant building, 39,100 square feet of parking area, 6940 square feet of patio and 10,356 square feet landscape planters. Public infrastructure is presently in place to provide storm drainage service to the project site.

A geotechnical report was prepared for the proposed project, by Geotechnologies, Inc. entitled Geotechnical Engineering Investigation, Proposed Hotel, 600 South Sepulveda Boulevard, Manhattan Beach, California - File Number 21778. Subsurface exploration was performed on September 16 and 17, 2019 by Geotechnologies, Inc. which included drilling five (5) exploratory excavations which varied in depth between forty (40) and seventy (70) feet. Excavation was performed using a hollow stem auger. Earth materials encountered were classified in accordance with the visual-manual procedures of the Unified Soil Classification System. The material encountered in the boreholes consisted of three (3) to six (6) feet of fill, with native material consisting of silty sands and sands underlying the fill. Groundwater was not encountered during the exploration. Historic high ground water level was recorded at approximately 40 feet below ground surface. The project site is outside the seismically induced liquefaction zone.

The properties surrounding the Project Site are fully developed commercial sites and are characterized by gently sloping topography. The Project Site's topography slopes from the northeast to southwest, generally towards Tennyson and Sepulveda. Runoff from the parking area drains south and west via sheet flow to the south driveways, then out to Tennyson through sidewalk drains. Runoff from the building drains via scuppers and downspouts to the parking and planter areas on the east and west sides of the building. An existing public catch basin is located on Sepulveda, at Tennyson.

The Project Site is within the drainage area of the Los Angeles County Flood Control District (LACOFCD) Hermosa Beach Project No. 4001- Unit 1 Line E. Project No. 4001 is directly tributary to the Pacific Ocean.

A review of the Federal Emergency Management Agency flood insurance rate maps indicated that the Project is not located within a designated flood plain, flood hazard zone, or regulatory

floodway. A FEMA Firmette map documenting this can be found in Appendix B.

PROPOSED PROJECT

The Project is proposing construction of two structures on a common podium deck with one level of common basement parking below grade. One structure consists of approximately 6,845 square foot retail space on the ground level, with 11,000 square feet of office space on the second level. The second structure is a proposed 80,040 square feet hotel with four (4) levels, including 2,400 square feet of common areas. In addition, the project provides 48,138 square feet of subterranean parking in one basement level and 16,400 square feet of surface parking on the podium deck. The project will be developed in one phase.

Existing drainage patterns will be preserved by the proposed project. Runoff from the project building roofs and surface improvements will be intercepted by the site storm drainage system for conveyance to the public street and ultimately discharged to Tennyson.

HYDROLOGY

Hydrology Method

The City of Manhattan Beach defers to the County of Los Angeles methodology for storm water calculations. The methodology described in the Los Angeles County Department of Public Works (LACPWD) Hydrology Manual (2006) was used to compute the 10-year, 25-year and 50-year stormwater runoff flows from the project site to the existing drainage system. The hydrologic methods used in this study were based on procedures described in the 2006 LACPWD Manual. Calculations for the existing and proposed conditions are provided in Appendix A. In accordance with LACDPW requirements, the 50 year and 25-year and 10-year (24-hour) storm events were used in this analysis.

Calculations to determine the storm water runoff from the proposed site were performed using the HydroCalc program, developed by the Los Angeles County Flood Control District (LACFCD), and the 2006 LACFCD Hydrology Manual. The HydroCalc program may be used to compute runoff volume and flow rate for small area watersheds (less than 10 acres). The program uses the 50-year 24 hour isohyet to compute storm intensity. To compute runoff for the 10- year and 25-year storm events, the 50-year isohyet value is adjusted using a standard reduction factor. The HydroCalc program automatically adjusts the 50-year isohyet value based on the storm event to be calculated. This information, along with other pertinent site information, is used to compute storm runoff flow rate for the required storm event.

Hydrology Results

Rainfall and soil characteristics for the Project site are shown on the Redondo Beach Quad Isohyetal Map included in Appendix A. The 50-year (24-hour) rainfall Isohyet nearest the project area is approximately 5.08 inches. The 25-year (24-hour) Isohyet reduction factor from the 50-year is 0.878, and thus, the 25-year (24-hour) rainfall Isohyet is 4.46 inches for this project area. The 10-year (24-hour) rainfall Isohyet reduction factor from the 50-year event is 0.714, and thus, the 10-year (24-hour) rainfall Isohyet is 3.63 inches. The reduction factors can be found in

Table 5.3.1 of the LACPWD Hydrology Manual. As shown on the Redondo Beach Quad Isohyetal Map, the soil classification of the project site falls within LACDPW defined soil classification type 010. The project area to be disturbed is approximately 1.487 acres. The percentage impervious is calculated to be 0.84 (84%) for the pre-development condition. The percentage impervious calculated for the post-development condition is 0.874 (87.4%).

The maps showing the Hydrology and LID Pre-Development and Post-Development, Pervious and Impervious Areas are included as Appendix C. The results of the calculations can be found in Table 1. A system overflow sized for the 25-year storm will be discharged to the existing street when the proposed LID BMP is at capacity.

Table 1: Comparison of Existing and Proposed Hydrology, 50-year & 25-year Storm Events

Sub-Area	Area (Acres)	50 year Flow Rate, Q (cfs)		25 year Flow Rate, Q (cfs)		10 year Flow Rate, Q (cfs)	
		Existing	Proposed	Existing	Proposed	Existing	Proposed
1	1.487	3.472	3.526	2.792	2.844	2.090	2.139

Conclusion:

Based on the project design features and the existing design requirements, comparison of the existing and proposed conditions shows a minor increase in the peak flow rate for the 10-year, 25- year and 50-year storm events with the proposed development. With a slight increase (84% to 87.4%) in the percent impervious in the proposed condition, the proposed runoff increases approximately 2%, and no mitigation measures are required. Therefore, existing public infrastructure can accommodate the proposed development and impacts would be less than significant.

WATER QUALITY

Water Quality Method

Per the new MS4 requirements incorporated in the recently updated City of Los Angeles Low Impact Development Ordinance, LID calculations must be performed using either 0.75-inch storm event or the 85th Percentile storm, whichever is greater, for the given site. The depth of the 85th percentile storm was determined using the County of Los Angeles Department of Public Works Website and the geographical information system (GIS) found there. Maps of the County showing the 85th percentile isohyet contours can be found at http://dpw.lacounty.gov/wrd/hydrologygis/. A copy of the contour map for this site can be found in Appendix A. The 85th percentile isohyet for the project site, taken from the County website, is 0.76 inches. For this project site, the he 85th percentile storm event governs. As previously stated, the project is located on the USGS Redondo Beach Quad Isohyetal Map, Soil

Type 010, a copy of which is included in Appendix A.

Calculations to determine LID storm water runoff volume for the proposed site were performed using the HydroCalc program developed by the Los Angeles County Flood Control District (LACFCD) and the 2006 LACFCD Hydrology Manual. The HydroCalc program may be used to compute runoff volume and flow rate for small area watersheds (less than 10 acres). The program uses either 0.75-inch storm event or 85th percentile storm data, along with other pertinent site information, to determine LID storm water runoff volume and other relevant hydrology data. The 85th percentile, 24-hour rain event of rainfall is 0.76 inches and will be used for design of the proposed LID BMP.

Water Quality Results

Table 2 shows the estimated required peak mitigation flow rates (QPM) and mitigation volumes (VM) for the proposed site as one tributary area, and these peak mitigation quantities represent the treatment flows and volumes evaluated for the site. Detailed flow and volume calculations are given in Appendix A.

An infiltration test was performed as part of the project Geotechnical Investigation described in the Existing Conditions Section of this report. Percolation testing was performed in compliance with the County of Los Angeles Department of Public Works Guidelines for Design, Investigation and Reporting Low Impact Development Stormwater Infiltration (GS200.1). The site-specific testing yielded a resulting infiltration rate of 0.62 inches per hour for use in designing the proposed infiltration system.

The project LID Maps are included as Appendix C. The Project will incorporate an infiltration system for mitigation of the City of Manhattan Beach Low Impact Development Ordinance (LID). A proprietary planter-based BMP that would satisfy the requirements for infiltration of the Vm is a Maxwell Drywell System.

Table 2: LID Calculations, 85th Percentile Storm Event

Sub-Area	Area (Acres)	Peak Mitigation Flow Rate Qpm (cfs)		Mitigation Volume Vm (cf)	
		Existing	Proposed	Existing	Proposed
1	1.487	0.249	0.258	3,140.85	3,251.51

The volume of 3,251.51 cubic feet is required to be captured and infiltrated through site specific BMPs.

Conclusion:

Water quality treatment is required to be addressed on-site by the City of Manhattan Beach LID Ordinance; therefore, no impacts to infrastructure result, and the existing storm water infrastructure is sufficient for water quality purposes.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A project is considered to have a significant impact on hydrology or water quality if the proposed project will have any of the following effects, according to CEQA Guidelines Appendix G:

a. Violate any water quality standards or waste discharge requirements.
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 (e.g. 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).
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. Thresholds which could result in substantial erosion or siltation are increases in storm water velocity above the baseline condition.
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 storm water runoff in a manner which would result in flooding on- or off-site. Thresholds which could result in an increased rate or amount of storm water runoff are increases in the flow rate or duration above the baseline condition.
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
f. Otherwise substantially degrade water quality. Thresholds which could result in degradation are water quality that it is unable to attain mandatory health-related standards for City water services established by the State of California Department of Health Services.

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

MITIGATION

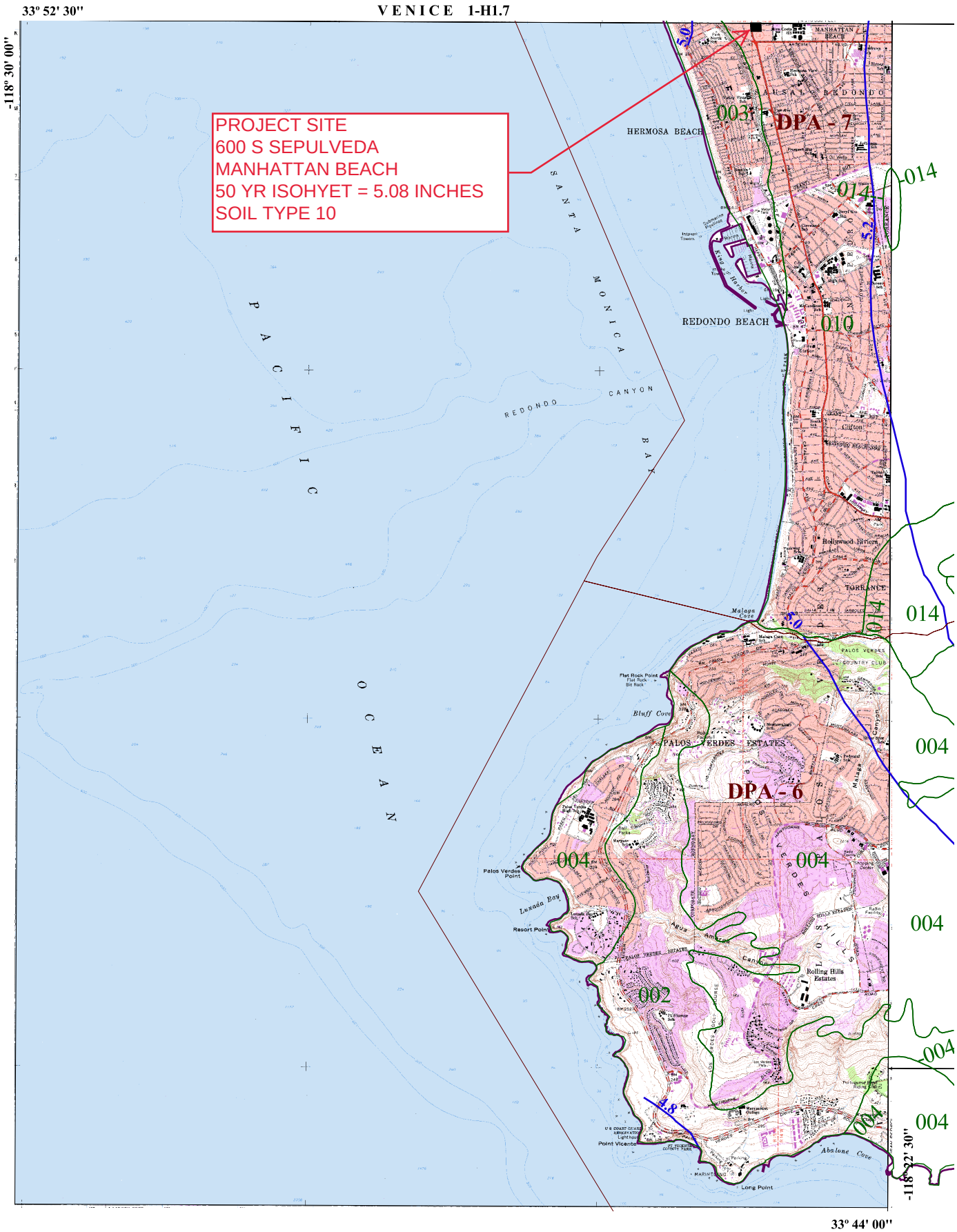
Based on the hydrologic results, detention facilities are not required for the proposed project to address hydrology. However, stormwater capture and infiltration would be required for water quality purposes, examples include dry wells, subsurface detention structure, or subsurface detention pipes.

Construction Document level LID, hydrology and hydraulic calculations will be required to be prepared and reviewed and approved by the City of Manhattan Beach before project construction permits can be issued.

BMPs will be implemented to collect, detain, and treat runoff on-site before discharging into the LACOFCD storm drain system. During construction, temporary stormwater BMPs will be installed to minimize erosion and restrict sedimentation of the storm drain downstream. This is expected to occur during each phase of the project based on the area disturbed. The project disturbed area exceeds 1 acre and will require the project to prepare a Stormwater Pollution Prevention Plan (SWPPP) and file a Notice of Intent for coverage under the current Statewide Construction General Permit.

The project as proposed does not have any significant impacts on the items listed in the thresholds of significance for hydrology or water quality, once the required Construction Phase SWPPP and Low Impact Development BMPs are implemented.

Appendix A: Hydrology & LID Calculations



N
W E
S

016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

REDONDO BEACH
50-YEAR 24-HOUR ISOHYET

1-H1.3

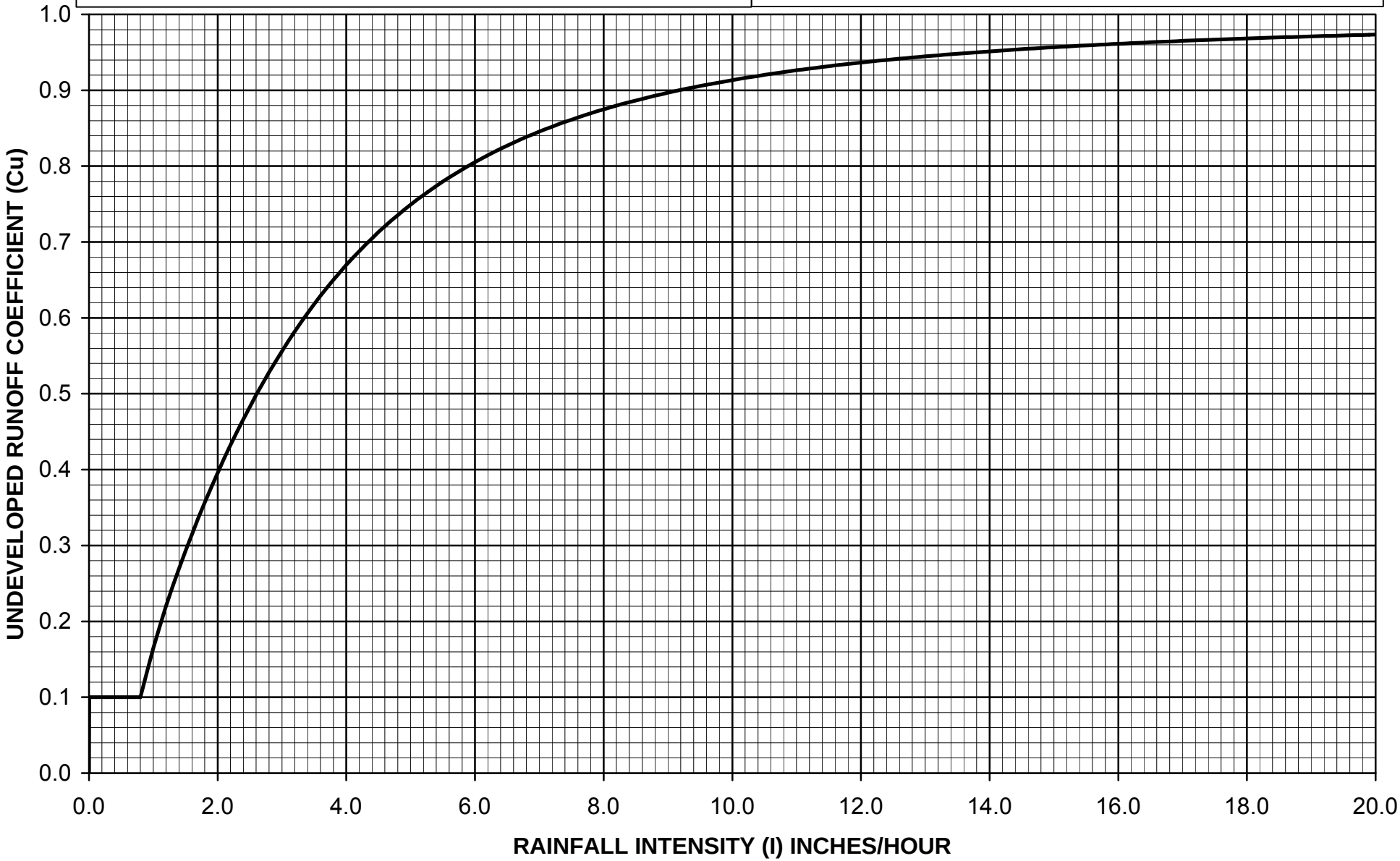
LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

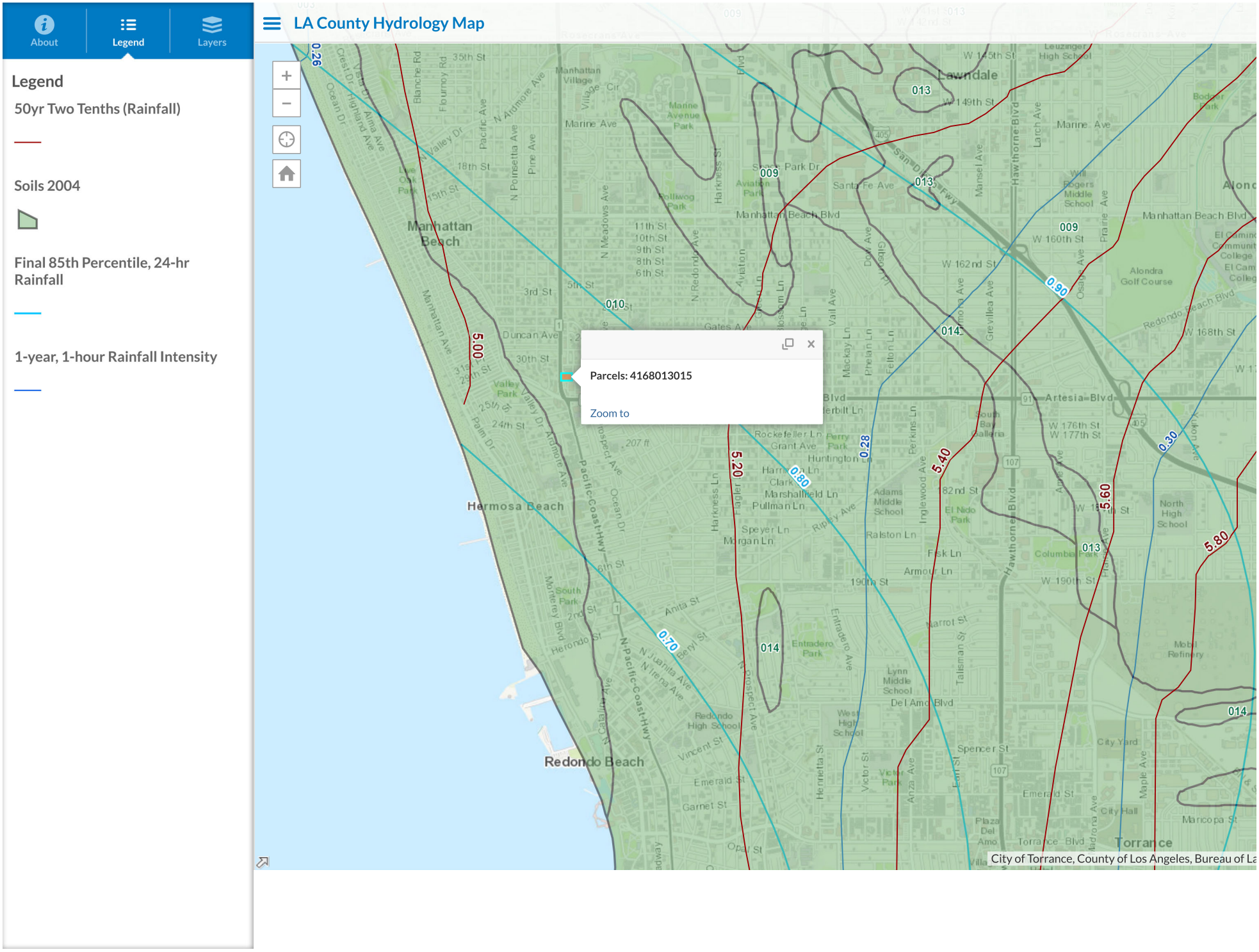
$C_D = (0.9 * IMP) + (1.0 - IMP) * C_U$

Where: C_D = Developed Runoff Coefficient
IMP = Proportion Impervious
C_U = Undeveloped runoff coefficient

Los Angeles County Department of Public Works

RUNOFF COEFFICIENT CURVE
SOIL TYPE NO. 010




About
Legend
Layers
Legend
50yr Two Tenths (Rainfall)
Soils 2004
Final 85th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
LA County Hydrology Map
Parcels: 4168013015
Zoom to
Manhattan Beach
Hermosa Beach
Redondo Beach
Lawndale
Torrance
0.26
5.00
0.90
0.28
5.20
0.80
5.40
0.30
5.60
0.70
5.80
City of Torrance, County of Los Angeles, Bureau of La

Peak Flow Hydrologic Analysis

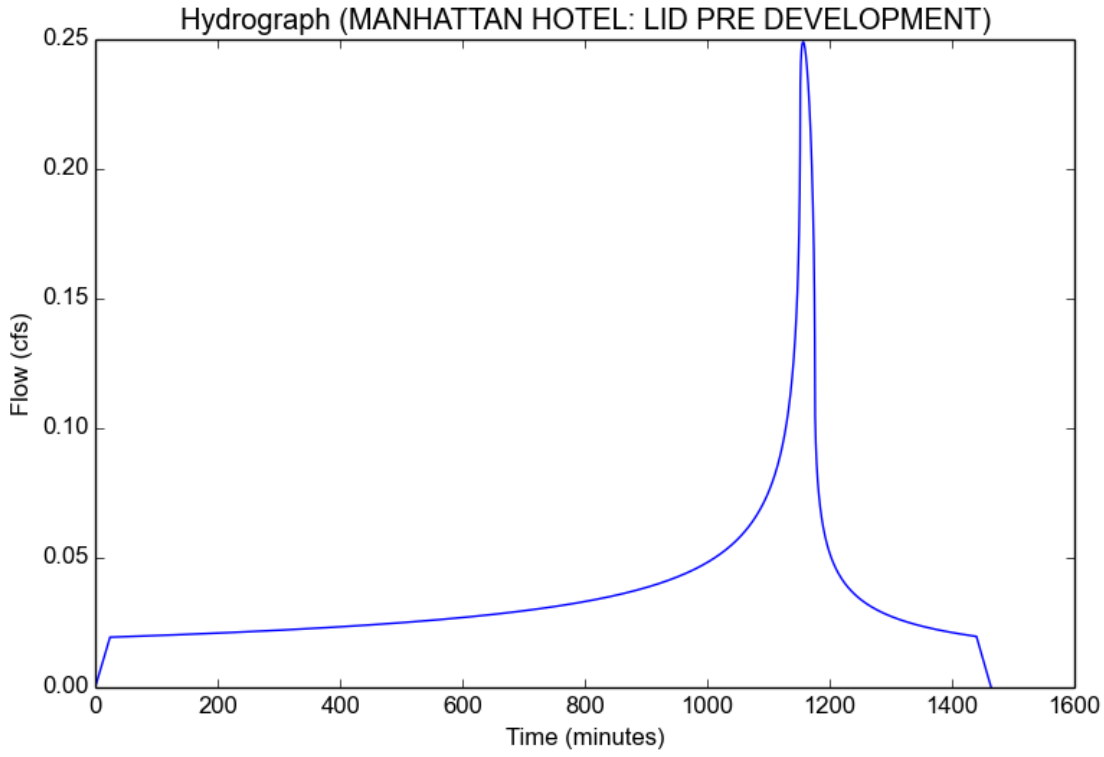
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	LID PRE DEVELOPMENT
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	0.76
Percent Impervious	0.84
Soil Type	10
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.76
Peak Intensity (in/hr)	0.2169
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.772
Time of Concentration (min)	24.0
Clear Peak Flow Rate (cfs)	0.249
Burned Peak Flow Rate (cfs)	0.249
24-Hr Clear Runoff Volume (ac-ft)	0.0721
24-Hr Clear Runoff Volume (cu-ft)	3140.8525



Peak Flow Hydrologic Analysis

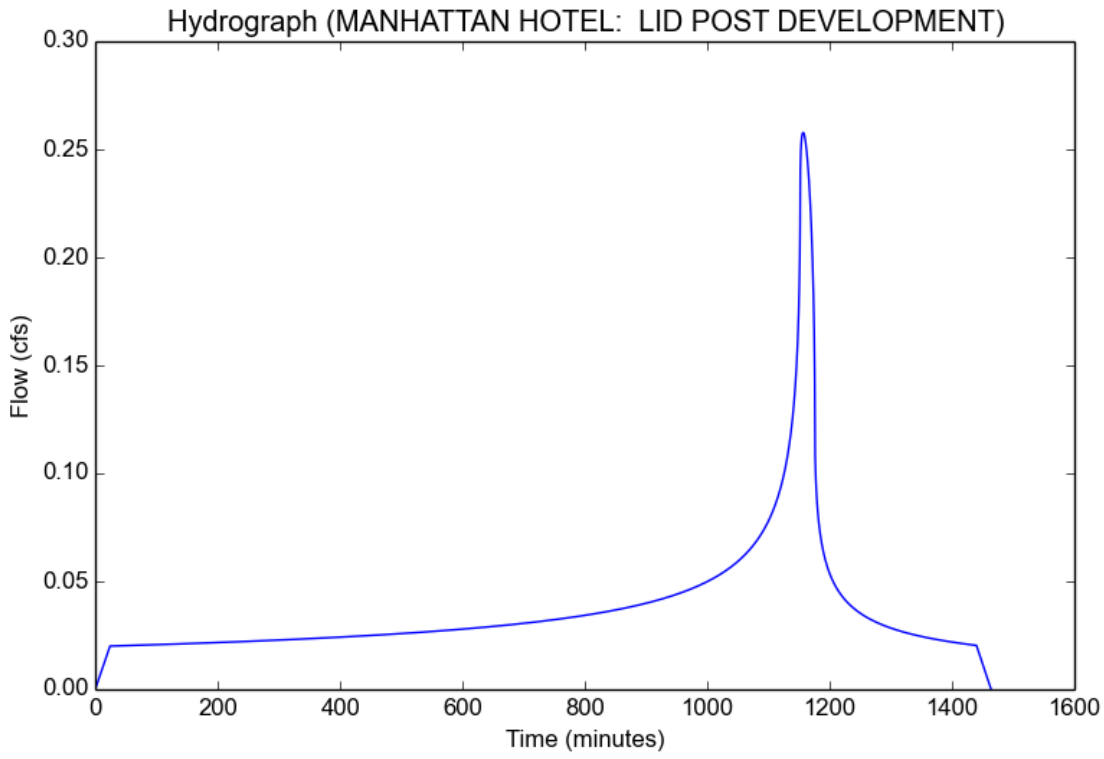
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	LID POST DEVELOPMENT
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	0.76
Percent Impervious	0.874
Soil Type	10
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.76
Peak Intensity (in/hr)	0.2169
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.7992
Time of Concentration (min)	24.0
Clear Peak Flow Rate (cfs)	0.2578
Burned Peak Flow Rate (cfs)	0.2578
24-Hr Clear Runoff Volume (ac-ft)	0.0746
24-Hr Clear Runoff Volume (cu-ft)	3251.5147



Peak Flow Hydrologic Analysis

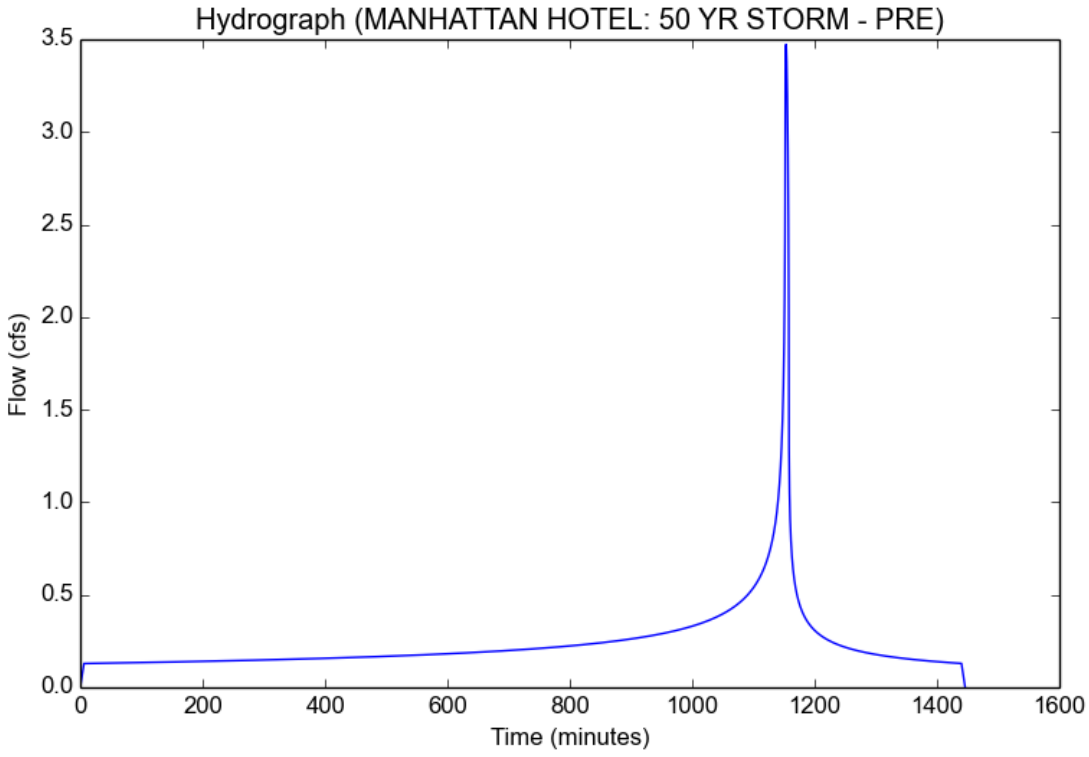
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	50 YR STORM - PRE
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.84
Soil Type	10
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.08
Peak Intensity (in/hr)	2.782
Undeveloped Runoff Coefficient (Cu)	0.5209
Developed Runoff Coefficient (Cd)	0.8394
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	3.4722
Burned Peak Flow Rate (cfs)	3.4722
24-Hr Clear Runoff Volume (ac-ft)	0.4845
24-Hr Clear Runoff Volume (cu-ft)	21103.2055



Peak Flow Hydrologic Analysis

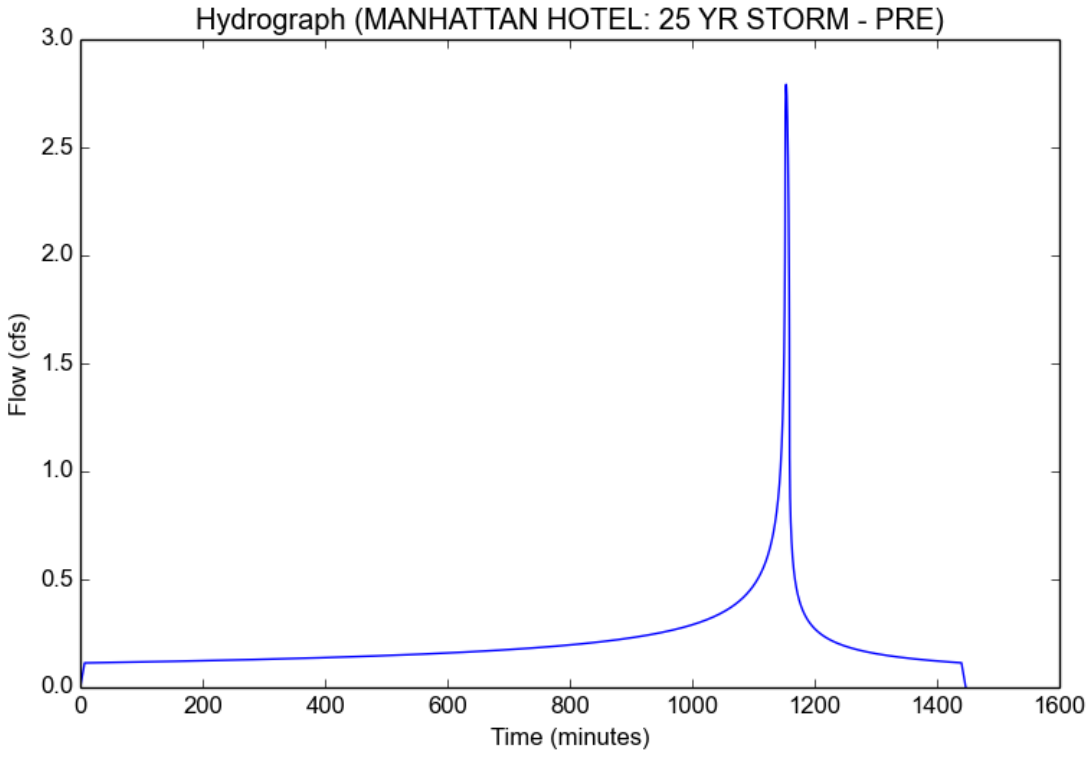
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	25 YR STORM - PRE
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.84
Soil Type	10
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.4602
Peak Intensity (in/hr)	2.2719
Undeveloped Runoff Coefficient (Cu)	0.4395
Developed Runoff Coefficient (Cd)	0.8263
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	2.7915
Burned Peak Flow Rate (cfs)	2.7915
24-Hr Clear Runoff Volume (ac-ft)	0.4249
24-Hr Clear Runoff Volume (cu-ft)	18507.9464



Peak Flow Hydrologic Analysis

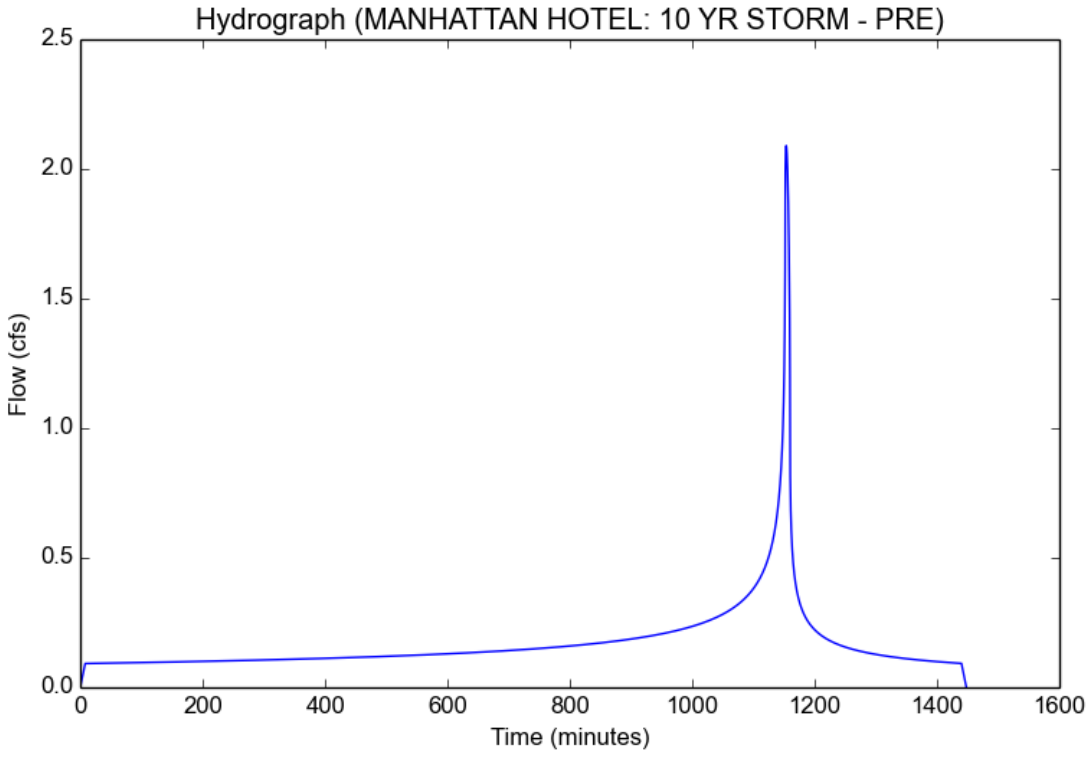
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	10 YR STORM - PRE
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.84
Soil Type	10
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	3.6271
Peak Intensity (in/hr)	1.7351
Undeveloped Runoff Coefficient (Cu)	0.3375
Developed Runoff Coefficient (Cd)	0.81
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	2.0899
Burned Peak Flow Rate (cfs)	2.0899
24-Hr Clear Runoff Volume (ac-ft)	0.345
24-Hr Clear Runoff Volume (cu-ft)	15030.1287



Peak Flow Hydrologic Analysis

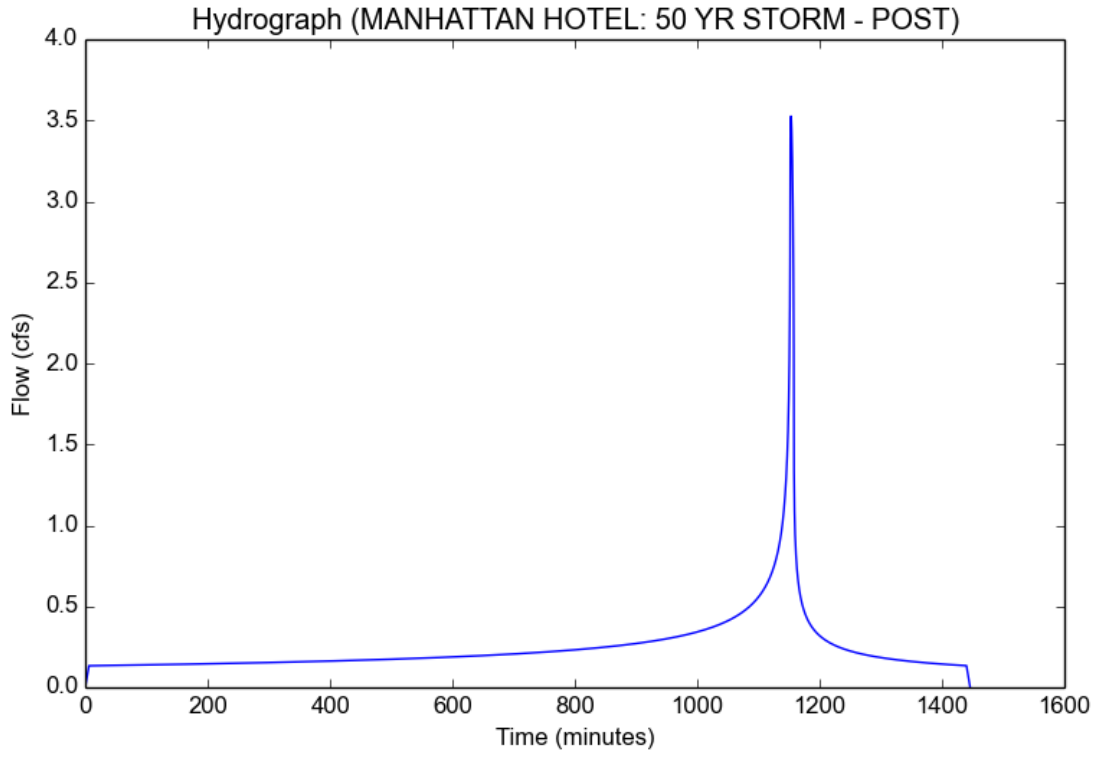
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	50 YR STORM - POST
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.874
Soil Type	10
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.08
Peak Intensity (in/hr)	2.782
Undeveloped Runoff Coefficient (Cu)	0.5209
Developed Runoff Coefficient (Cd)	0.8522
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	3.5255
Burned Peak Flow Rate (cfs)	3.5255
24-Hr Clear Runoff Volume (ac-ft)	0.5009
24-Hr Clear Runoff Volume (cu-ft)	21819.6781



Peak Flow Hydrologic Analysis

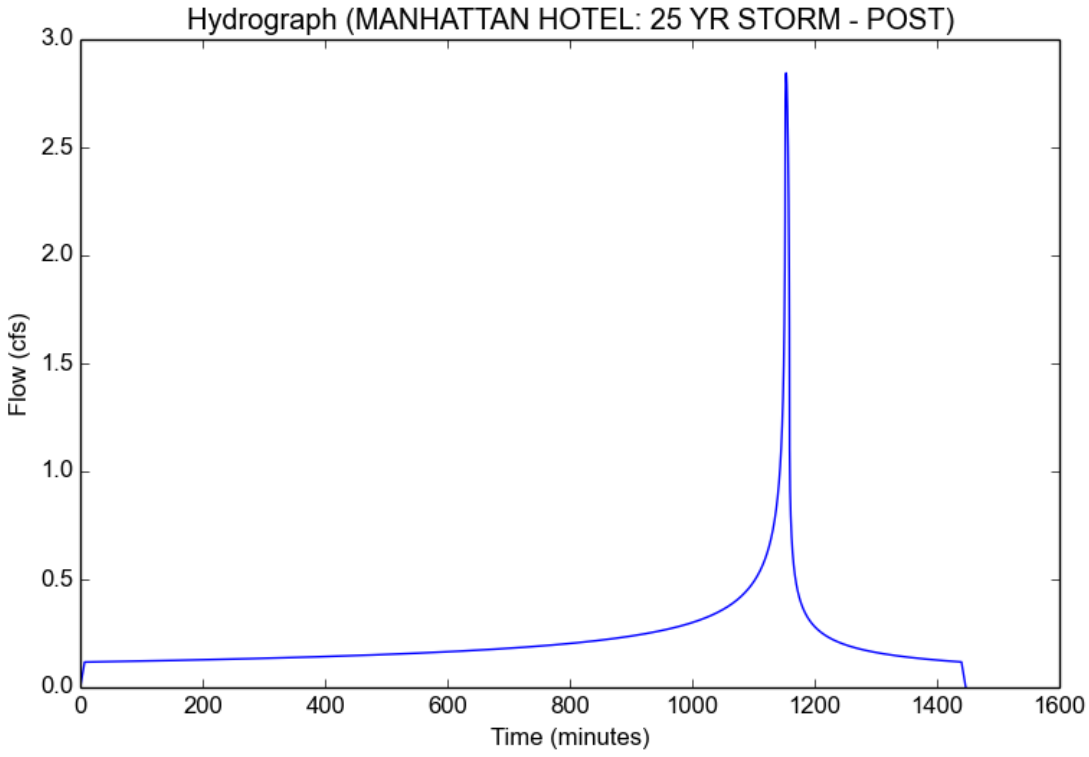
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	25 YR STORM - POST
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.874
Soil Type	10
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.4602
Peak Intensity (in/hr)	2.2719
Undeveloped Runoff Coefficient (Cu)	0.4395
Developed Runoff Coefficient (Cd)	0.842
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	2.8444
Burned Peak Flow Rate (cfs)	2.8444
24-Hr Clear Runoff Volume (ac-ft)	0.4394
24-Hr Clear Runoff Volume (cu-ft)	19141.4021



Peak Flow Hydrologic Analysis

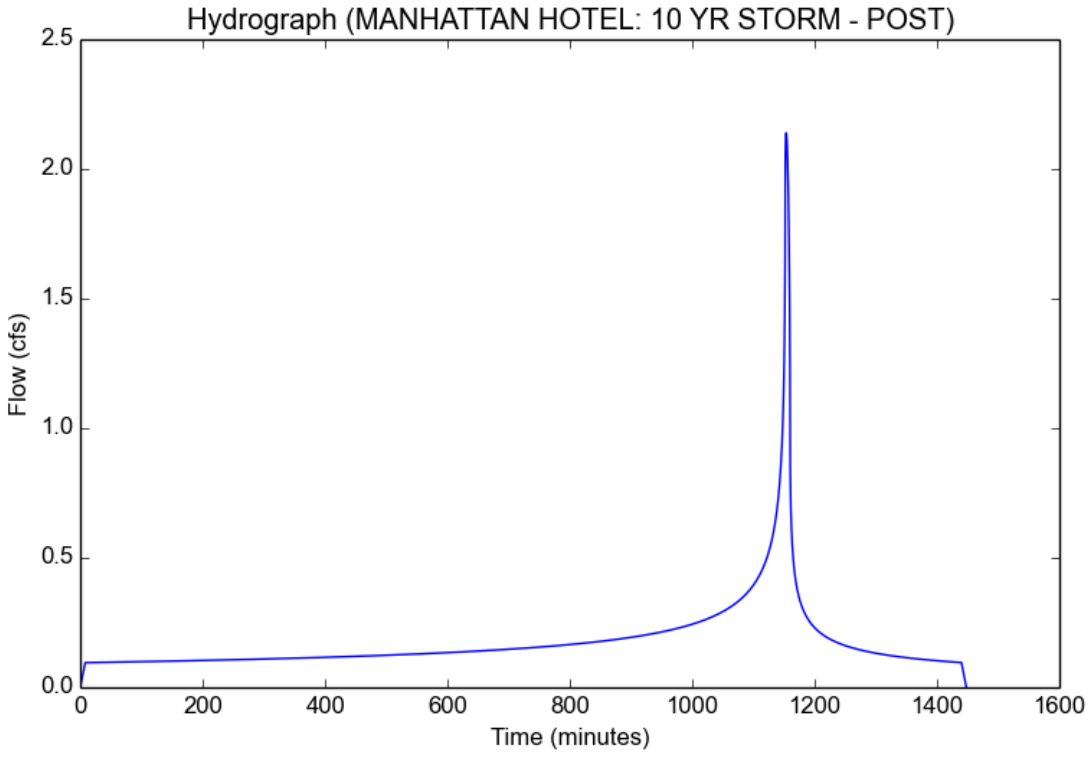
File location: P:/Shared/Projects/Live Oak Properties/19520-Manhattan Beach/DOC/CEQA ITEMS/DRAINAGE TECHNICAL REPORT/APPENDIX A-CA
Version: HydroCalc 1.0.3

Input Parameters

Project Name	MANHATTAN HOTEL
Subarea ID	10 YR STORM - POST
Area (ac)	1.487
Flow Path Length (ft)	340.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.08
Percent Impervious	0.874
Soil Type	10
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	3.6271
Peak Intensity (in/hr)	1.7351
Undeveloped Runoff Coefficient (Cu)	0.3375
Developed Runoff Coefficient (Cd)	0.8291
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	2.1393
Burned Peak Flow Rate (cfs)	2.1393
24-Hr Clear Runoff Volume (ac-ft)	0.357
24-Hr Clear Runoff Volume (cu-ft)	15549.673

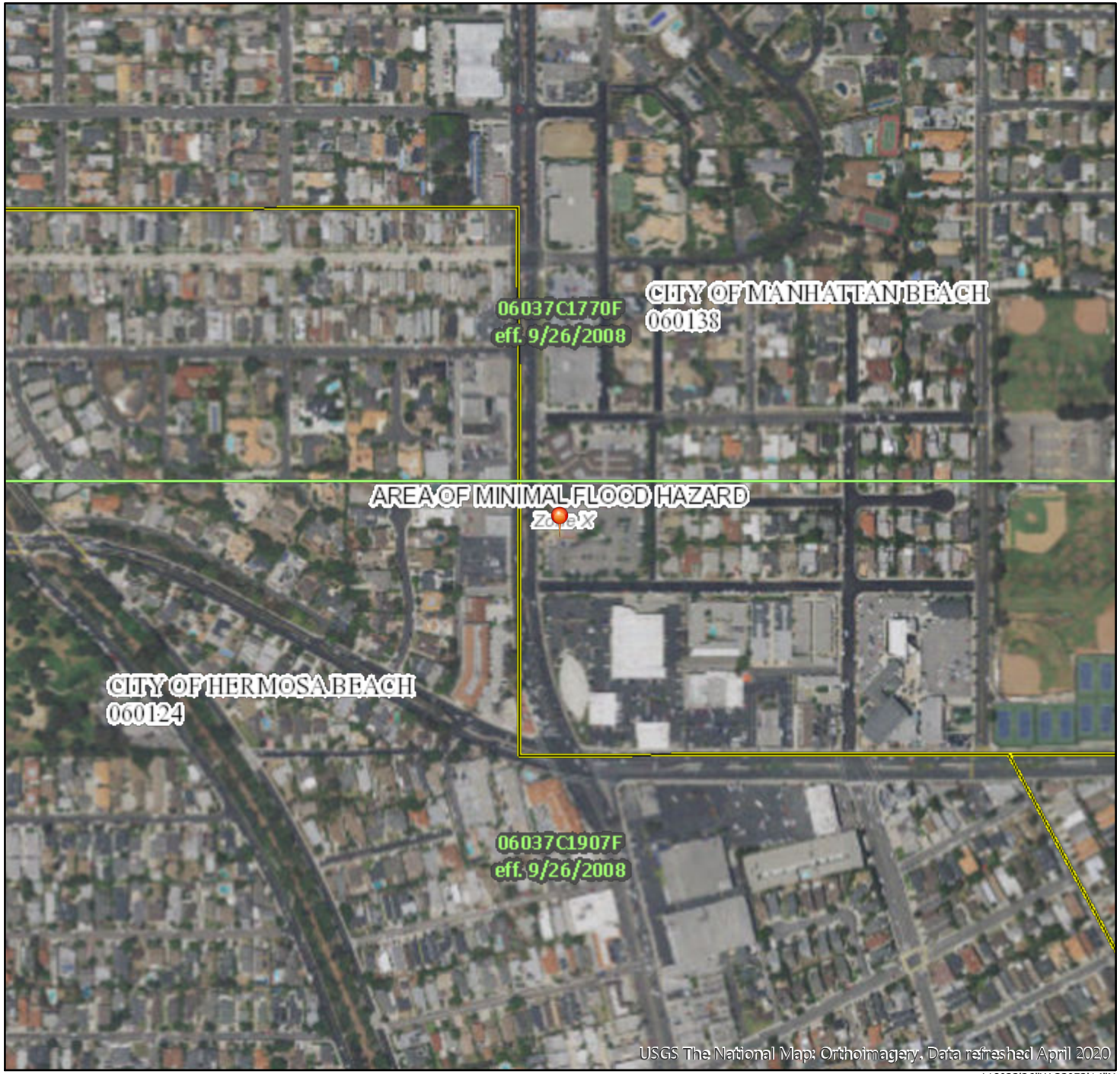


Appendix B: FEMA Map

National Flood Hazard Layer FIRMette

FEMA

118°24'3"W 33°52'43"N



118°23'26"W 33°52'14"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/29/2020 at 4:23 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

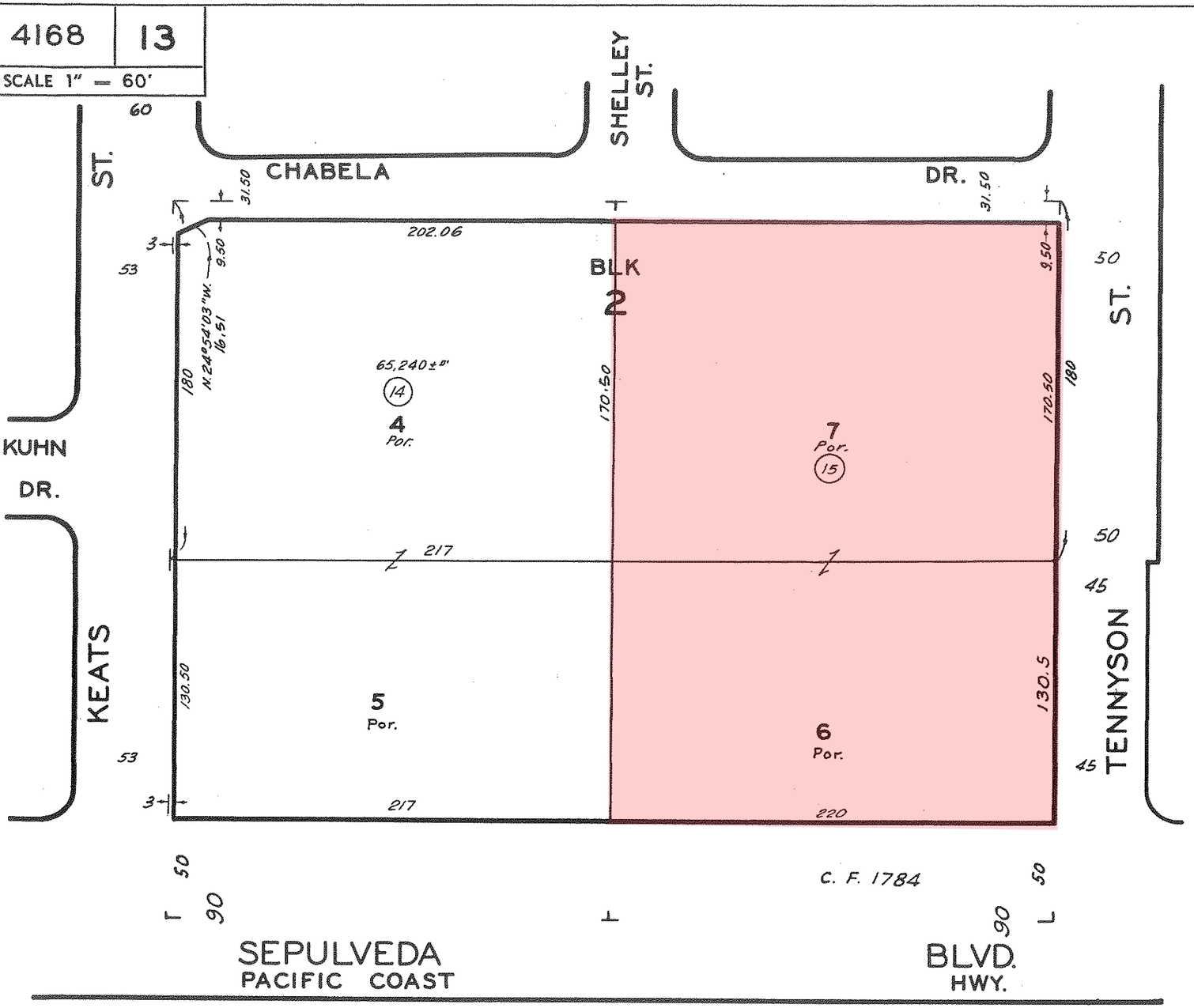
Appendix C: Hydrology & LID Area Maps – Pre and Post Development

4168 | 13

SCALE 1" = 60'

4-19-65
9-10-65

Revised
3-1-58
2-23-62
680904510
750102201
760405816
761220619
770308
831104613-84
840210-84



N

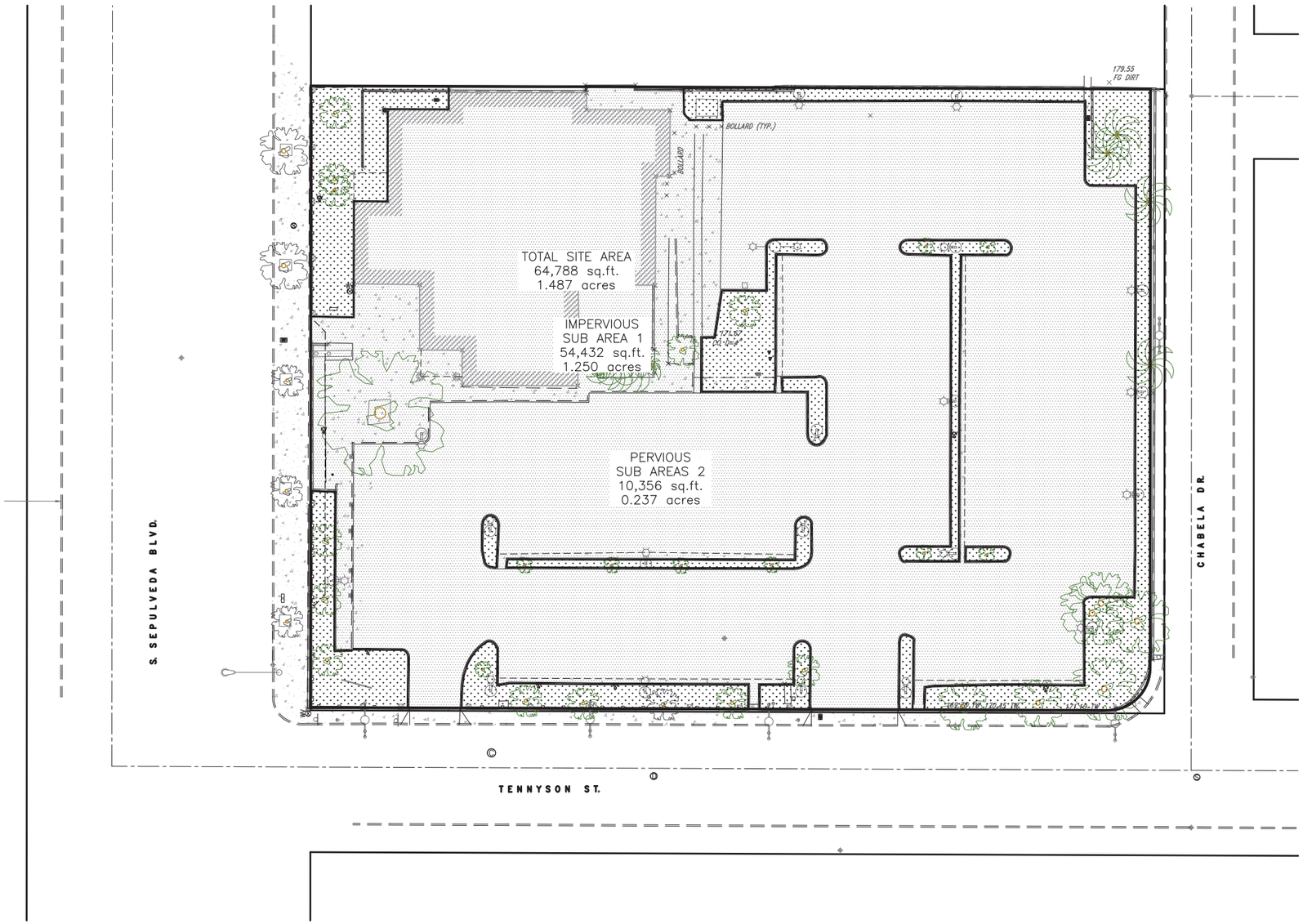
AMENDED MAP OF SEASIDE PARK

M.B. 8-19

CODE
6174

FOR PREV. ASSM'T. SEE: 1701-13

ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.



LEGEND:

PERVIOUS AREA

IMPERVIOUS AREA

AREA CALCULATIONS

AREA No.	AREA (SQ.FT)	AREA (ACRES)	PERVIOUS (SQ.FT)	PERVIOUS (ACRES)	IMPERVIOUS (SQ.FT)	IMPERVIOUS (ACRES)
1	54,432	1.250	–	–	54,432	1.250
2	10,356	0.237	10,356	0.237	–	–
TOTAL	64,788	1.487	10,356	0.237	54,432	1.250
PERVIOUS PERCENTAGE		= (16.0%)				
IMPERVIOUS PERCENTAGE		= (84.0%)				

0' 20'

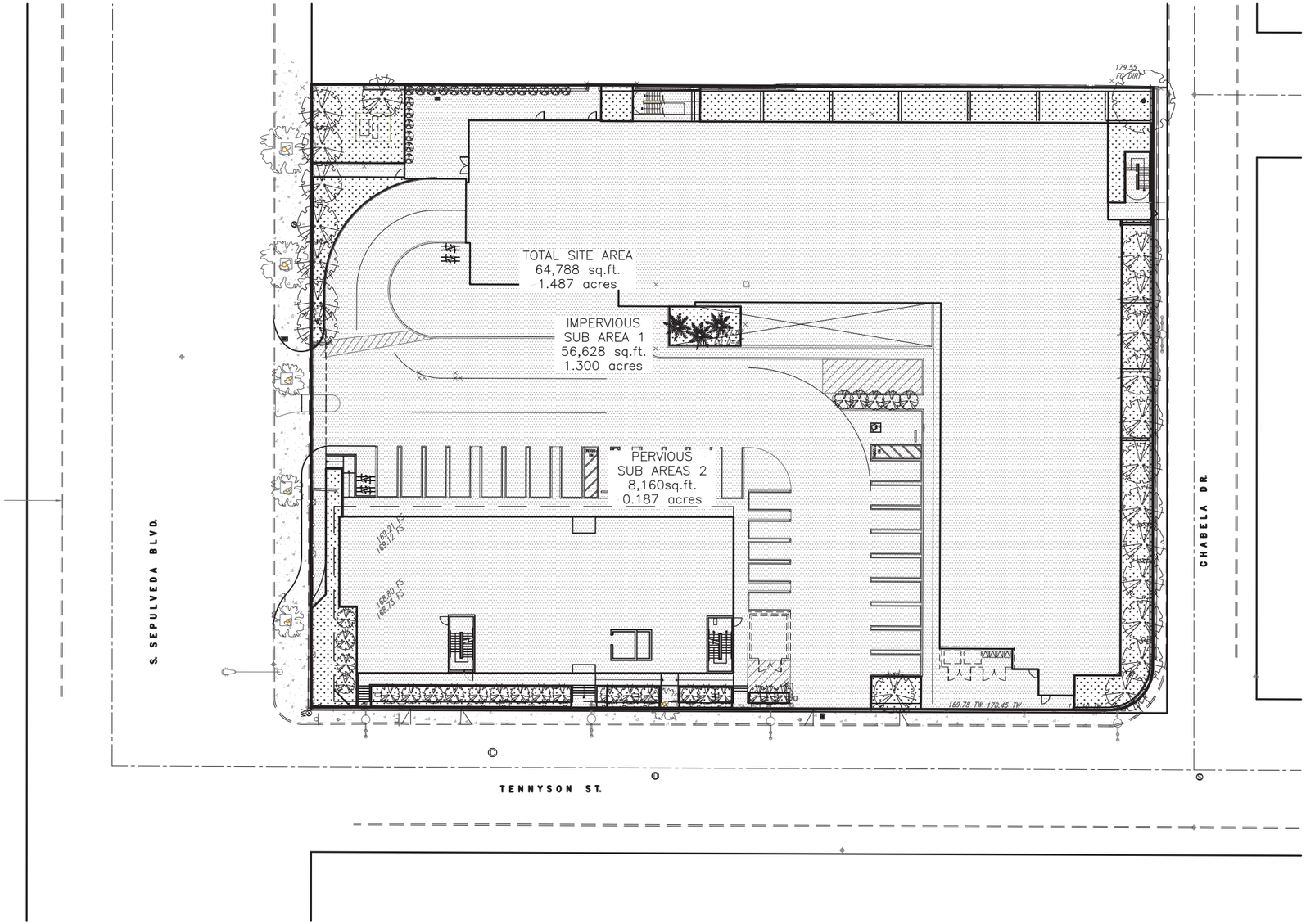
Barbara L. Hall, P.E., Inc.
318 West Evergreen Avenue
Monrovia, CA 91016
Phone: (626) 256-3220
Fax: (626) 256-3218

MANHATTAN HOTEL
MANHATTAN BEACH

CONCEPTUAL HYDROLOGY PLAN
PRE-DEVELOPMENT

DATE: 03/02/2020
JOB NO.: 18543

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



LEGEND:

PERVIOUS AREA

IMPERVIOUS AREA

AREA CALCULATIONS

AREA No.	AREA (SQ.FT)	AREA (ACRES)	PERVIOUS (SQ.FT)	PERVIOUS (ACRES)	IMPERVIOUS (SQ.FT)	IMPERVIOUS (ACRES)
1	56,628	1.300	–	–	56,628	1.300
2	8,160	0.187	8,160	0.187	–	–
TOTAL	64,788	1.487	8,160	0.187	56,628	1.300
PERVIOUS PERCENTAGE		= (12.6%)				
IMPERVIOUS PERCENTAGE		= (87.4%)				

0' 20'

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Fax: (626) 256-3218

MANHATTAN HOTEL
MANHATTAN BEACH

CONCEPTUAL HYDROLOGY PLAN
POST-DEVELOPMENT

DATE: 03/02/2020
JOB NO.: 18543

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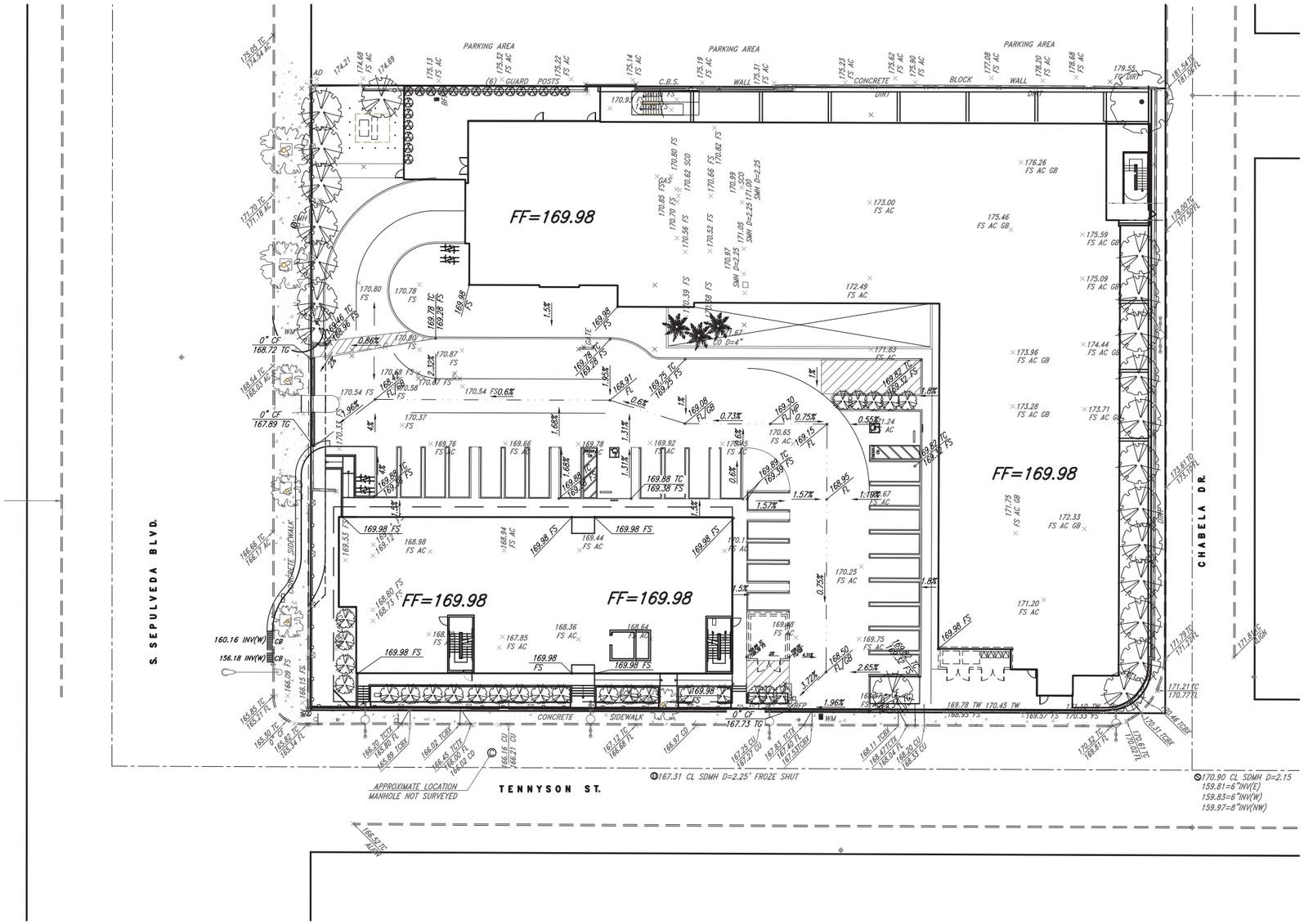

GRADING QUANTITIES	
CUT	26,787 C.Y.

0' 20'

Barbara L. Hall, P.E., Inc.
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MANHATTAN HOTEL
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CONCEPTUAL GRADING PLAN

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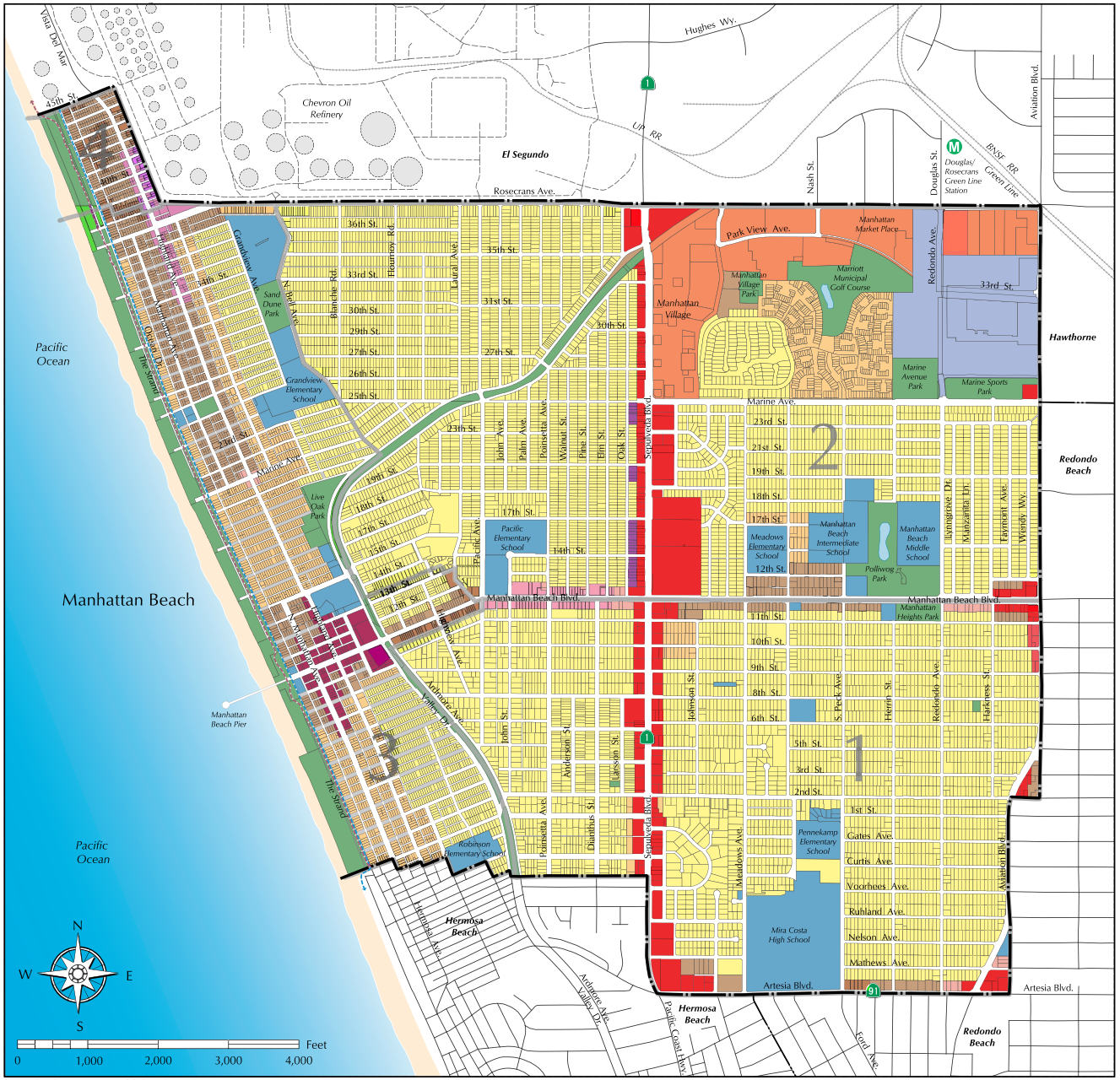


Source: City of Manhanttan Beach GIS; Cotton/Bridges/Associates, 2002

MANHATTAN BEACH GENERAL PLAN

Figure LU-3

Land Use Policy Map

MANHATTAN · BEACH · GENERAL · PLAN

CITY OF MANHATTAN BEACH

ZONING DESIGNATIONS

Area District Boundaries

Zoning Designations & Overlays

Residential Districts

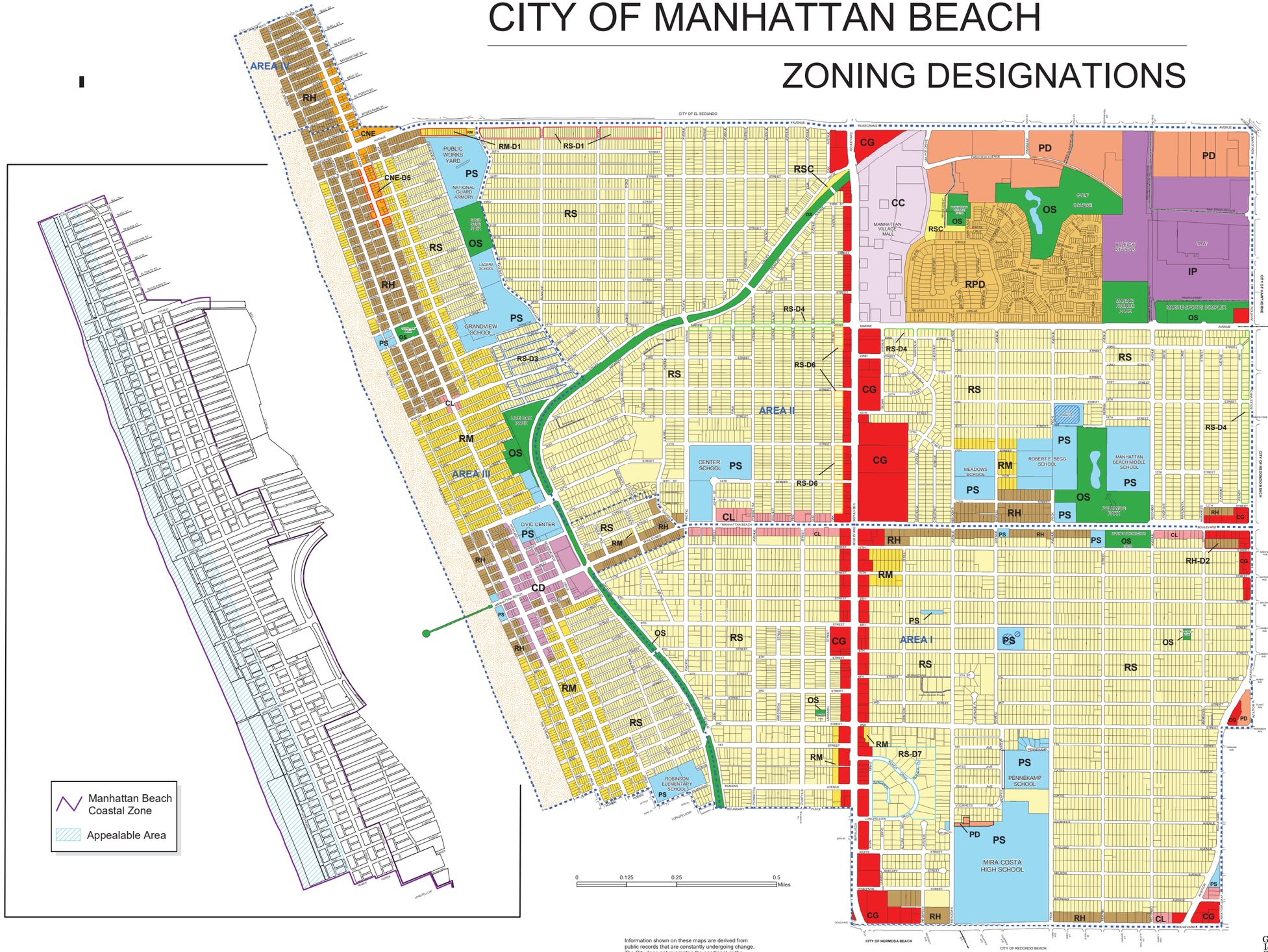
- RS Residential Single Family
  - D1-Design Review -Rosecrans Avenue
  - D3-Design Review -Gaslamp Neighborhood
  - D4-Design Review -Traffic Noise Impact Area
  - D6- Design Review -Oak Avenue
  - D7- Design Review -Longfellow Drive
- RM Residential Medium Density
  - D1- Design Review -Rosecrans Avenue
- RH Residential High Density
  - D2- Design Review -11th Street
- RPD Residential Planned Development
- RSC Residential Senior Citizen

Commercial Districts

- CL Local Commercial
- CC Community Commercial
- CG General Commercial
- CD Downtown Commercial
- CNE North End Commercial
  - D5- Design Review -North End Commercial

Other Districts

- PD Planned Development
- IP Industrial Park
- PS Public and Semi-Public
- OS Open Space



Map Adopted by Ordinance Number 2057 on August 3, 2004.
Adoption Incoporates the Following Preceding Ordinances:
2038, 2025, 2019, 2012, 1988, 1935, 1899, 1848, 1832, 1779.
It Also Incorporates the Following Amendments: 2062, 2105.

Information shown on these maps are derived from public records that are constantly undergoing change. The City does not guarantee the positional or the Thematic accuaracy of the GIS data.

Geographic Information System CITY OF MANHATTAN BEACH

Appendix E:
Phase I ESA Report Update

May 16, 2019

Mr. Jan A. Holtze
Live Oak Properties, LLC
1219 Morningside Avenue, Suite 204
Manhattan Reach, CA 90266

Subject: Update for Previous Phase I Environmental Site Assessment Report, for a Commercial Property Located at 600-612 South Sepulveda Boulevard, Manhattan Beach, California.

Dear Mr. Holtze:

Certified Environmental Consultants, Inc. (CEC) recently completed update activities as related to a previously performed Phase I Environmental Site Assessment (Phase I) for the above-described property. This transmittal summarizes the findings of the previous report, describes the findings of CEC's follow-up investigation, and provides current conclusions and recommendations. The site's location and general features are shown on Figures 1 and 2, respectively. Recent photographs of the site have been provided in Appendix A.

Background

The site was the subject of a previous Phase I investigation, which had been prepared by CEC. The previous report was titled Phase I Environmental Site Assessment Report for Commercial Property Located at 600-612 South Sepulveda Boulevard, Within the City of Manhattan Beach, California. The previous report carried a release date of May 11, 2017.

Based on CEC's previous research findings, the subject site and adjacent and nearby areas were vacant land until the late 1940s/early 1950s. The southwestern edge of the property was occupied by a restaurant building in 1952 and 1953 photographs. The former restaurant was no longer present, and the northwestern part of the site appeared to have been part of a residential development, in a 1963 aerial photograph.

A subsequent former restaurant-type building/restaurant operations were present at the site during the 1970s through mid-1980s. The former restaurant was no longer present, and the site appeared to have been vacant, graded land in photographs form 1989 and 1994. The site's present-day restaurant building and facilities were found to have been constructed during 1995, and these present-day site features could be seen in aerial photographs from the years 2003 through 2016. Usage of the site only for restaurant-type activities was identified through the described research.

The subject site and adjacent properties did not appear on any of the various enforcement-type or active, permit-based regulatory listings, or on any of the business-type-based historical listings. The closet nearby listed properties pertained to historical and permit-type listings. No indications of enforcement actions, or any reports of unauthorized releases, were found for any adjacent properties.

1206 Harris Avenue, Camarillo, CA 93010 (805) 388-8970 cecdj@aol.com

No indications of TSD operations or large-scale or recurring chemical storage, leakage, or spillage, were noted at the site. Further, no hazardous-waste TSD facilities, such as above-ground or underground storage tanks, dry wells, clarifiers, or disposal areas, were noted at the site. Also, no indications of historical contamination from past operations, such as irregular topography or pavement surfaces, noxious odors and/or stressed vegetation, were identified during CEC's site visit.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, significant depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report or other regulatory listings are indicative of current environmental impacts at the subject site.

This update report supplements the earlier Phase I investigation/report and should be reviewed in conjunction with the previous report. However, for easy reference, copies of pertinent excerpts from the previous report are included in Appendix B.

Purpose

The purpose of this update was to reassess the subject site for the presence of current, readily apparent and recognizable characteristics that may be of potential environmental concern, if present, and conversely, to ascertain and describe the apparent lack of current RECs. Potential environmental concern typically include current or past activities related to the treatment, storage and/or disposal (TSD) of regulated/hazardous materials that could have an adverse impact on the property's value and/or affect future land usage.

Involved Parties

This update report was prepared for submittal to Mr. Jan Holtze and Live Oak Properties, LLC. Completion of the described update-investigation activities was authorized by Mr. Holtze in a May 4, 2019 electronic transmittal.

Scope of Work

The Scope of Work for this Phase I update was based on CEC's experience with similar projects and published guidelines (American Society for Testing and Materials Guideline E 1527-13), and included the following tasks and activities: reviewing the previously prepared Phase I report; performing a follow-up reconnaissance of the site and adjacent properties; discussing site conditions with the business/property owner; purchasing and reviewing regulatory websites and a current database summary report of federal, state, regional and local regulatory agency lists; and providing this written summary of CEC's recent findings, conclusions and recommendations.

Data acquisition for this update commenced on May 4, 2019. Data acquisition and evaluation for this project ended on May 16, 2019.

Site Setting

The subject site consists of a restaurant-type property that is located along the eastern side of South Sepulveda Boulevard, within the City of Manhattan Beach, Los Angeles County, California. The site currently is developed with a single-story restaurant building and associated paved driveway and parking areas. The site's existing restaurant building, which occupies the northwestern part of the land, appeared to exhibit a concrete, slab-on-grade foundation and structural flooring system.

Additional improvements at the site include paved parking lot and driveway areas, partial perimeter fencing/walls, landscaping, and features that were deemed to be indicative of the presence of municipal services (potable water and sanitary sewer) and private-utility (electricity and natural gas) connections. The site's general layout can be seen on Figure 3.

No hazardous-material-type TSD operations or facilities were noted at the site, or were otherwise discovered through historical research, as described in the following report sections.

Recent Site Reconnaissance Findings

On May 6, 2019, CEC's representative performed a follow-up reconnaissance of the site. The site building was found to be unoccupied and other than abandoned restaurant-type equipment generally was vacant.

Instances of non-hazardous refuse and recyclable wastes were present on and near the site. However, observed refuse bins were labeled for use only in disposal of non-liquid and non-hazardous wastes. No indications of improper use of the rubbish/recycle bins for disposal of hazardous or otherwise-regulated wastes were observed.

Pole-mounted electrical transformers were noted adjacent to and near the site. However, the observed transformers appeared to be in good condition, with no indications of damage or leakage noted. In addition, no leaking fluorescent light fixtures were observed at the site. Based on these observations, it is deemed unlikely the site has been adversely impacted by polychlorinated biphenyls (PCBs).

Instances of storm-water inlets and/or surface-drainage channels were noted at and near the site. However, no indications of use of the observed drains/fixtures for the improper disposal of hazardous materials and/or wastes were noted at the time of CEC's visit. Adjacent properties appeared to have been graded to route surface waters away from the subject site.

Restaurant-type floor drains were noted in the building's kitchen area and a multi-chamber "grease trap" was present in the parking lot. However, no indications of TSD-related activities, or large-scale or recurring chemical storage, leakage, or spillage, were noted at the site. Further, no hazardous-waste TSD facilities, such as above-ground or underground storage tanks, dry wells, clarifiers, or settling ponds or other types of waste-disposal areas, were noted at the site. Additionally, no indications of historical contamination from past TSD operations, such as irregular topography or pavement surfaces, noxious odors and/or stressed vegetation, were identified during CEC's recent site visit.

CEC also performed a walk-by reconnaissance of the adjacent properties and general neighborhood, to check for readily apparent conditions that would be of potential environmental concern. No readily apparent environmental concerns were observed on the adjacent properties or roadways.

Results of Current Regulatory Agency Lists Review

CEC checked the state's Geotracker database for any site or nearby regulatory listings. No references to the identified site addresses or any adjacent properties were included in the Geotracker database. The closest nearby listing was shown to be a former leaking underground storage tank (LUST) project, for which a "Closed Case" condition was shown.

Status as a closed case indicates a site has been assessed and/or remediated to the satisfaction of the oversight agency. Inasmuch, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

CEC also reviewed the state's EnviroStor website, where listings of large-scale cleanups that may have resulted in environmental liens, or land-use restrictions, being recorded, for past mitigation activities that were not sufficiently completed to provide for unlimited/unrestricted future use. Neither the subject site nor any of the adjacent or nearby properties were included on any of the various EnviroStor listings.

Additionally, CEC reviewed database-derived summaries of governmental listings of known or suspected hazardous materials sites in the vicinity that may have an adverse impact on the subject site. The database search was performed by ERS, in accordance with ASTM standards for this type of investigation. A summary of the various listings and findings follows. Detailed descriptions of the various listings, responsible regulatory agencies, recommended search radius for a given listing, as well as copies of pertinent portions of the database report, are included in Appendix C.

The subject site and adjacent properties did not appear on any of the various enforcement-type or active, permit-based regulatory listings, or on any of the business-type-based historical listings. The only listing found for the site pertained to an air-emissions record, which pertained to a former occupant (Acapulco Restaurant). The closest nearby listed properties were included on historical and permit-type lists. No indications of enforcement actions, or any reported unauthorized releases, were found for adjacent properties.

More-distant nearby listings pertained to operating permits, historical directories, and/or closed cases. Permit-derived listings unto themselves do not indicate an unauthorized release has occurred, or other form of environmental concern exists. Similarly, directory-based historical references are not unto themselves indicative of an environmental condition. Additionally, the existence of such permits suggests operations are/were being conducted under regulatory oversight. As stated above, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, significant depth to ground water, regional soil types, nature of listing(s)

and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report or other regulatory listings are indicative of current environmental impacts at the subject site.

Conclusions and Recommendations

CEC has performed a Phase I Environmental Site Assessment Update for the subject property, in conformance with the scope of work and limitations of ASTM Practice E1527-13. As discussed in the various Update Report sections, no current RECs or otherwise reportable/actionable environmental conditions were identified for the site.

Based on previous and recent findings and expressed rationale, CEC concludes the site has been satisfactorily screened for current environmental conditions of concern. Inasmuch, no additional site assessment or remediation activities presently are deemed necessary and no further investigation or corrective actions are herein recommended.

Limitations

No site assessment activities, no matter how extensive or expensive, can guarantee the absence of hazardous or otherwise regulated materials at a particular site. Despite the use of reasonable care, CEC and other well-qualified and competent environmental professionals may fail to detect the presence of hazardous/regulated substances at a property.

CEC and other environmental professionals may under or over estimate the amount and/or extent of hazardous or regulated substances present. Additionally, CEC offers no comments regarding future conditions at the property or changes to environmental-screening guidelines and practices.

CEC assumes no responsibility for conditions that were not readily apparent at the time of its work, or for the accuracy or completeness of information provided or compiled by others. The professional services provided for this report and the related investigation are intended to meet the degree of skill and care ordinarily exercised by other environmental professionals in the region practicing under similar conditions and circumstances. No other warranty or guarantee, express or implied, is made.

This report was prepared on behalf of Mr. Jan Holtze and Live Oak Properties, LLC, and is intended to be used solely by designated representatives and agents in evaluating the potential impact, if any, of hazardous/regulated materials at the site.

This report is not intended for use by other parties, and may not contain sufficient detail for use by others. Any use of or reliance upon the information by another party shall be at the sole risk of such third party, and without legal recourse against CEC, its employees, or officers, regardless of whether such action is based upon contract, tort or statute.

This report does not represent a legal opinion. CEC's comments are based on its understanding of current regulations and experience with similar projects. A qualified environmental attorney should be consulted for a legal opinion on any related matters, including site ownership/management requirements and options.

Air-quality testing and/or inspecting for the presence of mold, or other potential respiratory-related concerns, were not performed as part of this investigation. Sampling and/or inspecting the site for radon, mold or other air-quality concerns, such as vapor intrusion, would require an increase in CEC's scope of work.

Thank you for this opportunity to be of service. Please do not hesitate to call if you have any questions or desire additional clarification.

Sincerely,
Certified Environmental Consultants, Inc.

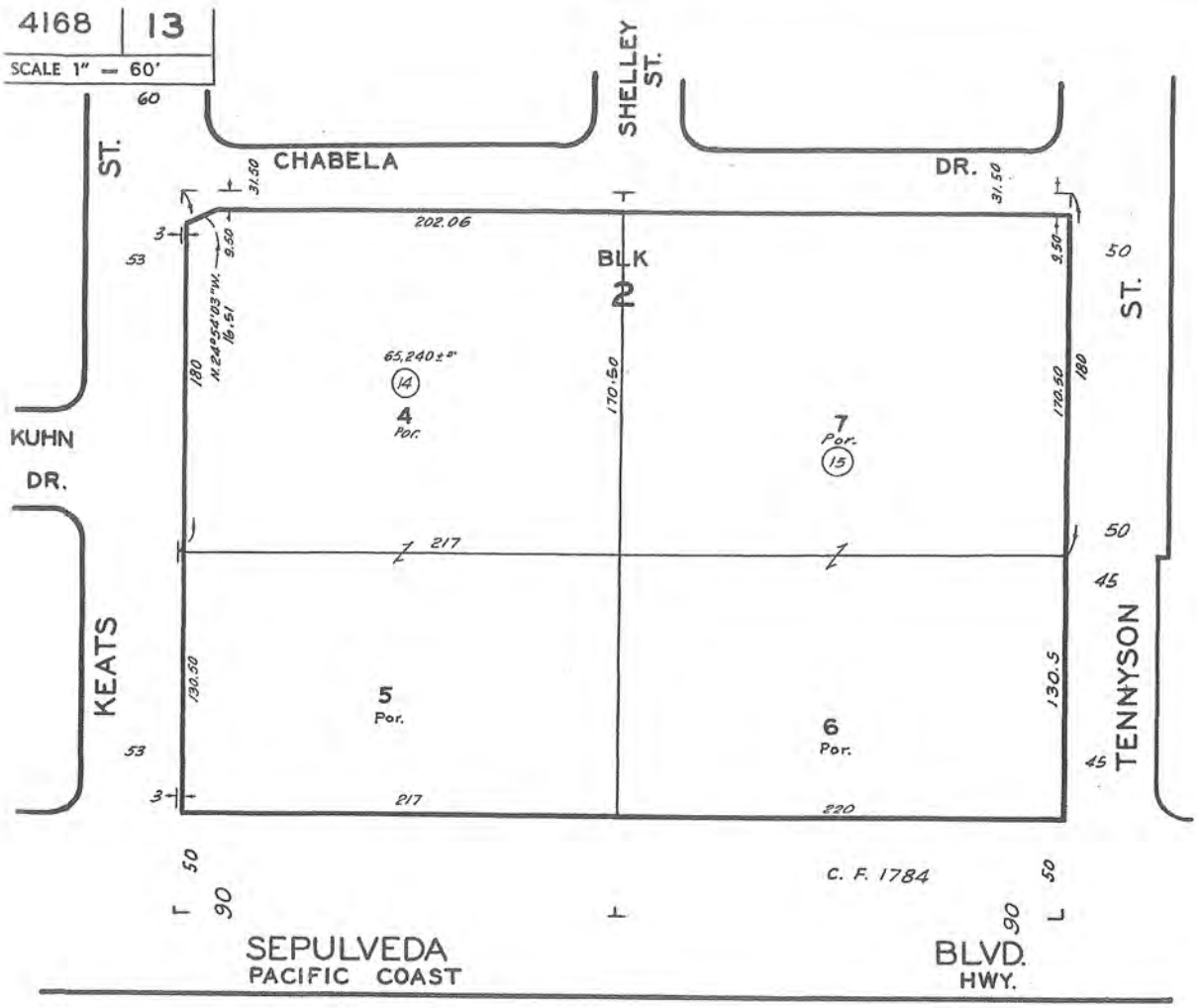
David R. Johannes, PG, REA, CES
President

Attachments:
- Appendix A - Recent Site Photographs
- Appendix B - Previous Site Report (excerpts)
- Appendix C - Current Database Report (excerpts)

Figures

DATE:	DRAWN BY:	PROJECT NO.	Site Location Map 600-612 South Sepulveda Boulevard Manhattan Beach, California	FIGURE
5/15/19	D. Johannes	19-2060		1
SOURCE:	USGS Redondo Beach Quadrangle			

CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.



AMENDED MAP OF SEASIDE PARK

M.B. 8-19

CODE 6174

DATE:	DRAWN BY:	PROJECT NO.	Assessor's Parcel Map 600-612 South Sepulveda Boulevard Manhattan Beach, California	FIGURE
5/15/19	D. Johannes	19-2060		2
SOURCE:	Los Angeles Assessor's Office			

CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.

DATE:	DRAWN BY:	PROJECT NO.	Recent Aerial Photograph 600-612 South Sepulveda Boulevard Manhattan Beach, California	FIGURE
5/15/19	D. Johannes	19-2060		3
SOURCE:	Environmental Record Search			

CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.

Appendix A
Recent Site Photographs

Photographs 1 and 2 - Northeasterly to easterly view of the site and adjacent properties, as seen from a point to the southwest, across South Sepulveda Boulevard; and an easterly to southeasterly view of the site and adjacent properties, as seen from a more-northerly point, also from a point across South Sepulveda Blvd.

Photographs 3 and 4 - Westerly to northwesterly view of the site and adjacent properties, as seen from near the property's southeastern corner; and a southwesterly to westerly view of the site and adjacent properties, as seen from a more-northerly point of reference, near the property's northeastern corner.

Photographs 5, 6 and 7 - View of water-service piping on the south edge of the site's parking lot; view of non-hazardous refuse bins seen in Photograph 4; and view of a multi-chamber "grease trap", in nearby area of the site's parking lot.

Photographs 8, 9 and 10 - Views of an electrical transformer near the southeast corner of the site building; and views of the vacant kitchen area of the building.

Photographs 11 and 12 - Views of vacant dining-room areas inside the south part of the site building.

Appendix B
Previous Phase I Report (excerpts)

CEC
Certified Environmental Consultants, Inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT FOR COMMERCIAL PROPERTY LOCATED AT 600-612 SOUTH SEPULVEDA BOULEVARD, WITHIN THE CITY OF MANHATTAN BEACH, CALIFORNIA

For submittal to

First Choice Bank
In Care Of: Ms. Kerie Dawson
Dawson Appraisal, Inc,
15581 Placid Circle
Huntington Beach, CA 92647

On behalf of

Mr. Stuart Sackley and
The Sackley Family Trust

Prepared by

Certified Environmental Consultants, Inc.

David R. Johannes, RG, REA, CES
President

DAVID R. JOHANNES #12677 Environmental Assessment Specialist Certified Environmental Association

REGISTERED GEOLOGIST DAVID R. JOHANNES No. 5855 STATE OF CALIFORNIA

CEC Project Number 17-1878
May 11, 2017

1206 Harris Avenue, Camarillo, CA 93010 (805) 388-8970 cecdj@aol.com

EXECUTIVE SUMMARY

Certified Environmental Consultants, Inc. (CEC) recently completed a Phase I Environmental Site Assessment (Phase I) for commercial property located at 600-612 South Sepulveda Boulevard, in the City of Manhattan Beach, Los Angeles County, California. The county-assigned assessor's parcel number for the subject land is 4168-013-015. This report summarizes the investigative procedures that were followed, describes the findings of environmental-screening investigation, and provides CEC's project-related conclusions and recommendations.

Based on CEC's research findings, the subject site and adjacent and nearby areas were vacant land until the late 1940s/early 1950s. The southwestern edge of the property was occupied by a restaurant building in 1952 and 1953 photographs. The former restaurant was no longer present, and the northwestern part of the site appeared to have been part of a residential development, in a 1963 aerial photograph.

A subsequent former restaurant-type building/restaurant operations were present at the site during the 1970s through mid-1980s. The former restaurant was no longer present, and the site appeared to have been vacant, graded land in photographs form 1989 and 1994. The site's present-day restaurant building and facilities were found to have been constructed during 1995, and these present-day site features could be seen in aerial photographs from the years 2003 through 2016. Usage of the site only for restaurant-type activities was identified through the described research.

The subject site and adjacent properties did not appear on any of the various enforcement-type or active, permit-based regulatory listings, or on any of the business-type-based historical listings. The closet nearby listed properties pertained to historical and permit-type listings. No indications of enforcement actions, or any reports of unauthorized releases, were found for any adjacent properties.

More-distant nearby listings pertained to operating permits, closed cases, and/or historical directories. Permit-derived listings unto themselves do not indicate an unauthorized release has occurred, or other form of environmental concern exists. Similarly, directory-based historical references are not unto themselves indicative of an environmental condition. Additionally, the existence of such permits suggests operations are/were being conducted under regulatory oversight. Also, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

No indications of TSD operations or large-scale or recurring chemical storage, leakage, or spillage, were noted at the site. Further, no hazardous-waste TSD facilities, such as above-ground or underground storage tanks, dry wells, clarifiers, or disposal areas, were noted at the site. Also, no indications of historical contamination from past operations, such as irregular topography or pavement surfaces, noxious odors and/or stressed vegetation, were identified during CEC's site visit.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, significant depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report or other regulatory listings are indicative of current environmental impacts at the subject site.

TABLE OF CONTENTS

TABLE OF CONTENTS

1.0 INTRODUCTION

Certified Environmental Consultants, Inc. (CEC) recently completed a Phase I Environmental Site Assessment (Phase I) for commercial property located at 600-612 South Sepulveda Boulevard, in the City of Manhattan Beach, Los Angeles County, California. The county-assigned assessor's parcel number for the subject land is 4168-013-015.

This report summarizes the investigative procedures that were followed, describes the findings of environmental-screening investigation, and provides CEC's project-related conclusions and recommendations.

1.1 Purpose

The purpose of the assessment was to identify and assess apparent and recognizable site characteristics that may be of environmental concern, if present, and conversely, to ascertain and describe the apparent lack of recognized environmental conditions. Typical areas of potential environmental concern include present/past activities related to the treatment, storage and/or disposal (TSD) of regulated/hazardous materials, which could have adversely impacted the site, or other environmental hazards that likely would affect the property's value and/or future land use.

"Recognized environmental conditions" (RECs) do not include *de minimis* conditions at the subject site that generally do not appear to present a material risk of harm to public health or the environment, and that generally would not be deemed likely to become the subject of an enforcement action if brought to the attention of the local regulatory agency. Small, isolated staining of the pavement surface in a vehicle-parking area would be an example of a *de minimis* condition.

A current REC would involve the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment, under conditions indicative of a release to the environment, and/or under observable conditions that would pose a material threat of future release.

By contrast, an historical REC (HREC) would be a case that pertains to an older unauthorized release or other form of regulated environmental condition, wherein previously completed site assessment and/or remediation activities were performed by the Responsible Party, to the satisfaction of an overseeing regulatory agency, and status as a "closed case" has been granted, with no on-going land- or activity-use restrictions imposed.

By further contrast, a controlled REC (CREC) also would involve an older unauthorized release or other form of regulated environmental condition, wherein previously completed site assessment and/or remediation activities were performed by the Responsible Party, to the satisfaction of an overseeing regulatory agency, and status as a "closed case" has been granted.

However, CRECs have not been remediated to unrestricted cleanup levels. Inasmuch, future land and/or activity use(s), and/or engineering controls, such as concrete barriers that must remain in place, may apply.

1.2 Involved Parties

This report was prepared for submittal to First Choice Bank (FCB), on behalf of Mr. Stuart Sackley and the Sackley Family Trust, as authorized by FCB's agent, Ms. Kerie Dawson, with Dawson Appraisal, Inc., in an April 26, 2017 electronic transmittal.

1.3 Scope of Work

The Scope of Work for the Phase I was based on published guidelines (American Society for Testing and Materials Guideline E1527-13) and experiences with similar projects. Specifically, the following tasks were completed: performing a reconnaissance of the site and nearby properties; reviewing readily available local regulatory agency listings; reviewing a database-derived printout of federal, state, regional and local regulatory lists; reviewing various site-history/land-usage information sources, such as historical photographs and maps; reviewing the state's Geotracker, EnviroStor and Well Finder websites; performing a preliminary vapor-encroachment screening; and conducting a personal interview with the current property owner.

Portions of the reviewed historical materials for this project were provided by Environmental Record Search (ERS). The historical records, maps, and other data that were derived from the various ERS-provided references are indicated in the respective report sections.

CEC's services culminated with preparation of this written report of project-related findings and conclusions. Data acquisition for this report commenced on April 26, 2017. Data acquisition and evaluation for this report ended on May 11, 2017.

2.0 GENERAL SITE CHARACTERISTICS

2.1 Site Location

The subject site is located at the northeastern corner of the intersection of South Sepulveda Boulevard and Tennyson Street, in the City of Manhattan Beach, County of Los Angeles, California. The site's formal street address is 600 South Sepulveda Boulevard, Manhattan Beach, CA 90266. No address-based listing for the site's described "612" address was found through the county assessor's office.

The site location has been indicated on Figure 1 - Site Location Map. The site location is further delineated on Figure 2 - Assessor's Parcel Map. Figure 2 also shows the site's physical shape and dimensions, as well as relationship of the subject parcel to nearby properties and land.

2.2 Adjacent Properties

The subject site is located in an area of mixed-use residential and commercial development. To the north, the site is bounded by a commercial, office-type and more-distant retail properties. To the east, the site is bounded by residential properties. To the south of the site lies Tennyson Street, and a series of additional commercial properties. To the west, the site is bordered by South Sepulveda Boulevard, with a mixture of retail-type commercial properties, and more-distant residential properties, beyond.

Adjacent and nearby land can be seen in recent ground-level photographs of the area that have been included in Appendix A. Additionally, adjacent and nearby land use can be seen on previously referenced Figure 2, as well as on Figure 3 - Recent Aerial Photograph.

2.3 Site Description and Uses/Operations

The site is developed with a single-story building that is occupied by a Mexican-food restaurant. Gathered information indicates the site previously also was occupied by restaurant-type businesses. The site's existing restaurant building, which occupies the northwestern part of the land, appeared to exhibit a concrete, slab-on-grade foundation and structural flooring system.

Additional improvements at the site include paved parking lot and driveway areas, partial perimeter fencing/walls, landscaping, and features that were deemed to be indicative of the presence of municipal services (potable water and sanitary sewer) and private-utility (electricity and natural gas) connections. The site's general layout can be seen on Figure 3.

No hazardous-material-type TSD operations or facilities were noted at the site, or were otherwise discovered through historical research, as described in the following report sections.

3.0 ENVIRONMENTAL SETTING

3.1 Regional Physiographic Conditions

The site is located in the southeastern portion of California's Transverse Ranges Geomorphic Province. The Transverse Ranges Province generally consists of east-west trending, elongate, fault-derived, sequential mountains and valleys, and geologically is quite complex. Structural features in the region generally are related to crustal shortening (compression forces).

The Transverse Ranges Geomorphic Province is characterized by complexly folded and faulted rock units, primarily consisting of marine and non-marine sedimentary materials, with some localized outcroppings of intrusive (granitic) and extrusive (volcanic) igneous rocks, and associated metamorphic rocks.

Formational/mapped units of the Transverse Ranges Province vary in age from Proterozoic to Holocene/Recent. These eras related to ages ranging from greater than 570 million years old to less than 11,000 years in age.

The ground surface at the site appeared to be relatively level, and lies at an estimated elevation of about 152 feet above mean sea level. Regionally, the ground surface slopes gently downward to the northeast.

3.2 Soils Conditions

According to site-specific soils information that was provided by ERS, the region's underlying soils belong to the Abaft and Marina assemblages. Soils of these groupings typically consist of silty to sandy loams, and exhibit slow to moderate infiltration rates. Based on regional setting, the soils beneath the site likely consist of stratified intervals of silts, sands and clays. Stratified and/or fine-

grained soils of this type would be expected to exhibit slow infiltration rates. These soil types would tend to inhibit the migration of liquid- and/or vapor-phase contamination, if present.

3.3 Geological Conditions

Based on CEC's review of a geologic map, the site area is underlain by Recent-aged alluvium. These younger materials predominantly consist of stream-channel deposits and unconsolidated floodplain deposits. The local thickness of this alluvial material is believed to be several hundred feet in thickness. In the site area, these alluvial deposits appear to be unconformably underlain by Mesozoic-aged sedimentary units that are of marine origin.

Structurally, the Transverse Ranges generally are comprised of east-trending, steeply dipping, folded rock units that in many instances have been fractured along their axes and/or flanks by compressional faulting.

Numerous named and unnamed faults have been identified at on-shore and off-shore locations in the Los Angeles County area, and southern California in general is known to be seismically active. Regionally, there are several active and inactive faults that have been mapped within a 20-mile radius of the subject site. However, according to review of a fault map, no known or suspected active faults are present at or adjacent to the site.

Therefore, like most of southern California, the site may be subjected to significant ground motion during an earthquake event. However, based on this finding, it seems unlikely ground-surface rupture would directly impact the subject property.

3.4 Hydrological/Hydrogeological Conditions

No mapped water bodies are present at or adjacent to the subject property. According to information provided by ERS, the site area does not lie within a mapped flood zone. Based on this finding, routine flooding of the site does not appear to be of concern. Further, no mapped riparian areas, or designated wetlands, were identified at or adjacent to the subject site.

No wells were observed at the site, and no depth-to-water or water-quality data has been provided for ground water beneath the site. Based on gathered information, it is likely first ground water beneath the site occurs under perched or semi-perched, unconfined conditions, at depths of roughly 110 to 130 feet below ground surface.

Regionally, ground-water flow likely follows the general trend of the topography of the ground surface. Based on this rationale ground-water flow beneath the site area likely is toward the northeast. Determining depth to ground water and flow-direction data for the site would require an increase in CEC's scope of services.

4.0 RESULTS OF INVESTIGATION

4.1 Site Inspection Observations

On May 2, 2017, CEC's Certified Environmental Specialist performed reconnaissance activities at the subject site. Several recent photographs of the property's buildings and other features are

provided in Appendix A. The site's general layout and physical improvements can be further reviewed on Figures 2 and 3.

A general tour of the site and area was provided by Mr. Sackley. As described in Section 2.3, the site currently is developed as a restaurant-type property. Gathered information indicates the site historically also has been used for similar, restaurant-type operations.

Instances of non-hazardous refuse and recyclable wastes were present on and near the site. However, observed refuse bins were labeled for use only in disposal of non-liquid and non-hazardous wastes. No indications of improper use of the rubbish/recycle bins for disposal of hazardous or otherwise-regulated wastes were observed.

Pole-mounted electrical transformers were noted adjacent to and near the site. However, the observed transformers appeared to be in good condition, with no indications of damage or leakage noted. In addition, no leaking fluorescent light fixtures were observed at the site. Based on these observations, it is deemed unlikely the site has been adversely impacted by polychlorinated biphenyls (PCBs).

Instances of storm-water inlets and/or surface-drainage channels were noted at and near the site. However, no indications of use of the observed drains/fixtures for the improper disposal of hazardous materials and/or wastes were noted at the time of CEC's visit. Adjacent properties appeared to have been graded to route surface waters away from the subject site.

No indications of TSD-related activities, or large-scale or recurring chemical storage, leakage, or spillage, were noted at the site. Further, no hazardous-waste TSD facilities, such as above-ground or underground storage tanks, dry wells, clarifiers, or settling ponds or other types of waste-disposal areas, were noted at the site. Additionally, no indications of historical contamination from past TSD operations, such as irregular topography or pavement surfaces, noxious odors and/or stressed vegetation, were identified during CEC's site visit.

4.2 Adjacent Site and Vicinity Observations

A walk-by reconnaissance of the adjacent properties and general neighborhood was performed on May 2, 2017, to check for readily apparent conditions that would be of potential environmental concern. No readily apparent environmental concerns were observed on the adjacent properties or roadways.

4.3 Results of Regulatory Agency Lists Review

CEC checked the state's Geotracker database for any site or nearby regulatory listings. No references to the identified site addresses or any adjacent properties were included in the Geotracker database. The closest nearby listing was shown to be a former leaking underground storage tank (LUST) project, for which a "Closed Case" condition was shown.

Status as a closed case indicates a site has been assessed and/or remediated to the satisfaction of the oversight agency. Inasmuch, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

CEC also reviewed the state's EnviroStor website, where listings of large-scale cleanups that may have resulted in environmental liens, or land-use restrictions, being recorded, for past mitigation activities that were not sufficiently completed to provide for unlimited/unrestricted future use. Neither the subject site nor any of the adjacent or nearby properties were included on any of the various EnviroStor listings.

Additionally, CEC reviewed database-derived summaries of governmental listings of known or suspected hazardous materials sites in the vicinity that may have an adverse impact on the subject site. The database search was performed by ERS, in accordance with ASTM standards for this type of investigation. A summary of the various listings and findings follows. Detailed descriptions of the various listings, responsible regulatory agencies, recommended search radius for a given listing, as well as copies of pertinent portions of the database report, are included in Appendix B.

The subject site and adjacent properties did not appear on any of the various enforcement-type or active, permit-based regulatory listings, or on any of the business-type-based historical listings. The only listing found for the site pertained to an air-emissions record, which pertained to a former occupant (Acapulco Restaurant). The closest nearby listed properties were included on historical and permit-type lists. No indications of enforcement actions, or any reported unauthorized releases, were found for adjacent properties.

More-distant nearby listings pertained to operating permits, historical directories, and/or closed cases. Permit-derived listings unto themselves do not indicate an unauthorized release has occurred, or other form of environmental concern exists. Similarly, directory-based historical references are not unto themselves indicative of an environmental condition. Additionally, the existence of such permits suggests operations are/were being conducted under regulatory oversight. As stated above, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, significant depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report or other regulatory listings are indicative of current environmental impacts at the subject site.

4.4 Results of Site-History/Land-Use Review

4.4.1 Personal Interviews and Questionnaire Reviews

CEC spoke with Mr. Sackley, at the time of the site visit. Mr. Sackley indicated the current restaurant building had been constructed during the 1990s, and that the property previously had been under similar (restaurant) usage. Mr. Sackley also expressed that he was not aware of any underground storage tanks, or other types of potential environmental concerns, at the site.

CEC reviewed copies of an Environmental Transaction Screen Questionnaire (ETSQ) and a Report-User Questionnaire (RUQ), both of which had been completed by Mr. Michael Lococo. No apparent or potential environmental concerns at the site were identified through review of the provided ETSQ responses. Additionally, no indications of land- or activity-use restrictions were

identified through review of the provided RUQ responses. Copies of the completed questionnaires are included in Appendix C for reference.

CEC previously has contacted representatives of local regulatory agencies regarding any personal knowledge they may have about known or potential environmental concerns associated with a particular site. CEC has been informed agency personnel would not have any personal knowledge of environmental issues that were not included in the respective agency's published listings. Based on these earlier findings, it was deemed unlikely further interviews with local-agency personnel would yield any pertinent additional information that was not otherwise available.

Historical records described elsewhere in this report do not suggest the site has ever been used as a hazardous-waste treatment, storage or disposal facility. Given this condition, and the depth and consistency of received descriptions and otherwise gathered land-use information, it was deemed unlikely interviewing former property owners and/or facility managers would provide any pertinent additional information.

4.4.2 Ownership Information

According to gathered information, the subject property currently is owned by Mr. Michael Angelo Lococo II, Mr. Randall Craig Lococo, and Mr. Daniel David Lococo, as Tenants in Common. Historical site-ownership information was not readily available through the assessor's office or other readily available information sources. Collection, review and reporting of prior ownership records would require an increase in CEC's scope of work.

4.4.3 Air Resources Control Board Records

The referenced ERS database report included summaries of various regulatory listings that are related to industrial-type air emissions. As previously discussed in Section 4.3, no emission-related releases or violations for the site were identified in the ERS report.

4.4.4 Aerial Photographs

Historical aerial photographs of the site and vicinity, provided by ERS, were reviewed as another means to gather historical land-usage information. Aerial photographs of the site area dating back to 1952 were provided and reviewed. Specifically, photographs from 1952, 1953, 1963, 1972, 1980, 1985, 1989, 1994, 2003, 2006, 2011 and 2016 were provided and observed. A summary of the land-use information that was gathered from the various individual photographs follows.

The scale and/or generally poor quality of several photographs made detailed examination of specific site features impractical. However, general use of the site and area appeared to be generally consistent with the historical information gathered through the other described information sources.

An elongate, rectangular-shaped building that fronted South Sepulveda Boulevard was present on the southwest edge of the site, in the 1952 and 1953 photographs. The eastern and southwestern parts of the site appeared to have been vacant at the time of the 1963 view, whereas the northwestern part of the site appeared to have been part of a residential-type development. A former, commercial-type building, with a later addition, which were found to have been used for

previous restaurant-type operations, could be seen at the property in the 1972 through 1985 photographs.

The site appeared to have been vacant, graded land in the 1989 and 1994 aerial views. The site's present-day restaurant building and grounds could be seen in the 2003 through 2016 photographs. No large-scale TSD-type facilities, such as waste-disposal or -treatment ponds, land-filling operations, oil wells and/or tank farms, were observed at the subject site in these historical aerial photographs.

4.4.5 Fire Insurance Maps

Sanborn Maps originally were prepared for use by the insurance industry, and date back to the late 1800s for some metropolitan areas. These maps often depict pertinent site information regarding number, approximate size and location of structures on the property, types of construction materials, presence of above-ground or underground storage tanks, and age of site improvements.

ERS's researchers indicated Sanborn Maps were not available for the site area. This finding is deemed to be consistent with a lack of historically significant commercial development at and near the site.

4.4.6 Regional Wildcat Map

CEC visited the state's Well Finder website to check their collection of Wildcat Maps for the existence of historical petroleum wells at or near the site. According to gathered information, no oil wells have ever been installed at or near the subject property. Inasmuch, adverse impact to the site from oil-exploration and/or -production activities is unlikely.

4.4.7 Topographic Maps

CEC reviewed excerpts of topographic maps of the site area to gather additional historical-usage information. The project-specific map excerpts were provided by ERS. The earliest provided topographic base map was prepared in 1896. Subsequent map excerpts included publication and/or photograph-based revision dates of 1905, 1916, 1927, 1930, 1941, 1953, 1965, 1975, 1982 and 2016.

The site was depicted to have been undeveloped land, with no structures or other land-use features of concern shown, on the 1896 through 1941 base maps. The site's former restaurant building, as described above, was shown to have been present on the southwestern edge of the site, on the 1953 map. The site and vicinity were depicted as "urbanized area", where only landmark buildings such as parks, churches and schools typically are plotted, on each of the 1965 through 1982 maps. No structures or land-use features were depicted at the area of the subject site.

The present-day condition of the site and adjacent and nearby properties could be seen on the 2016 map, which incorporated a superimposed aerial photograph. No large-scale TSD-type facilities, such as waste-disposal or waste-treatment ponds, land-filling operations, oil wells and/or tank farms, were depicted at the site on these historical maps.

4.4.8 Historical Directories

ERS provided an historical-directory (telephone) summary for the site's street address. The reviewed directory-listings summary dated back to 1936. Subsequent directory-publication searches included the years 1947, 1952, 1960, 1971, 1974, 1981, 1985, 1990, 1996 and 2000.

No directory listings for the site's current street address (or 612 or 618 South Sepulveda Boulevard) were found for the years 1936 and 1947. While no listings for 600 or 612 were found, the site's apparent former address of 618 South Sepulveda Boulevard, was shown to have been a "Lococo's" restaurant, in both the 1952 and 1960 directory listings. While no directory listings for the site were found for the years 1981 and 1990, listings from the remaining directory listings (years 1971 through 2000) pertained to restaurants.

4.4.9 Environmental Liens/Institutional Controls/Engineering Barriers

The referenced environmental-screening guidelines require this report's user to determine whether any environmental liens or other types of institutional controls exist for the subject property. However, in support of this investigation, CEC reviewed a provided copy of a Preliminary Title Report (PTR) for the site, which recently had been issued by First American Title Insurance Company.

Only routine language, such as that pertaining to water and mineral rights, tax-liens, lease-agreements, and/or easements, was identified in the reviewed text. Specifically, no references to environmental liens, institutional controls, or engineering barriers, such as concrete caps that must remain in place, or other types of land-use restrictions, were described in the PTR. Additionally, no large-scale cleanups were shown to have occurred at or near the site in the state's Envirostor database, as discussed in Section 4.3, or were identified in the RUQ responses, as described in Section 4.4.1. Based on this information, it is deemed unlikely environmental liens and/or usage restrictions exist for the site.

4.4.10 Building and Safety Records

CEC visited the offices of the City of Manhattan Beach's Building and Safety Department to review their available site records. Their public-access records dated back to 1994, when permits for construction of the site's existing restaurant building and grounds had been issued. Subsequent permits and records related to routine upgrades and replacements to existing facilities. No references to TSD-related facilities were contained in the city's building department records.

4.5 Synopsis of Previous Environmental Investigations

CEC has not been provided with copies of any previously prepared environmental reports for the subject property. In addition, CEC has not become aware of the existence of any such reports.

4.6 Results of Suspect ACM Observations

Asbestos is a naturally occurring mineral fiber that has been used in construction and many other industries. Manufacturers used asbestos in their commercial products because asbestos is

noncombustible, noncorrosive, nonconductive, and it has high tensile strength. Asbestos fibers have been mixed with binding agents to create approximately 3,600 different commercial products.

The amount of asbestos contained in these asbestos-containing materials (ACMs) can vary from less than 1% to 100%. Over several decades, it generally was determined that any inhalation exposure to asbestos fibers represented a potential health hazard. Regulatory agencies banned the use of friable, asbestos-containing building materials after 1978. As described in Section 4.4.10, the site's building was not constructed until the 1990s. Inasmuch, the presence of ACMs at the site should not be a concern.

4.7 Radon Potential and Air-Quality Concerns

Radon is a colorless, odorless, tasteless radioactive gas that occurs in soil and ground water as a by product of radioactive decay of uranium and thorium isotopes found in certain rocks. Various levels of naturally occurring radon exist across the United States. Under some conditions, Radon can become concentrated in buildings, such as those with basements or that exhibit poor air circulation. Prolonged exposure to radon has been associated with increased risk of certain types of cancer.

The California Statewide Radon Survey Interim Results Report was reviewed regarding potential naturally occurring radon levels at the site. For this report, the California Department of Health Services divided the state into nine regions, based on general geology, climate and existing radon occurrence and distribution knowledge.

The subject site is located in Region 9. Based on statistical analysis of random sampling performed by ZIP Code, the report predicted only 0.5% of the homes in Region 9 exceeded the EPA's action level of 4.0 picoCuries per liter (pCi/l). Therefore, elevated levels of naturally occurring radon at the site are not anticipated.

Sampling at the site for the presence of radon, mold, or other indoor-air-quality concerns, would require use of specialty sampling equipment and outside laboratory analyses. Such additional sampling services, or conducting a more-detailed evaluation of indoor-air-quality concerns, such as vapor intrusion, would necessitate an increase in CEC's scope of work, timeframe and project budget.

5.0 VAPOR ENCROACHMENT SCREENING (VES)

In order to address potential vapor-encroachment concerns, as related to nearby sites, ASTM Standard E2600-10 (Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions) was referenced for general guidance, as part of this Phase I environmental screening. The step-wise vapor-encroachment screening process, and associated outcome, are discussed below.

The purpose of this vapor-threat screening is to establish whether or not an ASTM-defined Vapor Encroachment Condition (VEC) may exist, due to migratory contamination (ground water and/or soil vapor), that may be derived from nearby database-listed properties.

Conversely, the vapor-encroachment screening process is intended to provide a procedure for establishing that a VEC does not or is not likely to exist for a given property. If one or more nearby "suspect" properties, as identified in the database report, can not be eliminated as potential vapor-migration sources, additional evaluation (sample collection) typically is recommended.

5.1 Tier I VES

The initial step in a VES involves a cursory review of the regulatory database report described in Section 4.3 and other historical records where applicable, to assess if any "known or suspect potentially contaminated properties" exist within close proximity of the site. The referenced ASTM guidelines require initial screening at a radius of 1 mile, in establishing a default Area of Concern (dAOC) that surrounds the site. At this level of potential vapor-migration evaluation, there is no distinction between releases of petroleum products and other chemicals of concern, such as industrial cleaning and/or degreasing solvents, or consideration of physiographic conditions, such as physical barriers or soil types.

Some of the nearby agency-listed properties that were described in Section 4.3 lie within the ASTM-defined dAOC for the subject site. Based on this initial finding, additional evaluation of the potential for off-site migratory contamination was conducted, as described below.

5.2 Tier II VES

Tier II screening uses more-detailed information for the nearby sites of potential concern that had been identified through the Tier I process, to better assess whether or not a migratory contaminant plume is close enough to the subject site to result in a possible VEC.

Specific distances between properties, with respect to the direction of ground-water flow and/or chemical type, soil types, and more-detailed review of the nature of nearby listings, are used to further assess the likely presence of a VEC. The known or likely presence of an identified nearby VEC unto itself could require consideration as a potential REC.

5.3 Tier III VES

As described in Section 4.3, the subject site and the adjacent properties/land did not appear on any of the various enforcement-type regulatory listings, and the closest listing of this type was found to be a closed case. As previously indicated, closed regulatory cases would be unlikely to exhibit significant and/or migratory contamination.

Other nearby references pertained only to permit-related and historical-directory listings. As previously described, permit-and/or directory-derived listings unto themselves do not indicate an unauthorized release has occurred, or other form of environmental concern exists.

As such, no potential for migratory contamination has been identified for adjacent properties, and no sources of contamination have been identified for the site. Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, apparent depth to ground water, regional soil types, nature of listing(s) and/or the status of listings, it is deemed unlikely the described regulatory listings included in the ERS database report are indicative of current, migratory environmental impacts at the subject site.

Given the apparent lack of nearby contamination, and significant depth to regional ground water, CEC concludes it is unlikely that a VEC exists at the subject property. Inasmuch, no Tier III VES activities (collection and analysis of physical samples) presently are deemed warranted.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on CEC's research findings, the subject site and adjacent and nearby areas were vacant land until the late 1940s/early 1950s. The southwestern edge of the property was occupied by a restaurant building in 1952 and 1953 photographs. The former restaurant was no longer present, and the northwestern part of the site appeared to have been part of a residential development, in a 1963 aerial photograph.

A subsequent former restaurant-type building/restaurant operations were present at the site during the 1970s through mid-1980s. The former restaurant was no longer present, and the site appeared to have been vacant, graded land in photographs form 1989 and 1994. The site's present-day restaurant building and facilities were found to have been constructed during 1995, and these present-day site features could be seen in aerial photographs from the years 2003 through 2016. Usage of the site only for restaurant-type activities was identified through the described research.

The subject site and adjacent properties did not appear on any of the various enforcement-type or active, permit-based regulatory listings, or on any of the business-type-based historical listings. The closet nearby listed properties pertained to historical and permit-type listings. No indications of enforcement actions, or any reports of unauthorized releases, were found for any adjacent properties.

More-distant nearby listings pertained to operating permits, closed cases, and/or historical directories. Permit-derived listings unto themselves do not indicate an unauthorized release has occurred, or other form of environmental concern exists. Similarly, directory-based historical references are not unto themselves indicative of an environmental condition.

Additionally, the existence of such permits suggests operations are/were being conducted under regulatory oversight. Also, it would be unlikely significant and/or migratory contamination would be present at a closed-case property.

No indications of TSD operations or large-scale or recurring chemical storage, leakage, or spillage, were noted at the site. Further, no hazardous-waste TSD facilities, such as above-ground or underground storage tanks, dry wells, clarifiers, or disposal areas, were noted at the site. Also, no indications of historical contamination from past operations, such as irregular topography or pavement surfaces, noxious odors and/or stressed vegetation, were identified during CEC's site visit.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, significant depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report or other regulatory listings are indicative of current environmental impacts at the subject site.

7.0 LIMITATIONS

No site assessment activities, no matter how extensive or expensive, can guarantee the absence of hazardous or otherwise regulated materials at a particular site. Despite the use of reasonable care, CEC and other well-qualified and competent environmental professionals may fail to detect the presence of hazardous/regulated substances at a property. Further, CEC and other environmental professionals may under or over estimate the amount and/or extent of hazardous or regulated substances present.

CEC assumes no responsibility for conditions that were not readily apparent at the time of its work, or for the accuracy or completeness of information provided or compiled by others. Professional services provided for this report and the related investigation are intended to meet the degree of skill and care ordinarily exercised by other environmental professionals in the region practicing under similar conditions and circumstances. No other warranty or guarantee, express or implied, is made.

This report was prepared for submittal to First Choice Bank, on behalf of Mr. Stuart Sackley and the Sackley Family Trust, and is intended to be used only by these named parties and their designated agents, and may not contain sufficient detail for use by others. Any use of or reliance upon the information by another party shall be at the sole risk of such third party, and without legal recourse against CEC, its employees, or officers, regardless of whether such action is based upon contract, tort or statute.

This report does not constitute a legal opinion. CEC's comments are based on its understanding of current regulations and experience with similar projects. A qualified environmental attorney should be consulted for a legal opinion on any related matters, including the site's current and future ownership and management requirements and options.

8.0 REFERENCES

8.1 Published References

Aerial Photo and Topographic Map Research, 600-612 South Sepulveda Boulevard, Manhattan Beach, CA 90266, Environmental Record Search, 2017.

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Geology of California, Second Edition, Robert M. Norris and Robert W. Webb, 1990.

Hybrid Fire Insurance Maps, 600-612 South Sepulveda Boulevard, Manhattan Beach, CA 90266, Environmental Record Search, 2017.

Preliminary Title Report for 600-612 South Sepulveda Boulevard, Manhattan Beach, CA 90266, First American Title Insurance Company, 2017.

8.2 Record of Personal Communications

Mr. Stuart Sackley

9.0 QUALIFICATIONS AND PROFESSIONAL DECLARATION

All of the herein-described Phase I investigation and historical research/review activities were performed by CEC's president and owner, Mr. David R. Johannes. Mr. Johannes founded CEC at the beginning of 1996, after working for 10-plus years with Southern California-based international and regional geotechnical and environmental consulting companies.

To date, CEC has performed over 880 environmental site assessment, remediation and/or monitoring programs, in conformance with a variety of published and/or project-specific guidelines. CEC's client listing includes a diverse grouping of national, international and regional banks, public agencies, attorneys, military defense contractors, other consulting firms, and private-property owners and management firms.

Mr. Johannes is a Registered/Professional Geologist (California), Registered Environmental Assessor (California), Certified Environmental Specialist (USA), Certified Air Quality Specialist (USA), and is a California-Licensed "A" General Engineering Contractor. A copy of Mr. Johannes' professional resume of experience and credentials is maintained on file and can be provided upon receipt of authorized request.

Declaration: "I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312, and that I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. In preparing the Phase I report, I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Appendix C
Current Database Report (excerpts)

ERS
ENVIRONMENTAL RECORD SEARCH
"The Intelligent Choice"

RecCheck

Report Results

The Standard for ASTM/AAI Radius Searches
(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

REPORT RESULTS

Site Location:

600 South Sepulveda Boulevard
Manhattan Beach, CA 90254
(N 33-52-29, W 118-23-44) NAD83

Client:

Certified Environmental Consultants, Inc.

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EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	600 South Sepulveda Boulevard Manhattan Beach, CA 90254
Client Project Name/Number:	Sepul4B 19-2060
Coordinates:	N 33-52-29, W 118-23-44 (NAD 83) 33.874702, -118.395543
Date of Report	May 3, 2019
ERS Project Number:	2104706597
Subject Site Listed on the following lists:	Not Listed
Subject Site Listed as Map ID#:	N/A
USGS 7.5 Minute Quad Map:	Redondo Beach (digital) (Date Unavailable)
Subject Site Located within a Potential Area of Concern:	No
Township, Section and Range:	Township: 03S Range: 14W Section: 30 Baseline: San Bernardino
Site Elevation: (feet above or below (-) mean sea level)	173
Flood Zone: (FEMA Q3 Digital Data)	Panel: 06037C1907F, Effective Date: 9/26/2008 Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
Fire Insurance Map Coverage:	Coverage May Exist in Manhattan Beach. Years: 1917, 1928, 1938. Sources: ERS; ; California State Univ., Northridge,Stanford Univ. ; Formerly US Census Bureau, Jeffersonville, IN
Radon Information:	EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)For zip code 90254: Number of tests per zip code: 15 Number of tests where radon is > 4 pCi/L: 0 Percentage of test where radon is > 4 pCi/L: 0.00% Other Information: Not Reported
Search Radius Expansion Size: (In Miles)	0

Soil Type: **(USDA Soil Survey Geographic Database) (SSURGO)**	Urban land-Abaft-Marina complex, 0 to 15 percent slopes Map Unit Type: Complex Hydric: No Drainage Class: Somewhat excessively drained General Information: Mixed, thermic Typic Xeropsamments
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched
Occurrence Count:	150

SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
1 Maps: 1, 2, 3, 4	1128166-PD BEACH REPORTER	500 S SEPULVEDA BLVD # 215 MANHATTAN BEACH	Hist-Printers	Listed	0.03 NE	9
1 Maps: 1, 2, 3, 4	CAL000094088 DR BRUCE H LETVIN DPM INC	500 S SEPULVEDA BLVD #218 MANHATTAN BEACH	HWIS-CA	Listed	0.03 NE	9
1 Maps: 1, 2, 3, 4	CAL000163032 DR GAYLE WOOD	500 S SEPULVEDA BLVD STE 306 MANHATTAN BEACH	HWIS-CA	Listed	0.03 NE	9
1 Maps: 1, 2, 3, 4	CAL000123305 RONALD J. GREENE, D.D.S., A.P.C.	500 SO SEPULVEDA BLVD MANHATTAN BEACH	HWIS-CA	Listed	0.03 NE	9
1 Maps: 1, 2, 3, 4	CAL000079128 MANHATTAN CHIROPRACTIC ASSO	500 SOUTH SEPULVEDA BLVD MANHATTAN BEACH	HWIS-CA	Listed	0.03 NE	9
1 Maps: 1, 2, 3, 4	CAL000123305 RONALD J. GREENE, D.D.S., A.P.C.	500 SO SEPULVEDA BLVD MANHATTAN BEACH	RCRA-NON-US	Listed	0.03 NE	9
2 Maps: 1, 2, 3, 4	119423-SC ACAPULCO RESTAURANTS, INC.	600-612 S SEPULVEDA MANHATTAN BEACH	AIR-DIST-CA	Listed	0.03 SW	-1
3 Maps: 1, 2, 3, 4	231305 City of Manhattan Beach	Sepulveda Blvd. at Tennyson St. Manhattan Beach	CHMIRS-CA	Listed	0.04 SW	-1
4 Maps: 1, 2, 3, 4	014229-014761-LAC VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	County-UST-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	110002808454 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	FRS-US	Listed	0.04 W	1

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
4 Maps: 1, 2, 3, 4	103358 LOTUS OF SOUTH BAY	2775 PACIFIC COAST HWY Hermosa Beach	Hist-Auto Dealers	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	54FDFFFA-CAL000314758 LOTUS OF SOUTH BAY	2775 PACIFIC COAST HWY HERMOSA BEACH	Hist-CA	No Longer Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	451987 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	451987 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	Hist-FINDS-US	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	5CB2F9E-CAD982415911 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	Hist-US	No Longer Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	CAC002591347 SOUTH BAY LOTUS	2775 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	CAL000314758 LOTUS OF SOUTH BAY	2775 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	CAD982415911 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	CAL000370056 GOOD SON LLC DBA SUBARU PACIFIC	2775 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.04 W	1
4 Maps: 1, 2, 3, 4	CAL000418106 DUNN-EDWARDS PAINTS #167	2775 PACIFIC COAST HWY UNIT A HERMOSA BEACH	RCRA-NON-US	Listed	0.04 W	1

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
4 Maps: 1, 2, 3, 4	CAD982415911 VASEK POLAK SUBARU	2775 PACIFIC COAST HWY HERMOSA BEACH	RCRA-SQG-US	Listed	0.04 W	1
5 Maps: 1, 2, 3, 4	741467-PD VASEK POLAK SAAB	2851 PACIFIC COAST HWY HERMOSA BEACH	Hist-Auto Dealers	Listed	0.05 NW	10
6 Maps: 1, 2, 3, 4	53042-SC BUGGE BUILDERS, INC.	2697 PACIFIC COAST HIWAY HERMOSA BEACH	AIR-DIST-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	014181-014705-LAC DARCY & KATHY BANKS	2697 PACIFIC COAST HWY HERMOSA BEACH	County-Others-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	110002761306 BUGGE BUILDERS	2697 PACIFIC COAST HWY HERMOSA BEACH	FRS-US	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	62111 BUGGE BUILDERS	2697 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	7760331 A S A P MUFFLER & BRAKE	2697 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	7760332 ASAP MUFFLER	2697 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	62111 BUGGE BUILDERS	2697 PACIFIC COAST HWY HERMOSA BEACH	Hist-FINDS-US	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	5CB2F9E-CAD981973985 BUGGE BUILDERS	2697 PACIFIC COAST HWY HERMOSA BEACH	Hist-US	No Longer Listed	0.05 SW	-4

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
6 Maps: 1, 2, 3, 4	CAL000063103 A S A P MUFFLER & BRAKE	2697 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	CAC000883768 AMERICAN SAVINGS BANK	2697-2699 PACIFIC COAST HWY HERMOSA BEACH	HWIS-CA	Listed	0.05 SW	-4
6 Maps: 1, 2, 3, 4	CAD981973985 BUGGE BUILDERS	2697 PACIFIC COAST HWY HERMOSA BEACH	RCRA-SQG-US	Listed	0.05 SW	-4
7 Maps: 1, 2, 3, 4	56718 Harbor Murre Cleaners	16431 Pacific Coast Hwy # B Sunset Beach	Hist-CA	No Longer Listed	0.06 NW	18
8 Maps: 1, 2, 4	423202-PD DR BOLTZ	2699 PACIFIC COAST HWY HERMOSA BEACH	Hist-Auto Repair	Listed	0.07 SW	-8
9 Maps: 1, 2, 4	7760533 1X QUAESTOR INC	700 S. SEPULVEPA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.07 S	4
10 Maps: 1, 2, 4	016625-022121-LAC VASEK POLAK BMW	2901 PACIFIC COAST HWY HERMOSA BEACH	County-UST-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	226864 VASEK POLAK BMW	2901 PACIFIC COAST HWY HERMOSA BEACH	CRSP-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	6848707 VASEK POLAK IMPORTS	2901 PACIFIC COAST HWY HERNOSA BEACH	Hist-CalFID-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	451985 VASEK POLAK BMW INC	2901 PACIFIC COAST HWY HERNOSA BEACH	Hist-CalFID-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	6848707 VASEK POLAK IMPORTS	2901 PACIFIC COAST HWY HERMOSA BEACH	Hist-LUSTIS-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	R-22121-UST VASEK POLAK BMW	2901 PACIFIC COAST HWY HERMOSA BEACH	HIST-R4-CA	Listed	0.08 NW	26

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
10 Maps: 1, 2, 4	6848707 VASEK POLAK IMPORTS	2901 PACIFIC COAST HWY HERMOSA BEACH	Hist-Regional-LUST-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	275277 VASEK POLAK BMW	2901 PACIFIC COAST HIGHWAY HERMOSA BEACH	Hist-UST-CA	Listed	0.08 NW	26
10 Maps: 1, 2, 4	T0603705354 VASEK POLAK BMW	2901 PACIFIC COAST HWY HERMOSA BEACH	LUST-Closed-CA	Completed - Case Closed	0.08 NW	26
10 Maps: 1, 2, 4	CAD982041725 SOUTH BAY B M W	2901 PACIFIC COAST HWY HERMOSA BEACH	RCRA-SQG-US	Listed	0.08 NW	26
11 Maps: 1, 2, 4	SC AQMD-SC-104494 TIFFANY CLEANERS	1133 ARTESIA BLVD STE C MANHATTAN BEACH	Air-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	104494-SC TIFFANY CLEANERS	1133 ARTESIA BLVD STE C MANHATTAN BEACH	AIR-DIST-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	92009-SC TIFFANY CLEANERS	1133 C ARTESIA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	22426 Tiffany Cleaners	1133 Artesia Blvd # C Manhattan Beach	Cleaners-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	76563 TIFFANY CLEANERS	1133 ARTESIA BLVD # C MANHATTAN BEACH	CRSP-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	CAD983651530 TIFFANY CLEANERS	1133 ARTESIA BLVD UNIT C MANHATTAN BEACH	DryCleaners-CA	Listed	0.09 SE	9
11 Maps: 1, 2, 4	1742 Tiffany Cleaners	1133 Artesia Blvd Manhattan Beach	Hist-Cleaners	Listed	0.09 SE	9
11 Maps: 1, 2, 4	328089-PD TIFFANY CLEANERS	1133 ARTESIA BLVD MANHATTAN BEACH	Hist-Cleaners	Listed	0.09 SE	9
11 Maps: 1, 2, 4	76828 Tiffany Real Estate Services	1133 Artesia Blvd Manhattan Beach	Hist-Cleaners	Listed	0.09 SE	9

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
11 Maps: 1, 2, 4	CAD983651530 TIFFANY CLEANERS	1133 ARTESIA BLVD UNIT C MANHATTAN BEACH	RCRA-SQG-US	Listed	0.09 SE	9
12 Maps: 1, 2, 4	8730 Azusa Coin Laundry	2615 Pacific Coast Hwy # 328 Hermosa Beach	Cleaners-CA	Listed	0.09 SW	-7
12 Maps: 1, 2, 4	7812290 1X SCIENCE APPLICATIONS INTL CORP	2615 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.09 SW	-7
13 Maps: 1, 2, 4	010871-010839-LAC WARREN PONTIAC	400 S SEPULVEDA BLVD MANHATTAN BEACH	County-Others-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	224137 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S MANHATTAN BEACH	CRSP-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	932113 BLAKELY-COMSTOCK	400 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	3778880 CIGNA HEALTHPLAN OF CALIFORNIA	400 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	3203221 BOB WARREN PONTIAC	400 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	7759300 1X BLAKESLEY-COMSTOCK	400 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	932113 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S MANHATTAN BEACH	Hist-LUSTIS-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	000308-UST BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S MANHATTAN BEACH	HIST-R4-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	932113 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S MANHATTAN BEACH	Hist-Regional-LUST-CA	Listed	0.1 N	28
13 Maps: 1, 2, 4	217555 BOB WARREN PONTIAC INC	400 SOUTH SEPULVEDA BLVD MANHATTAN BEACH	Hist-UST-CA	Listed	0.1 N	28

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
13 Maps: 1, 2, 4	T0603700018 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S MANHATTAN BEACH	LUST-Closed-CA	Completed - Case Closed	0.1 N	28
14 Maps: 1, 2, 4	511175-PD MIDAS AUTO SYSTEMS EXPERTS	3125 PACIFIC COAST HWY HERMOSA BEACH	Hist-Auto Repair	Listed	0.13 N	36
14 Maps: 1, 2, 4	7815979 MIDAS MUFFLER	3125 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.13 N	36
15 Maps: 1, 2, 4	98418-SC FATBURGER RESTAURANTS OF CALIF INC, FAT	1139 ARTESIA BLVD UNIT C MANHATTAN BEACH	AIR-DIST-CA	Listed	0.14 S	14
15 Maps: 1, 2, 4	3193065 FOTO QUICK	1139B ARTESIA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.14 S	14
15 Maps: 1, 2, 4	CAD983633876 FOTO QUICK	1139 ARTESIA BLVD UNIT B MANHATTAN BEACH	RCRA-SQG-US	Listed	0.14 S	14
16 Maps: 1, 2, 4	CAC002967570 VAN ZATEN FAMILY TRUST	1214 TENNYSON STREET MANHATTAN BEACH	RCRA-NON-US	Listed	0.14 SE	4
17 Maps: 1, 2, 4	91388-SC VASEK POLAK	356 SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.15 N	45
17 Maps: 1, 2, 4	016626-022122-LAC VASEK POLAK SAAB	356 S SEPULVEDA BLVD MANHATTAN BEACH	County-UST-CA	Listed	0.15 N	45
17 Maps: 1, 2, 4	260547 VASEK POLAK SAAB	356 SEPULVEDA BLVD S MANHATTAN BEACH	CRSP-CA	Listed	0.15 N	45
17 Maps: 1, 2, 4	600354-PD VASEK POLAK	356 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-Auto Repair	Listed	0.15 N	45
17 Maps: 1, 2, 4	451986 VASEK POLAK SAAB	356 SEPULVEDA BLVD S MANHATTAN BEACH	Hist-LUSTIS-CA	Listed	0.15 N	45
17 Maps: 1, 2, 4	R-22122-UST VASEK POLAK SAAB	356 SEPULVEDA BLVD S MANHATTAN BEACH	HIST-R4-CA	Listed	0.15 N	45

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
17 Maps: 1, 2, 4	T0603705355 VASEK POLAK SAAB	356 SEPULVEDA BLVD S MANHATTAN BEACH	LUST-Closed-CA	Completed - Case Closed	0.15 N	45
17 Maps: 1, 2, 4	CAD982415952 VASEK POLAK SAAB	356 S SEPULVEDA BLVD MANHATTAN BEACH	RCRA-SQG-US	Listed	0.15 N	45
18 Maps: 1, 2, 4	SC AQMD-SC-168023 JIM & JACK'S, INC.	50541278 PACIFIC COAST HWY HERMOSA BEACH	Air-CA	Listed	0.15 S	12
19 Maps: 1, 2, 4	421930 D&T Restaurants #0342	1203 ARTESIA BLVD MANHATTAN BEACH	CRSP-CA	Listed	0.15 SE	12
20 Maps: 1, 2, 4	168128 Verizon Wireless: Hermosa Beach	3201 PACIFIC COAST HIGHWAY HERMOSA BEACH	CRSP-CA	Listed	0.16 N	45
21 Maps: 1, 2, 4	013864-014319-LAC ANDERSON RYAN REALTY	2519 PACIFIC COAST HWY HERMOSA BEACH	County-Others-CA	Listed	0.17 S	6
21 Maps: 1, 2, 4	7750451 1X ANDERSON RYAN REALTY	2519 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.17 S	6
21 Maps: 1, 2, 4	4037836 ANDERSON RYAN REALTY	2519 PACIFIC COAST HERMOSA BEACH	Hist-USTReg-CA	Listed	0.17 S	6
22 Maps: 1, 2, 4	146249-SC SKECHERS USA, INC.	330 S SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 N	59
23 Maps: 1, 2, 4	72458-SC PREFERRED CLEANERS/P.Y.S. PARK DBA	1221 ARTESIA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	86672-SC PREFERRED CLEANERS	1221 ARTESIA BLVD STE 102 MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	136763-SC ARTESIA CLEANERS	1221 ARTESIA BLVD 201 MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	117802-SC ARTESIA CLEANERS, EUGENE E NA, DBA	1221 ARTESIA BLVD 102 MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 SE	9

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
23 Maps: 1, 2, 4	59202-SC DYLER INC	1221 ARTESIA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	8639 Artesia Cleaners	1221 Artesia Blvd # 102 Manhattan Beach	Cleaners-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	1500 7-ELEVEN INC. STORE #24549	1221 ARTESIA BLVD MANHATTAN BEACH	CRSP-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	CAD981986375 STAR CLEANERS & LAUNDRY	1221 ARTESIA BLVD SUITE 102 MANHATTAN BEACH	DryCleaners-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	CAL000291291 ARTESIA CLEANERS	1221 ARTESIA BLVD STE 102 MANHATTAN BCH	DryCleaners-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	397274 STAR CLEANERS & LAUNDRY	1221 ARTESIA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	5708156 PREFERRED CLEANERS/P.Y.S. PARK	1221 ARTESIA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.17 SE	9
23 Maps: 1, 2, 4	319355-PD PREFERRED CLEANERS	1221 ARTESIA BLVD MANHATTAN BEACH	Hist-Cleaners	Listed	0.17 SE	9
23 Maps: 1, 2, 4	76821 Artesia Cleaners	1221 Artesia Blvd Manhattan Beach	Hist-Cleaners	Listed	0.17 SE	9
23 Maps: 1, 2, 4	CAD981986375 STAR CLEANERS & LAUNDRY	1221 ARTESIA BLVD SUITE 102 MANHATTAN BEACH	RCRA-SQG-US	Listed	0.17 SE	9
24 Maps: 1, 2, 4	CAL000208953 SUPER FINE DRY CLEANERS	317 SEPULVEDA MANHATTAN BEACH	DryCleaners-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	57838-SC DEBONAIR CLEANERS	317 S SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	115810-SC DEBONAIR CLEANERS/SUPER FINE DRY CLEANERS	317 S SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.18 N	52

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
25 Maps: 1, 2, 4	11718 Debonair Cleaners	317 S Sepulveda Blvd Manhattan Beach	Cleaners-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	110664 DEBONAIR CLEANERS	317 S SEPULVEDA BLVD MANHATTAN BEACH	CRSP-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	CAD982034761 SUPER FINE DRY CLEANERS INC	317 S SEPULVEDA BLVD MANHATTAN BEACH	DryCleaners-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	116296 DEBONAIR CLEANERS, SHAPOUR PAR	317 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.18 N	52
25 Maps: 1, 2, 4	337670-PD DEBONAIR CLEANERS	317 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-Cleaners	Listed	0.18 N	52
25 Maps: 1, 2, 4	1060 Debonair Cleaners	317 S Sepulveda Blvd Manhattan Beach	Hist-Cleaners	Listed	0.18 N	52
25 Maps: 1, 2, 4	CAC002973856 SEPULVEDA BLVD. PROPERTIES, LLC	317 S SEPULVEDA BLVD. MANHATTAN BEACH	RCRA-NON-US	Listed	0.18 N	52
25 Maps: 1, 2, 4	CAD982034761 SUPER FINE DRY CLEANERS INC	317 S SEPULVEDA BLVD MANHATTAN BEACH	RCRA-NON-US	Listed	0.18 N	52
26 Maps: 1, 2, 4	CAD981633951 ARTESIA CLEANERS	980 ARTESIA BLVD HERMOSA BEACH	DryCleaners-CA	Listed	0.19 SE	9
26 Maps: 1, 2, 4	27744 ARTESIA CLEANERS	980 ARTESIA BLVD HERMOSA BEACH	Hist-CalFID-CA	Listed	0.19 SE	9
26 Maps: 1, 2, 4	293322-PD ARTESIA CLEANERS	980 ARTESIA BLVD HERMOSA BEACH	Hist-Cleaners	Listed	0.19 SE	9
26 Maps: 1, 2, 4	CAD981633951 ARTESIA CLEANERS	980 ARTESIA BLVD HERMOSA BEACH	RCRA-SQG-US	Listed	0.19 SE	9
27 Maps: 1, 2, 4	CAL000439104 LAZY ACRES	2510 PACIFIC COAST HWY HERMOSA BEACH	RCRA-NON-US	Listed	0.19 S	7

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
28 Maps: 1, 2, 4	CAL000009574 PREFFERRED CLEANERS	1221-102 ARTESIA BLVD MANHATTAN BEACH	DryCleaners-CA	Listed	0.19 SE	7
29 Maps: 1, 2, 4	CAC002973124 DANIEL DEYOE	3001 TENNYSON PL HERMOSA BEACH	RCRA-NON-US	Listed	0.19 NW	8
30 Maps: 1, 2, 4	7754315 1X GTE CALIFORNIA	MANHOLE #315R SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.2 N	53
31 Maps: 1, 2, 4	52124-SC MOBIL DLR	300 S SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	52329-SC MANHATTAN CAR WASH INC.	300 S SEPULVEDA BLVD MANHATTAN BEACH	AIR-DIST-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	012784-012981-LAC MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	County-UST-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	215477 MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	CRSP-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	T10000000151 MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	ENF-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	7749604 1X EVANS TANK LINE MOBILE OIL CORP STA	300 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	4043084 1X MANHATTAN CAR WASH	300 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	432586 TRW INC	300 S. SEPULVEDA BLVD MANHATTAN BEACH	Hist-CalFID-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	4043084 MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-City-UST-CA	Listed	0.2 N	62
31 Maps: 1, 2, 4	208229 MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-Service Stations	Listed	0.2 N	62

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
31 Maps: 1, 2, 4	T10000000151 MANHATTAN CAR WASH	300 S SEPULVEDA BLVD MANHATTAN BEACH	LUST-Closed-CA	Completed - Case Closed	0.2 N	62
32 Maps: 1, 2, 4	406614 Journey of Faith	1243 Artesia Blvd Manhattan Beach	ENF-SMARTS-CA	Historical	0.2 SE	-8
33 Maps: 1, 2, 4	386394-PD AUTO WERKSTATT	305 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-Auto Repair	Listed	0.21 N	50
33 Maps: 1, 2, 4	71381 Auto Werkstatt	305 South Sepulveda Blvd. Manhattan Beach	Hist-Auto Repair	Listed	0.21 N	50
33 Maps: 1, 2, 4	413333-PD CALIFORNIA SPORTSCAR	305 S SEPULVEDA BLVD MANHATTAN BEACH	Hist-Auto Repair	Listed	0.21 N	50
34 Maps: 1, 2, 4	94943 AT&T Mobility - HERMOSA BEACH (USID12049)	2447 PACIFIC COAST HWY HERMOSA BEACH	CRSP-CA	Listed	0.21 S	-9
34 Maps: 1, 2, 4	425556-PD E-Z LUBE CORP	2447 PACIFIC COAST HWY HERMOSA BEACH	Hist-Auto Repair	Listed	0.21 S	-9
35 Maps: 1, 2, 4	1588416 JIM & JACK AUTO BODY	307 SEPULVEDA EL SEGUNDO	Hist-HWS-CA	Listed	0.21 N	53
36 Maps: 1, 2, 4	CAD981968530 CHEM TAB CORPORATION	1253 E ARTESIA BLVD REDONDO BEACH	RCRA-SQG-US	Listed	0.23 SE	-3
37 Maps: 1, 2, 4	CAC002966730 NEIL MISHURDA	1187 LONGFELLOW DRIVE MANHATTAN BCH	RCRA-NON-US	Listed	0.24 NE	17
38 Maps: 1, 2, 4	CAC002976613 NADEEM KHULUSI	319 S DIANTHUS STREET MANHATTAN BEACH	RCRA-NON-US	Listed	0.24 NW	-7
39 Maps: 1, 2, 4	3767931 SOUTH BAY CHIROPRATIC CTR	2306 PACIFIC COAST HWY HERMOSA BEACH	Hist-CalFID-CA	Listed	0.25 S	-9
39 Maps: 1, 2, 4	CAD983651506 SOUTH BAY CHIROPRATIC CTR	2306 PACIFIC COAST HWY STE 303 HERMOSA BEACH	RCRA-NON-US	Listed	0.25 S	-9

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
A1 Maps: 7	419 Hermosa Beach Landfill	Not Reported by Agency	LA-LF-CA	Listed	0.25 W	N/A
40 Maps: 1, 4	T0603704284 HILLSIDE PLAZA-JOINT VENTURE	125 SEPULVEDA BLVD S MANHATTAN BEACH	LUST-Closed-CA	Completed - Case Closed	0.29 N	62
41 Maps: 1, 4	2240-LAC Hermosa Beach Landfill	North Valley Drive And Gould Avenue Hermosa Beach	County-SWF-CA	Listed	0.31 W	-93
42 Maps: 1, 4	60002526 Hermosa Beach City SD - Hermosa View Elementary School	1800 Prospect Avenue Hermosa Beach	School-Other-CA	No Action Required	0.46 SE	22

POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
NPL-R9-US	No	0
MethaneLF-CA	No	0
LA-LF-CA	No	1
Military-Bases-US	No	0
SGV-Deep-Plumes-CA	No	0
SGV-Shallow-Plumes-Puente-Valley-CA	No	0
SGV-Shallow-Plumes-CA	No	0

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
CERCLIS-US	0.5	0
CorAct-Open-CA	0.5	0
County-LUST-Open-CA	0.5	0
County-SLIC-Open-CA	0.5	0
Eval-Hist-Active-CA	0.5	0
Hist-UST-Cleanup-CA	0.5	0
LUST-Open-CA	0.5	0
Military-Active-CA	1	0
NPL-US	1	0
Proposed-NPL-US	1	0
Response-CA	1	0
SAA-Agreements-US	1	0
School-Active-CA	0.5	0
SLIC-Open-CA	0.5	0
State-Response-Active-CA	1	0
Superfund-Active-CA	1	0
Tribal-LUST-Open-Reg9	0.5	0
VCP-Active-CA	0.5	0

* For the purposes of this report, “high risk” occurrences are those that have known contamination and have not received a “case closed” or “no further action” status from the agency that maintains the records.

ASTM/AAI STANDARD RECORD SOURCES SUMMARY				
STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST. (MILES)	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #’S
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed

Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed
Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSDF-US	0	None Listed
Federal RCRA generators list	Property and adjoining properties / 0.25	RCRA-CESQG-US	0	None Listed
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	10	1, 4, 16, 25, 25, 27, 29, 37, 38, 39
		RCRA-SQG-US	9	4, 6, 10, 11, 15, 17, 23, 26, 36
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625	ERNS-US	0	None Listed
State and Tribal-Equivalent NPL	1.0 / 1.0	Response-CA	0	None Listed
		State-Response-Active-CA	0	None Listed
		State-Response-NFA-CA	0	None Listed
		State-Response-Other-CA	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	Superfund-Active-CA	0	None Listed
		Superfund-NFA-CA	0	None Listed
		Superfund-Other-CA	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	County-SWF-CA	1	41
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Land-Disposal-CA	0	None Listed
		SWIS-CA	0	None Listed
		SWLF-US	0	None Listed
		Tribal-ODI-US	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	County-LUST-CA	0	None Listed
		County-LUST-Closed-CA	0	None Listed
		County-LUST-Open-CA	0	None Listed

		Hist-UST-Cleanup-CA	0	None Listed
		LUST-Closed-CA	5	10, 13, 17, 31, 40
		LUST-Open-CA	0	None Listed
		Tribal-LUST-Closed-Reg9	0	None Listed
		Tribal-LUST-Open-Reg9	0	None Listed
State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	AST-CA	0	None Listed
		AST-CRSP-CA	0	None Listed
		City-AST-CA	0	None Listed
		City-UST-CA	0	None Listed
		County-AST-CA	0	None Listed
		County-UST-CA	4	4, 10, 17, 31
		FEMA-UST-US	0	None Listed
		Hist-UST-CA	2	10, 13
		Tribal-UST-Reg9	0	None Listed
		UST-Abandoned-CA	0	None Listed
		UST-CA	0	None Listed
		UST-Closed-CA	0	None Listed
		USTComp-CA	0	None Listed
		UST-CRSP-CA	0	None Listed
		UST-Priority-CA	0	None Listed
		UST-Proposed-CA	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5	Controls-CA	0	None Listed
		Deed-CA	0	None Listed
		Hist-Controls-CA	0	None Listed
		HWMP-Controls-CA	0	None Listed
		Liens-CA	0	None Listed
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Military-Active-CA	0	None Listed
		Military-NFA-CA	0	None Listed
		Military-Other-CA	0	None Listed
		School-Active-CA	0	None Listed
		School-NFA-CA	0	None Listed
		School-Other-CA	1	42
		Tribal-VCP-US	0	None Listed
		VCP-Active-CA	0	None Listed
		VCP-NFA-CA	0	None Listed
		VCP-Other-CA	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	BF-MOA-CA	0	None Listed
		BF-Tribal-US	0	None Listed

FEDERAL ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
BF-Tribal-US	0.5	0	0	0	0	-	0
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.25	0	0	0	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	3	7	-	-	10
RCRA-SQG-US	0.25	0	6	3	-	-	9
RCRA-TSDF-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
SWLF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
AST-CA	0.25	0	0	0	-	-	0
AST-CRSP-CA	0.25	0	0	0	-	-	0
BF-MOA-CA	0.5	0	0	0	0	-	0
BZ-HazWaste-CA	0.5	0	0	0	0	-	0
CERS-CA	0.25	0	0	0	-	-	0
CHMIRS-CA	0.0625	0	1	-	-	-	1
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	0	-	-	0
Controls-CA	0.5	0	0	0	0	-	0
CorAct-Closed-CA	0.5	0	0	0	0	-	0
CorAct-Open-CA	0.5	0	0	0	0	-	0
CorAct-Other-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	0	0	-	-	0
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
County-LUST-Closed-CA	0.5	0	0	0	0	-	0
County-LUST-Open-CA	0.5	0	0	0	0	-	0
County-Others-CA	0.25	0	2	1	-	-	3
County-SLIC-Closed-CA	0.25	0	0	0	-	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0
County-SWF-CA	0.5	0	0	0	1	-	1
County-UST-CA	0.25	0	3	1	-	-	4
CRSP-CA	0.25	0	4	6	-	-	10
CUPA-CA	0.25	0	0	0	-	-	0
Deed-CA	0.5	0	0	0	0	-	0
ENF-CA	0.25	0	0	1	-	-	1
ENF-SMARTS-CA	0.25	0	0	1	-	-	1
ENF-Wastewater-CA	0.25	0	0	0	-	-	0
Eval-Hist-Active-CA	0.5	0	0	0	0	-	0
Eval-Hist-NFA-CA	0.5	0	0	0	0	-	0
Eval-Hist-Other-CA	0.5	0	0	0	0	-	0
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	3	0	-	-	3
HIST-SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
HIST-SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	2	0	-	-	2
Hist-UST-Cleanup-CA	0.5	0	0	0	0	-	0
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.0625	0	10	-	-	-	10
HWMP-Controls-CA	0.5	0	0	0	0	-	0
ICE-CA	0.25	0	0	0	-	-	0
Land-Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.0625	0	0	-	-	-	0
LUST-Closed-CA	0.5	0	3	1	1	-	5
LUST-Open-CA	0.5	0	0	0	0	-	0
Manifest2-RI	0.0625	0	0	-	-	-	0
Military-Active-CA	1	0	0	0	0	0	0
Military-NFA-CA	0.5	0	0	0	0	-	0
Military-Other-CA	1	0	0	0	0	0	0
PR-MOA-CA	0.25	0	0	0	-	-	0
Response-CA	1	0	0	0	0	0	0
School-Active-CA	0.5	0	0	0	0	-	0
School-NFA-CA	0.5	0	0	0	0	-	0
School-Other-CA	0.5	0	0	0	1	-	1
SLIC-Closed-CA	0.5	0	0	0	0	-	0
SLIC-Open-CA	0.5	0	0	0	0	-	0
SML-CA	0.5	0	0	0	0	-	0
State-Response-Active-CA	1	0	0	0	0	0	0
State-Response-NFA-CA	0.5	0	0	0	0	-	0
State-Response-Other-CA	0.5	0	0	0	0	-	0
Superfund-Active-CA	1	0	0	0	0	0	0
Superfund-NFA-CA	1	0	0	0	0	0	0
Superfund-Other-CA	1	0	0	0	0	0	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
UST-Abandoned-CA	0.25	0	0	0	-	-	0
UST-CA	0.25	0	0	0	-	-	0
UST-Closed-CA	0.25	0	0	0	-	-	0
USTComp-CA	0.25	0	0	0	-	-	0
UST-CRSP-CA	0.25	0	0	0	-	-	0
UST-Priority-CA	0.5	0	0	0	0	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0
VCP-Active-CA	0.5	0	0	0	0	-	0
VCP-NFA-CA	0.5	0	0	0	0	-	0
VCP-Other-CA	0.5	0	0	0	0	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-CA	0.25	0	2	0	-	-	2
AIR-DIST-CA	0.25	0	6	10	-	-	16
BioFuel-US	0.25	0	0	0	-	-	0
CAF-CA	0.25	0	0	0	-	-	0
CDL-CA	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
CHWF-CA	0.5	0	0	0	0	-	0
Cleaners-CA	0.25	0	2	2	-	-	4
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
County-BI-CA	0.25	0	0	0	-	-	0
Dams-CA	0.25	0	0	0	-	-	0
DPR-CA	0.25	0	0	0	-	-	0
DryCleaners-CA	0.25	0	1	6	-	-	7
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-CA	0.0625	0	0	-	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-SWF-CA	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	2	-	-	-	2
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0
FUSRAP-US	0.25	0	0	0	-	-	0
Haulers-CA	0.0625	0	0	-	-	-	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AST-CA	0.25	0	0	0	-	-	0
Hist-AWS-CA	0.25	0	0	0	-	-	0
Hist-CA	0.0625	0	2	-	-	-	2
Hist-CalFID-CA	0.25	0	14	10	-	-	24
Hist-CALSITES-CA	0.25	0	0	0	-	-	0
Hist-CERCLIS-NFRAP-US	0.25	0	0	0	-	-	0
Hist-CERCLIS-US	0.25	0	0	0	-	-	0
Hist-City-UST-CA	0.25	0	0	1	-	-	1
Hist-Deed-CA	0.25	0	0	0	-	-	0
Hist-DTG-CA	0.25	0	0	0	-	-	0
Hist-ERNS-US	0.0625	0	0	-	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-FINDS-US	0.0625	0	2	-	-	-	2
Hist-HWS-CA	0.25	0	0	1	-	-	1

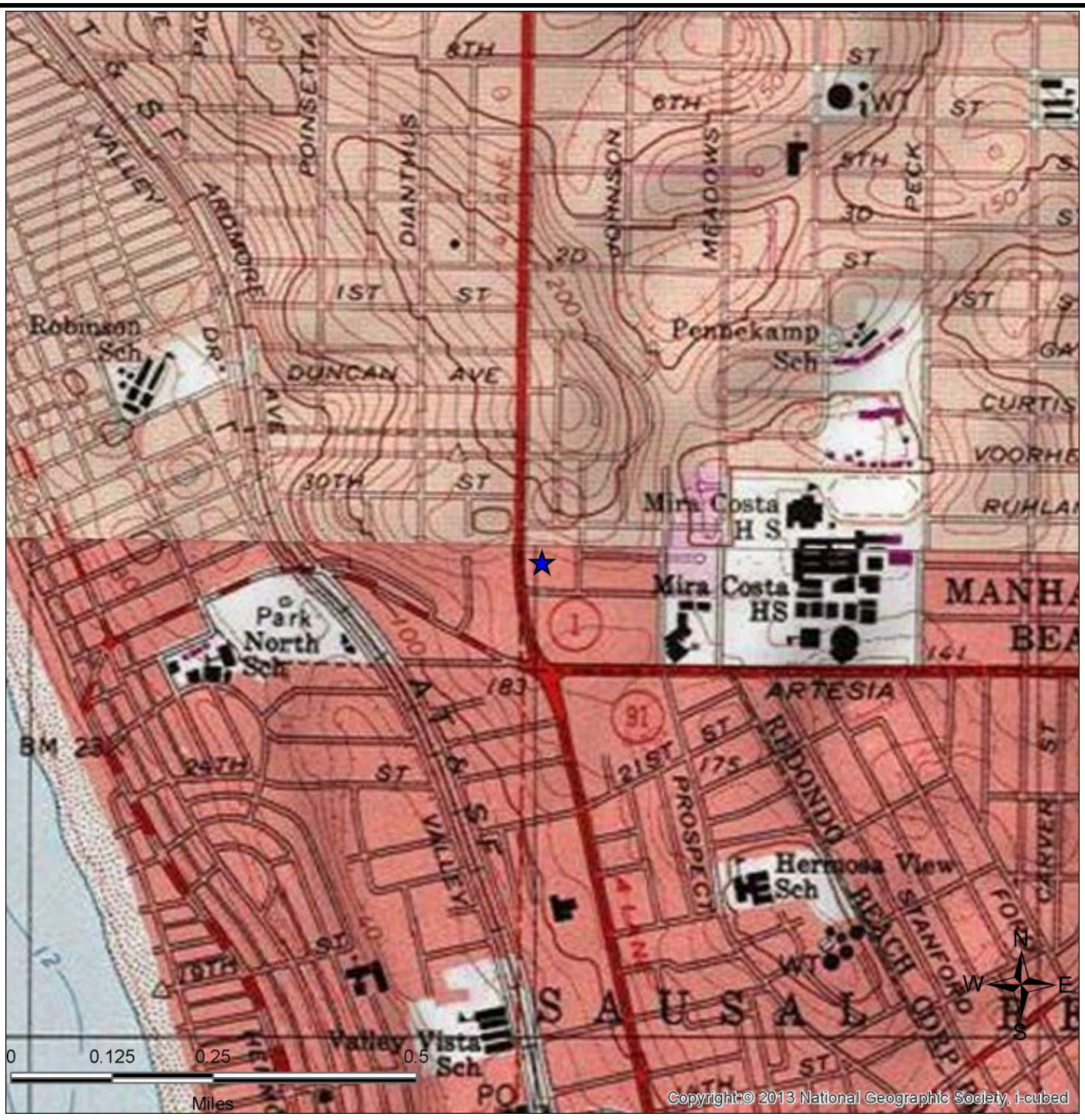
SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-LUSTIS-CA	0.25	0	3	0	-	-	3
HIST-MLTS-US	0.25	0	0	0	-	-	0
HIST-MTBE-CA	0.25	0	0	0	-	-	0
Hist-NPL-US	0.25	0	0	0	-	-	0
Hist-Orange-County-LF-CA	0.25	0	0	0	-	-	0
Historical-CA	0.5	0	0	0	0	-	0
Hist-Prop65-CA	0.25	0	0	0	-	-	0
Hist-RCRIS-US	0.25	0	0	0	-	-	0
Hist-Regional-LUST-CA	0.25	0	2	0	-	-	2
Hist-Regional-Other-CA	0.25	0	0	0	-	-	0
Hist-Regional-SLIC-CA	0.25	0	0	0	-	-	0
Hist-Regional-Spills-CA	0.25	0	0	0	-	-	0
Hist-Regional-SWLF-CA	0.25	0	0	0	-	-	0
Hist-Regional-UST-CA	0.25	0	0	0	-	-	0
Hist-SCL-CA	0.25	0	0	0	-	-	0
Hist-SWIS-CA	0.25	0	0	0	-	-	0
Hist-ToxicPits-CA	0.25	0	0	0	-	-	0
Hist-TRIS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	2	-	-	-	2
Hist-USGS-WaterWells-CA	0.0625	0	0	-	-	-	0
Hist-USTReg-CA	0.25	0	0	1	-	-	1
Hist-WaterWells-US	0.0625	0	0	-	-	-	0
Hist-WMUDS-CA	0.25	0	0	0	-	-	0
HWT-CA	0.25	0	0	0	-	-	0
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
LA-Waste-Haulers-CA	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
LMOP-US	0.5	0	0	0	0	-	0
Mines2-CA	0.0625	0	0	-	-	-	0
Mines-CA	0.0625	0	0	-	-	-	0
Mines-CDMG-CA	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
Mortgage-CA	0.25	0	0	0	-	-	0
MRDS-US	0.25	0	0	0	-	-	0
MWMP-CA	0.25	0	0	0	-	-	0
NCI-CA	0.25	0	0	0	-	-	0
NEI-LF-CA	0.25	0	0	0	-	-	0
NPDES-CA	0.0625	0	0	-	-	-	0
NPDES-SW-CA	0.0625	0	0	-	-	-	0
OGM-CA	0.0625	0	0	-	-	-	0
OGW-CA	0.0625	0	0	-	-	-	0
OSCF-CA	0.5	0	0	0	0	-	0
PCS-US	0.25	0	0	0	-	-	0
Perch1-CA	0.25	0	0	0	-	-	0
Perch2-CA	0.25	0	0	0	-	-	0
Project-CA	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	0	0	-	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
SP-CA	0.25	0	0	0	-	-	0
Spills-SSO-CA	0.25	0	0	0	-	-	0
SSTS-US	0.0625	0	0	-	-	-	0
TierPer-CA	0.25	0	0	0	-	-	0
TOMS-CA	0.0625	0	0	-	-	-	0
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC2-CA	0.0625	0	0	-	-	-	0
UIC-CA	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
WDR-CA	0.25	0	0	0	-	-	0

PROPRIETARY HISTORIC DATABASES

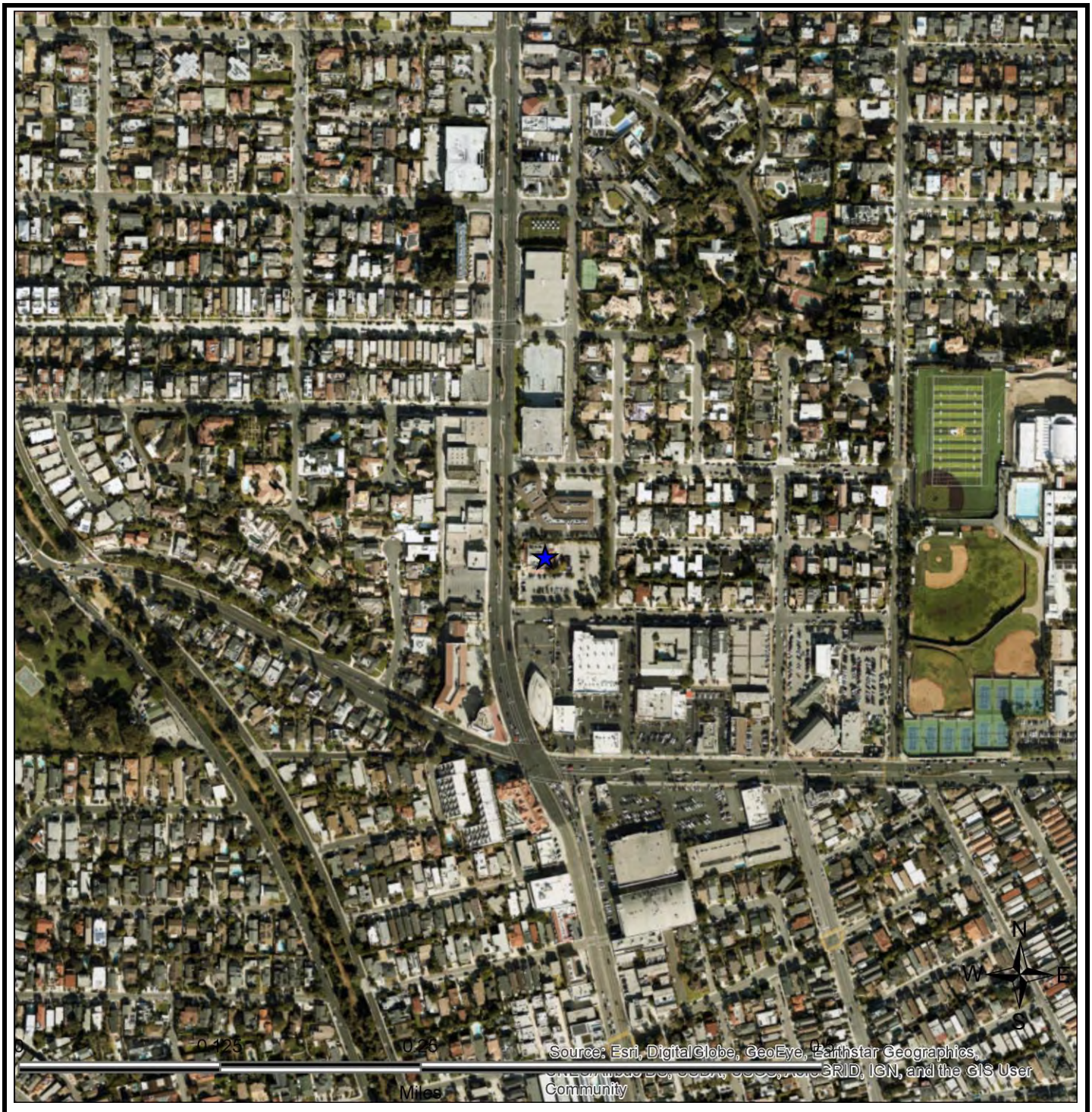
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	2	-	-	-	2
Hist-Auto Repair	0.25	0	3	4	-	-	7
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	3	5	-	-	8
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Other	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	1	-	-	-	1
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	0	1	-	-	1
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	0	-	-	-	0



SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. Redondo Beach (digital) (Date Unavailable) Quadrangle, 7.5 Minute Series

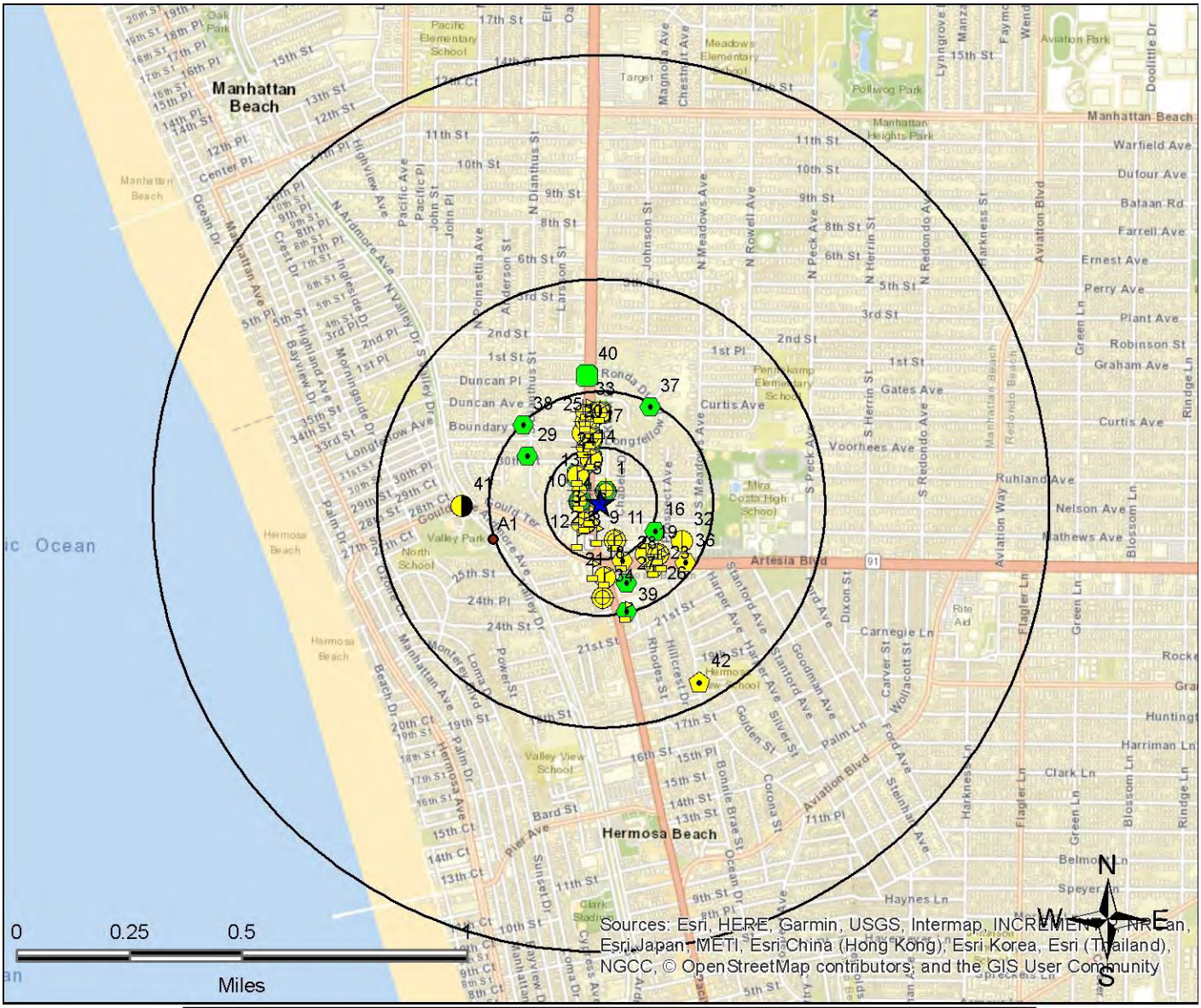
Certified Environmental Consultants, Inc.	600 South Sepulveda Boulevard Manhattan Beach, CA 90254	FIGURE: 1 JOB: 19-2060 DATE: 5/3/2019



SITE LOCATION MAP

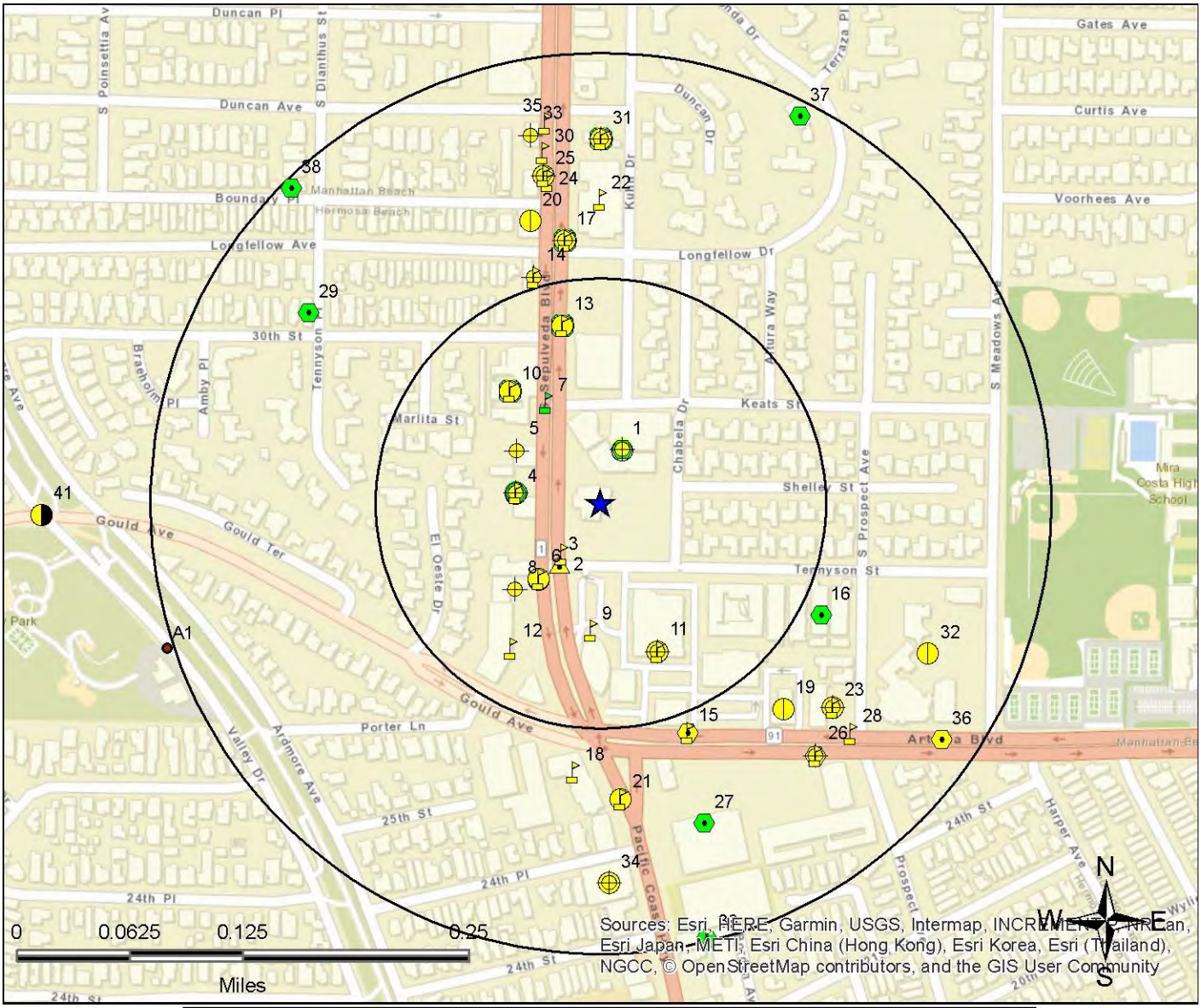
Certified Environmental Consultants, Inc.	600 South Sepulveda Boulevard Manhattan Beach, CA 90254	FIGURE: 2 JOB: 19-2060 DATE: 5/3/2019

1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)

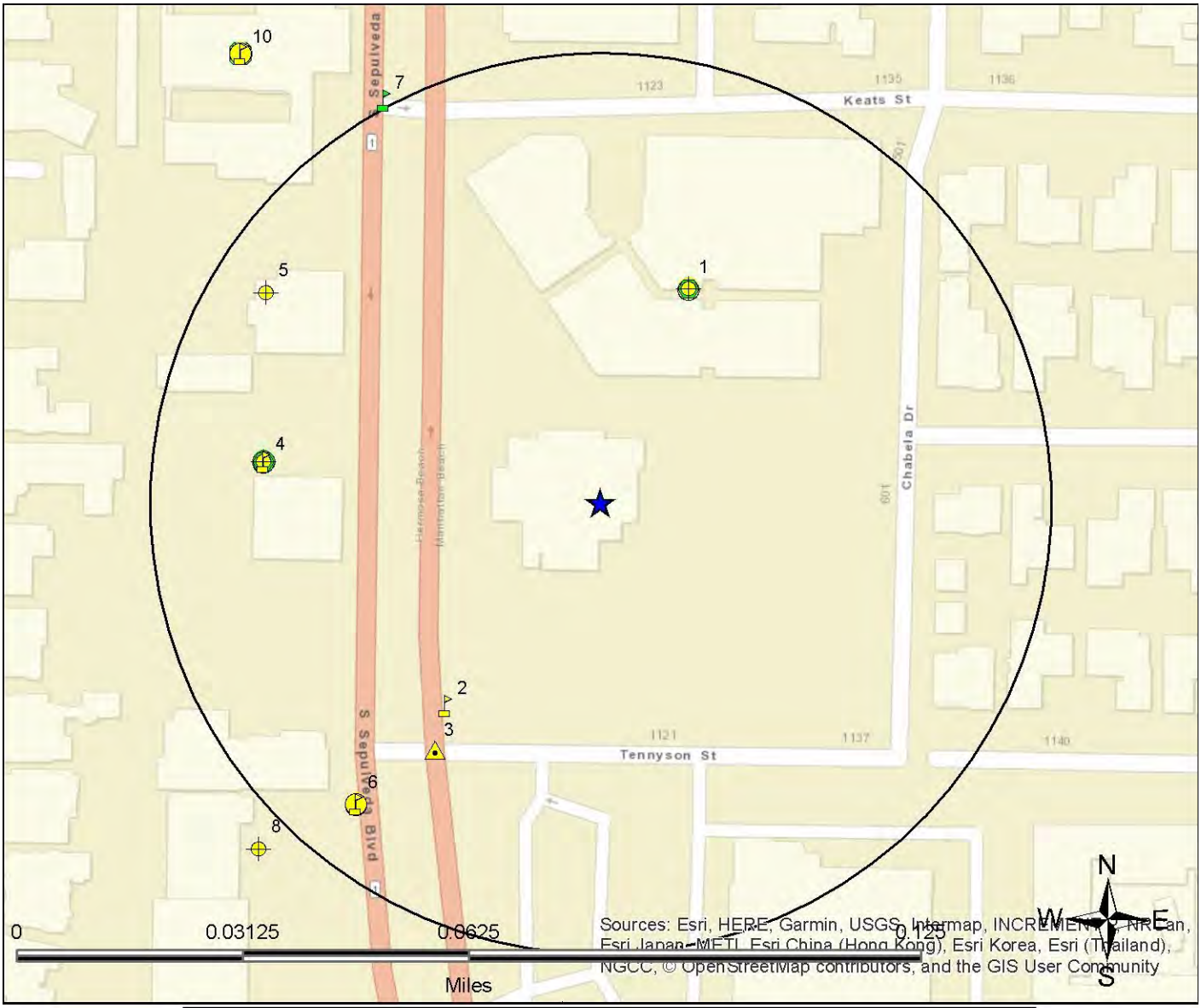


Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
- Federal RCRA Generators
- Federal UST
- Federal Inst/Eng Controls
- Federal Brownfield
- Federal ERNS
- Federal Emergency Release Reports
- Emergency Release Reports
- State/Tribal NPL
- State/Tribal CERCLIS Equivalent
- State/Tribal LUST
- State/Tribal Voluntary Cleanup Sites
- State/Tribal UST
- State/Tribal Brownfield
- State/Tribal Inst/Eng Controls
- State/Tribal Landfill/Solid Waste
- State/Tribal RCRA Equivalent
- State/Tribal ASTM Other
- ERS Supplemental Govt Sources
- ERS Exclusive Historic Sources

All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

0.0625-MILE RADIUS STREET MAP W/ OCCURRENCES (MAP3)

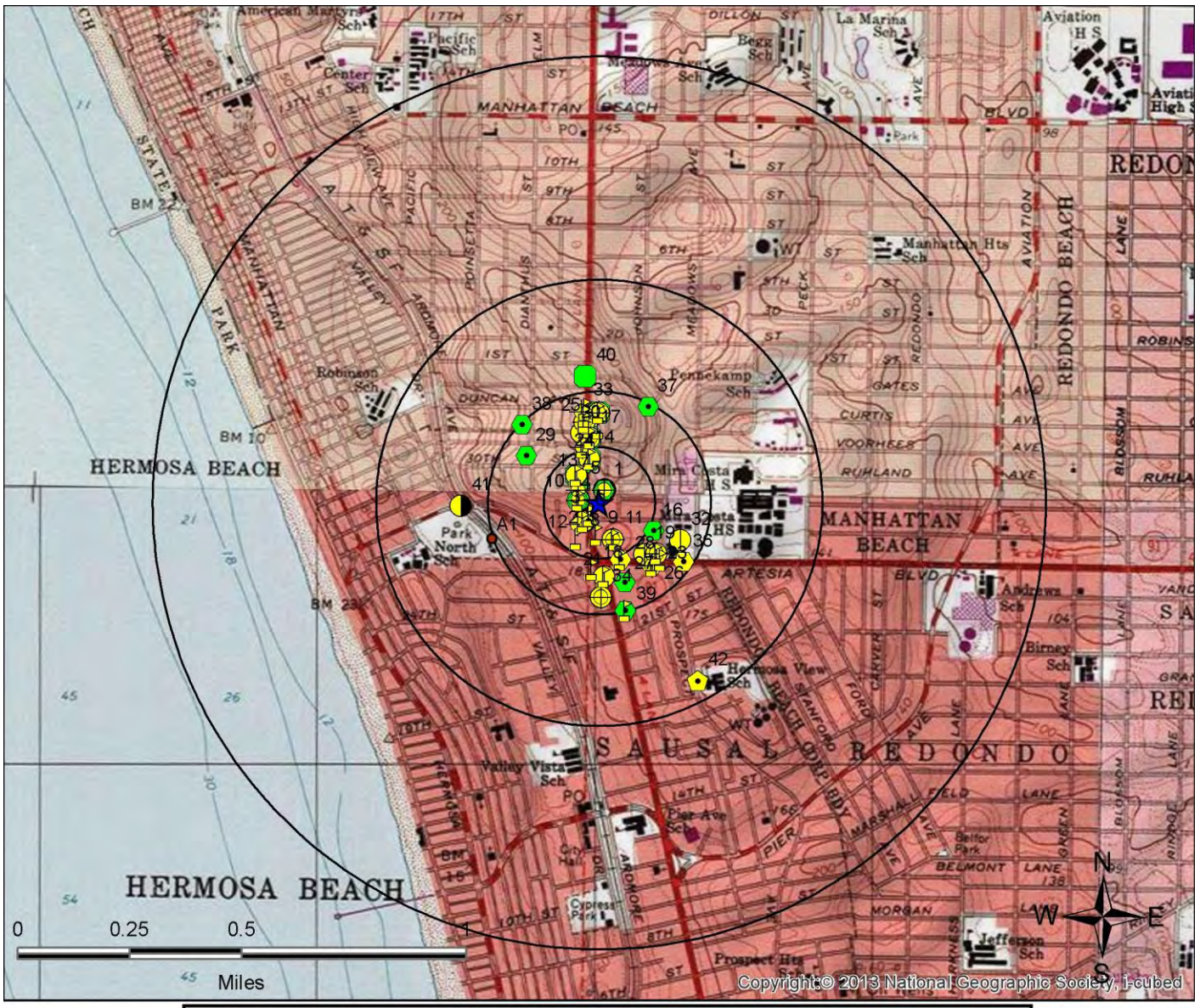


Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
- Federal RCRA Generators
- Federal UST
- Federal Inst/Eng Controls
- Federal Brownfield
- Federal ERNS
- Federal Emergency Release Reports
- Emergency Release Reports
- State/Tribal NPL
- State/Tribal CERCLIS Equivalent
- State/Tribal LUST
- State/Tribal Voluntary Cleanup Sites
- State/Tribal UST
- State/Tribal Brownfield
- State/Tribal Inst/Eng Controls
- State/Tribal Landfill/Solid Waste
- State/Tribal RCRA Equivalent
- State/Tribal ASTM Other
- ERS Supplemental Govt Sources
- ERS Exclusive Historic Sources

All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

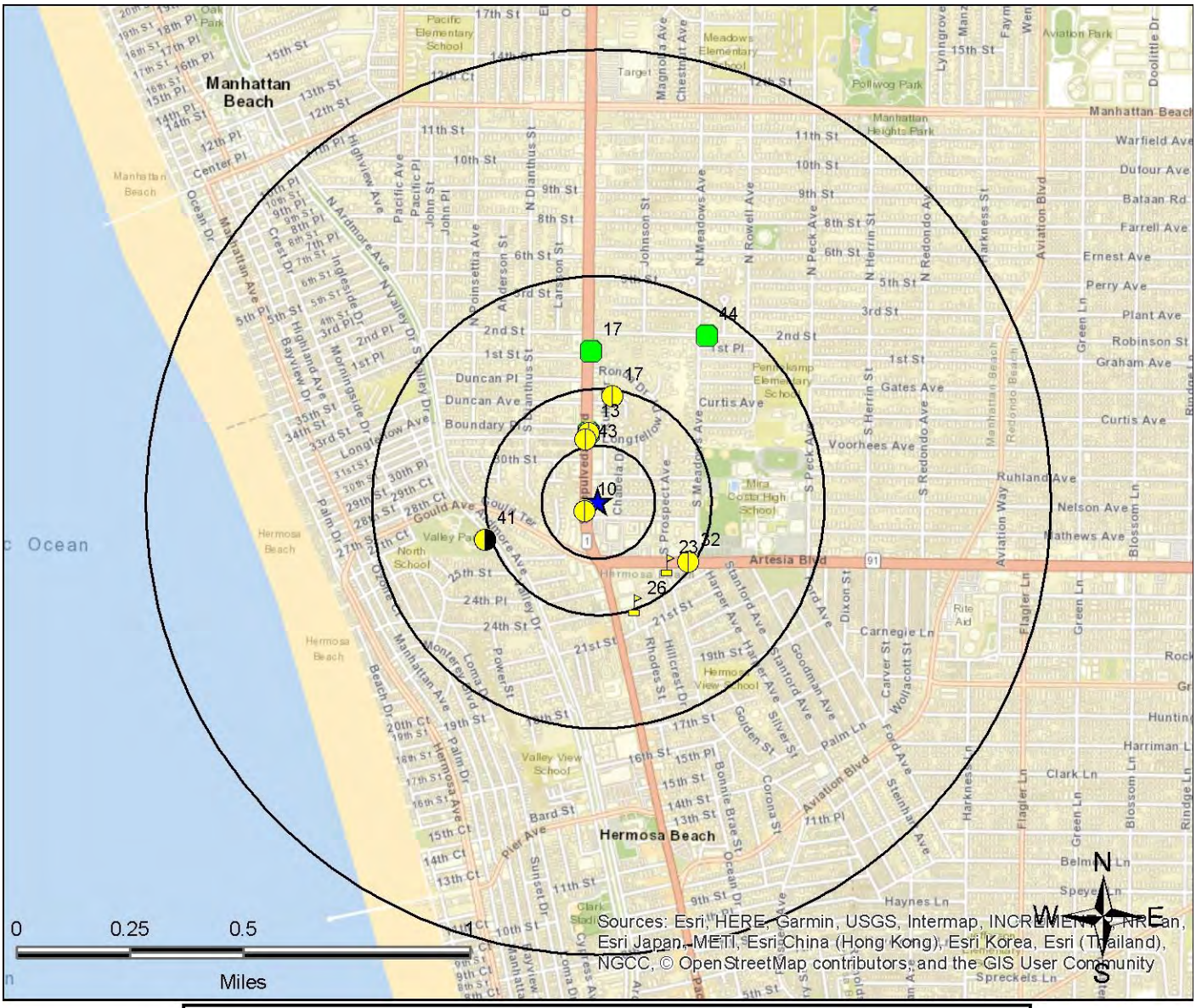
1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP4)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP5)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.

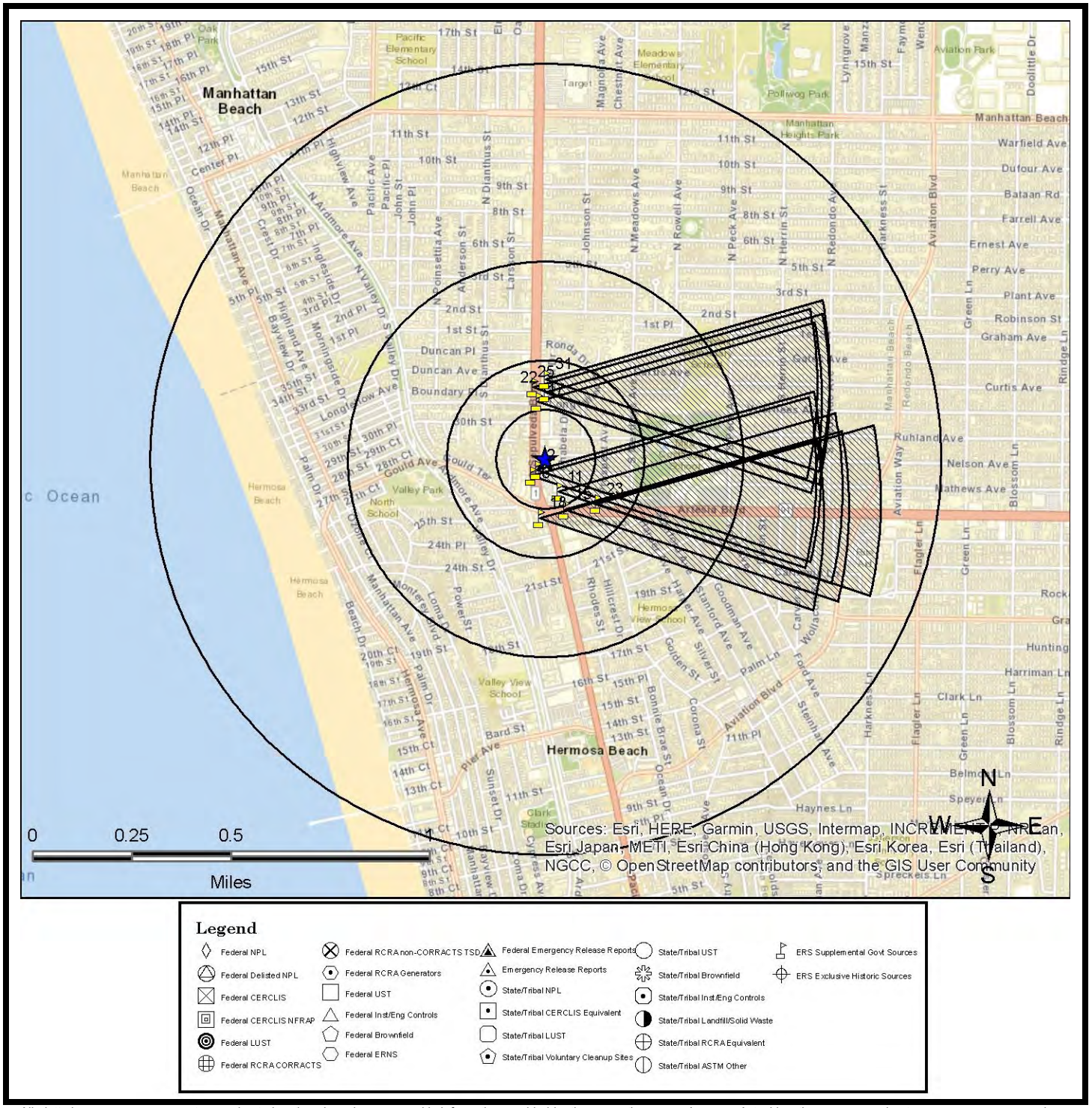


SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
10	R-22121-UST VASEK POLAK BMW	2901 PACIFIC COAST HWY HIST-R4-CA	-118.396, 33.8744	0.03	SW
13	224137 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S CRSP-CA	-118.39589, 33.87692	0.15	N
13	T0603700018 BLAKELY-COMSTOCK	400 SEPULVEDA BLVD S LUST-Closed-CA	-118.39589, 33.87692	0.15	N
17	R-22122-UST VASEK POLAK SAAB	356 SEPULVEDA BLVD S HIST-R4-CA	-118.395, 33.8781	0.24	N
17	T0603705355 VASEK POLAK SAAB	356 SEPULVEDA BLVD S LUST-Closed-CA	-118.39585, 33.87952	0.33	N
23	CAD981986375 STAR CLEANERS & LAUNDRY	1221 ARTESIA BLVD SUITE 102 DryCleaners-CA	-118.39279, 33.87271	0.21	SE
26	CAD981633951 ARTESIA CLEANERS	980 ARTESIA BLVD DryCleaners-CA	-118.39401, 33.8714	0.24	S
32	406614 Journey of Faith	1243 Artesia Blvd ENF-SMARTS-CA	-118.39198, 33.87283	0.24	SE
41	2240-LAC Hermosa Beach Landfill	North Valley Drive And Gould Avenue County-SWF-CA	-118.39981, 33.87345	0.26	W
43	R-24187-UST MORTISE AND LENON	729 PACIFIC COAST HWY HIST-R4-CA	-118.396, 33.8767	0.14	N
44	T0603780279 SERVICE STATION (FORMER)	1304 2ND ST LUST-Closed-CA	-118.3914, 33.88009	0.44	NE

MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP6)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminates may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

POTENTIAL AREAS OF CONCERN/CONTAMINATION (MAP7)

Note: Locations shown may represent site boundaries, contamination plumes, or other information. See descriptions in the Listed Occurrence Details for more information.

LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Printers	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
BEACH REPORTER			1, 2, 3, 4	1128166-PD
ADDRESS			**CITY**	**ZIP**
500 S SEPULVEDA BLVD # 215			MANHATTAN BEACH	90266-6983
DETAILS				
Listing Year: 1997 SIC Category: NEWSPAPERS (PUBLISHERS) SIC Code: 271101				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
DR BRUCE H LETVIN DPM INC			1, 2, 3, 4	CAL000094088
ADDRESS			**CITY**	**ZIP**
500 S SEPULVEDA BLVD #218			MANHATTAN BEACH	902660000

DETAILS

EPA ID: CAL000094088
Facility County: 19
Mailing Street: PO BOX 1064
Mailing City: MANHATTAN BEACH
Mailing State: CA
Mailing Zip: 902671064
Contact Name: BRUCE LETVIN
Contact Phone: --

Year: 2013
TONS: 0.015
TSD EPA ID: CAD059494310
Category Code: 331
Category Description: Off-specification, aged or surplus organics
Method Description: STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)

Year: 2013
TONS: 0.015
TSD EPA ID: NVD980895338
Category Code: 331
Category Description: Off-specification, aged or surplus organics
Method Description: STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
DR GAYLE WOOD			1, 2, 3, 4	CAL000163032
ADDRESS			**CITY**	**ZIP**
500 S SEPULVEDA BLVD STE 306			MANHATTAN BEACH	902660000

DETAILS

EPA ID: CAL000163032
Facility County: 19
Mailing Street: 500 S SEPULVEDA BLVD STE 306
Mailing City: MANHATTAN BEACH
Mailing State: CA
Mailing Zip: 902660000
Contact Name: DR GAYLE WOOD
Contact Phone: 3105457079

Year: 2002
TONS: 0.2025
TSD EPA ID: CAD981402522
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: RECYCLER

Year: 2001
TONS: 0.18
TSD EPA ID: CAD093459485
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: RECYCLER

Year: 2000
TONS: 0.06
TSD EPA ID: CAT000613976
Category Code: 541
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
RONALD J. GREENE, D.D.S., A.P.C.			1, 2, 3, 4	CAL000123305
ADDRESS			**CITY**	**ZIP**
500 SO SEPULVEDA BLVD			MANHATTAN BEACH	902660000

DETAILS

EPA ID: CAL000123305
Facility County: 19
Mailing Street: 500 S SEPULVEDA BLVD STE 206
Mailing City: MANHATTAN BEACH
Mailing State: CA
Mailing Zip: 902660000
Contact Name: RONALD J GREENE DDS
Contact Phone: 3103187678

Year: 2007
TONS: 0.06255
TSD EPA ID: CAD981402522
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: METALS RECOVERY INCLUDING RETORING,SMELTING,CHEMICALS,ECT

Year: 2006
TONS: 0.02085
TSD EPA ID: CAD981402522
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: RECYCLER

Year: 2005
TONS: 0.0834
TSD EPA ID: CAD981402522
Category Code: 541

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
MANHATTAN CHIROPRACTIC ASSO			1, 2, 3, 4	CAL000079128
ADDRESS			**CITY**	**ZIP**
500 SOUTH SEPULVEDA BLVD			MANHATTAN BEACH	902660000

DETAILS

EPA ID: CAL000079128
Facility County: 19
Mailing Street: 500 S SEPULVEDA BLVD STE 101
Mailing City: MANHATTAN BEACH
Mailing State: CA
Mailing Zip: 902660000
Contact Name: HARRY FOGEL DC
Contact Phone: 0000000000

Year: 1998
TONS: 0.0175
TSD EPA ID: CAL000121946
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: RECYCLER

Year: 1996
TONS: 0.02
TSD EPA ID: CAL000121946
Category Code: 541
Category Description: Photochemicals/photoprocessing waste
Method Description: RECYCLER

Year: 1995
TONS: 0.0125
TSD EPA ID: CAL000121946
Category Code: 171

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.03 miles NE	182 ft (9 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
RONALD J. GREENE, D.D.S., A.P.C.			1, 2, 3, 4	CAL000123305
ADDRESS			**CITY**	**ZIP**
500 SO SEPULVEDA BLVD			MANHATTAN BEACH	90266

DETAILS
Additional details may be found online using the following link: http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000123305&pgm_sys_acrnm_in=RCRAINFO Source Type: Implementer Generator Status Universe: N Generator Status: Non-Generator NAICS1: OFFICES OF DENTISTS Active Site Indicator: H---- Owner Name: RONALD J GREENE DDS Operator Name: RONALD J GREENE DDS In Handler Universes: Y In a Universe: Y Short Term Generator: N Importer Activity: N Mixed Waste Generator: N Transporter Activity: Y Transfer Facility: N Recycler Activity: N Onsite Burner Exemption: N Furnace Exemption: N Underground Injection Activity: N Receives Waste From Off-site: N Universal Waste: N Universal Waste Destination Facility: Y Used Oil Universe: NNNNNNN Federal Universal Waste: N Active Site Federally Regulated TSDF: ------ More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.03 miles SW	172 ft (1 ft lower than site)	2
SITE NAME			**MAPS**	**ID**
ACAPULCO RESTAURANTS, INC.			1, 2, 3, 4	119423-SC
ADDRESS			**CITY**	**ZIP**
600-612 S SEPULVEDA			MANHATTAN BEACH	90266

DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=119423 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 119423 County Code: LA County: Los Angeles Facility Status Code: I Facility Status: INACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: JESSE Facility Representative Last Name: KIOS Location Area Code: 310 Location Phone Number: 3183587 Location Phone Extension: Not Reported Mailing Address: 4001 VIA ORO 200 Mailing City: LONG BEACH Mailing State: CA Mailing Zip Code: 90266 Mailing Zip Code Extension: Not Reported Mailing Area Code: 310 Mailing Phone Number: 3183587 Mailing Phone Extension: Not Reported Mailing Representative First Name: JESSE Mailing Representative Last Name: KIOS More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CHMIRS-CA	Listed	0.04 miles SW	172 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
City of Manhattan Beach			1, 2, 3, 4	231305
ADDRESS			**CITY**	**ZIP**
Sepulveda Blvd. at Tennyson St.			Manhattan Beach	90266

DETAILS

Control#: 03-4231
Notified Date: 8/19/2003 8:56:31 AM
Agency: City of Manhattan Beach
1# Substance: Raw Sewage
1# Quantity: Not Reported
1# Measure: Not Reported
1# Type: Not Reported
1# Other: Not Reported
1# Pipeline: Not Reported
1# Vessel >= 300 Tons: Not Reported
2# Substance: Not Reported
2# Quantity: Not Reported
2# Measure: Not Reported
2# Type: Not Reported
2# Other: Not Reported
2# Pipeline: Not Reported
2# Vessel >= 300 Tons: Not Reported
3# Substance: Not Reported
3# Quantity: Not Reported
3# Measure: Not Reported
3# Type: Not Reported
3# Other: Not Reported
3# Pipeline: Not Reported
3# Vessel >= 300 Tons: Not Reported
Description: Released due to a grease back up.
Contained: Yes
Water?: Yes
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-UST-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	014229-014761-LAC
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS
Source of the list: County of Los Angeles Responsible Agency: Los Angeles Department of Public Works URL: http://ladpw.org/epd/OpenFileReview/Results.aspx?streetno=2775&streetdr=&streetname=PACIFIC%20COAST&zip=90254 File URL: Not Reported File Number: 014229-014761 Status: REM Status Description: Removed File. File does not have an active permit. Type: T Type Description: Underground Storage Tank File

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
FRS-US	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	110002808454
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
FRS Facility Detail Report URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110002808454 Create Date: 01-MAR-2000 00:00:00 Update Date: 08-AUG-2010 11:59:16 Program System: RCRAINFO Interest Type(s): SQG				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Dealers	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
LOTUS OF SOUTH BAY			1, 2, 3, 4	103358
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			Hermosa Beach	90254

DETAILS
Sic Code: 5511 Desc: Auto & Truck Dealer Site Added: 2/2010

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
LOTUS OF SOUTH BAY			1, 2, 3, 4	54FDFFFA-CAL000314758
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
Previous List: HWIS-CA Archived: 4/2/2012				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	451987
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-FINDS-US	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	451987
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-US	No Longer Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	5CB2F9E-CAD982415911
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
OrgDatabase: RCRA ArchDate: 3/23/2013				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
SOUTH BAY LOTUS			1, 2, 3, 4	CAC002591347
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS

EPA ID: CAC002591347
Facility County: 19
Mailing Street: 2775 PACIFIC COAST HWY
Mailing City: HERMOSA BEACH
Mailing State: CA
Mailing Zip: 90254
Contact Name: PETER BOESEN
Contact Phone: 3109397300

Year: 2005
TONS: 0.0375
TSD EPA ID: CAD028409019
Category Code: 151
Category Description: Asbestos containing waste
Method Description: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4

SITE NAME	MAPS	ID
LOTUS OF SOUTH BAY	1, 2, 3, 4	CAL000314758

ADDRESS	CITY	ZIP
2775 PACIFIC COAST HWY	HERMOSA BEACH	902542251

DETAILS

EPA ID: CAL000314758
Facility County: 19
Mailing Street: 18800 HAWTHORNE BLVD
Mailing City: TORRANCE
Mailing State: CA
Mailing Zip: 905045507
Contact Name: JAIME RODRIGUEZ
Contact Phone: 6268398412

Year: 2009
TONS: 4.17
TSD EPA ID: CAT080013352
Category Code: 222
Category Description: Oil/water separation sludge
Method Description: OTHER RECOVERY OF RECLAMATION FOR REUSE INCLUDING ACID REGENERATION, ORGANICS RECOVERY ECT

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4

SITE NAME	MAPS	ID
VASEK POLAK SUBARU	1, 2, 3, 4	CAD982415911

ADDRESS	CITY	ZIP
2775 PACIFIC COAST HWY	HERMOSA BEACH	902540000

DETAILS

EPA ID: CAD982415911
Facility County: 19
Mailing Street: 2775 PACIFIC COAST HWY
Mailing City: HERMOSA BEACH
Mailing State: CA
Mailing Zip: 902542251
Contact Name: VASEK POLAK
Contact Phone: 2133760935

Year: 1996
TONS: 0.2293
TSD EPA ID: CAT080013352
Category Code: 133
Category Description: Aqueous solution with total organic residues 10 percent or more
Method Description: RECYCLER

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.04 miles W	174 ft (1 ft higher than site)	4

SITE NAME	MAPS	ID
GOOD SON LLC DBA SUBARU PACIFIC	1, 2, 3, 4	CAL000370056

ADDRESS	CITY	ZIP
2775 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS
EPA ID: CAL000370056 Facility County: 19 Mailing Street: 2775 PACIFIC COAST HWY Mailing City: HERMOSA BEACH Mailing State: CA Mailing Zip: 902540000 Contact Name: EDWARD KLINE Contact Phone: 3108962100 Year: 2012 TONS: 5.004 TSD EPA ID: CAT080013352 Category Code: 222 Category Description: Oil/water separation sludge Method Description: OTHER RECOVERY OF RECLAMATION FOR REUSE INCLUDING ACID REGENERATION, ORGANICS RECOVERY ECT

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
DUNN-EDWARDS PAINTS #167			1, 2, 3, 4	CAL000418106
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY UNIT A			HERMOSA BEACH	90254

DETAILS

Additional details may be found online using the following link:

http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000418106&pgm_sys_acrnm_in=RCRAINFO

Source Type: Implementer
Generator Status Universe: N
Generator Status: Non-Generator
NAICS1: OTHER BUILDING MATERIAL DEALERS
Active Site Indicator: H----
Owner Name: DUNN-EDWARDS CORPORATION
Operator Name: VALARIE MARQUEZ
In Handler Universes: Y
In a Universe: Y
Short Term Generator: N
Importer Activity: N
Mixed Waste Generator: N
Transporter Activity: Y
Transfer Facility: N
Recycler Activity: N
Onsite Burner Exemption: N
Furnace Exemption: N
Underground Injection Activity: N
Receives Waste From Off-site: N
Universal Waste: N
Universal Waste Destination Facility: Y
Used Oil Universe: NNNNNNN
Federal Universal Waste: N
Active Site Federally Regulated TSDF: ------
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.04 miles W	174 ft (1 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
VASEK POLAK SUBARU			1, 2, 3, 4	CAD982415911
ADDRESS			**CITY**	**ZIP**
2775 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS
Additional details may be found online using the following link: http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD982415911&pgm_sys_acrnm_in=RCRAINFO Source Type: Implementer Generator Status Universe: SQG Generator Status: Small Quantity Generator Active Site Indicator: H---- Operator Name: NOT REQUIRED In Handler Universes: Y In a Universe: Y Short Term Generator: N Importer Activity: N Mixed Waste Generator: N Transporter Activity: N Transfer Facility: N Recycler Activity: N Onsite Burner Exemption: N Furnace Exemption: N Underground Injection Activity: N Receives Waste From Off-site: N Universal Waste: N Universal Waste Destination Facility: N Used Oil Universe: NNNNNNN Federal Universal Waste: N Active Site Federally Regulated TSDF: ------ Active Site Converter TSDF: ------ Active Site State Regulated TSDF: --------- More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Dealers	Listed	0.05 miles NW	183 ft (10 ft higher than site)	5

SITE NAME	MAPS	ID
VASEK POLAK SAAB	1, 2, 3, 4	741467-PD

ADDRESS	CITY	ZIP
2851 PACIFIC COAST HWY	HERMOSA BEACH	90254-2252

DETAILS
Listing Year: 1997 SIC Category: AUTOMOBILE DEALERS-NEW CARS SIC Code: 551102

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6

SITE NAME	MAPS	ID
BUGGE BUILDERS, INC.	1, 2, 3, 4	53042-SC

ADDRESS	CITY	ZIP
2697 PACIFIC COAST HIWAY	HERMOSA BEACH	90254

DETAILS

District: South Coast AQMD
Compliance URL:
http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=53042
Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.
Facility Id: 53042
County Code: LA
County: Los Angeles
Facility Status Code: A
Facility Status: ACTIVE
Number of Employees: 0
Location Zip Code Extension: 2298
Facility Representative First Name: Not Reported
Facility Representative Last Name: Not Reported
Location Area Code: Not Reported
Location Phone Number: Not Reported
Location Phone Extension: Not Reported
Mailing Address: 2697 PACIFIC COAST HIWAY
Mailing City: HERMOSA BEACH
Mailing State: CA
Mailing Zip Code: 90254
Mailing Zip Code Extension: 2298
Mailing Area Code: Not Reported
Mailing Phone Number: Not Reported
Mailing Phone Extension: Not Reported
Mailing Representative First Name: Not Reported
Mailing Representative Last Name: Not Reported

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6

SITE NAME	MAPS	ID
DARCY & KATHY BANKS	1, 2, 3, 4	014181-014705-LAC

ADDRESS	CITY	ZIP
2697 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS

Source of the list: County of Los Angeles
Responsible Agency: Los Angeles Department of Public Works Industrial Waste & Stormwater Permits
URL:
http://ladpw.org/epd/OpenFileReview/Results.aspx?streetno=2697&streetdr=&streetname=PACIFIC%20COAST&zip=90254
File URL: Not Reported
File Number: 014181-014705
Status: REM
Status Description: Removed File. File does not have an active permit.
Type: Not Reported
Type Description: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
FRS-US	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6

SITE NAME	MAPS	ID
BUGGE BUILDERS	1, 2, 3, 4	110002761306

ADDRESS	CITY	ZIP
2697 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS

FRS Facility Detail Report URL:
http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110002761306
Create Date: 01-MAR-2000 00:00:00
Update Date: 08-AUG-2010 18:25:24
Program System: RCRAINFO
Interest Type(s): SQG

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
BUGGE BUILDERS			1, 2, 3, 4	62111
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
A S A P MUFFLER & BRAKE			1, 2, 3, 4	7760331
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
ASAP MUFFLER			1, 2, 3, 4	7760332
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-FINDS-US	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
BUGGE BUILDERS			1, 2, 3, 4	62111
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-US	No Longer Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
BUGGE BUILDERS			1, 2, 3, 4	5CB2F9E-CAD981973985
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
OrgDatabase: RCRA ArchDate: 3/23/2013				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
A S A P MUFFLER & BRAKE			1, 2, 3, 4	CAL000063103
ADDRESS			**CITY**	**ZIP**
2697 PACIFIC COAST HWY			HERMOSA BEACH	902540000

DETAILS

EPA ID: CAL000063103
Facility County: 19
Mailing Street: 2697 PACIFIC COAST HWY
Mailing City: HERMOSA BEACH
Mailing State: CA
Mailing Zip: 902540000
Contact Name: WRIGHT SHARON
Contact Phone: 0000000000

Year: 1999
TONS: 0.025
TSD EPA ID: CAD028409019
Category Code: 352
Category Description: Other organic solids
Method Description: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWIS-CA	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6

SITE NAME	MAPS	ID
AMERICAN SAVINGS BANK	1, 2, 3, 4	CAC000883768

ADDRESS	CITY	ZIP
2697-2699 PACIFIC COAST HWY	HERMOSA BEACH	902540000

DETAILS

EPA ID: CAC000883768
Facility County: 19
Mailing Street: C/O CRC ENVIRO
Mailing City: IRVINE
Mailing State: CA
Mailing Zip: 927140000
Contact Name: AMERICAN SAVINGS BANK
Contact Phone: 0000000000

Year: 1994
TONS: 0
TSD EPA ID: UTD991301748
Category Code: 181
Category Description: Other inorganic solid waste
Method Description: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.05 miles SW	169 ft (4 ft lower than site)	6

SITE NAME	MAPS	ID
BUGGE BUILDERS	1, 2, 3, 4	CAD981973985

ADDRESS	CITY	ZIP
2697 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS

Additional details may be found online using the following link:

http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD981973985&pgm_sys_acrnm_in=RCRAINFO

Source Type: Implementer
Generator Status Universe: SQG
Generator Status: Small Quantity Generator
NAICS1: GENERAL AUTOMOTIVE REPAIR
Active Site Indicator: H----
Operator Name: NOT REQUIRED
In Handler Universes: Y
In a Universe: Y
Short Term Generator: N
Importer Activity: N
Mixed Waste Generator: N
Transporter Activity: N
Transfer Facility: N
Recycler Activity: N
Onsite Burner Exemption: N
Furnace Exemption: N
Underground Injection Activity: N
Receives Waste From Off-site: N
Universal Waste: N
Universal Waste Destination Facility: N
Used Oil Universe: NNNNNNN
Federal Universal Waste: N
Active Site Federally Regulated TSDF: ------
Active Site Converter TSDF: ------

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.06 miles NW	191 ft (18 ft higher than site)	7

SITE NAME	MAPS	ID
Harbor Murre Cleaners	1, 2, 3, 4	56718

ADDRESS	CITY	ZIP
16431 Pacific Coast Hwy # B	Sunset Beach	90742

DETAILS

Original Database: Cleaners-CA
Last Agency Status: Listed
Archive Date: 08/14/17
No Longer Listed-County: Orange
Executive First Name: Shinja
Executive Last Name: Baek
Professional Title: Not Reported
Executive Title: Owner
Executive Gender: Male
Executive Biography: Not Reported
ZIP Four: Not Reported
Carrier Route: Not Reported
Delivery Point Barcode: Not Reported
Metro Area: LA-Long Bch, CA
Neighborhood: Not Reported
Phone Number Combined: Not Available
Fax Number Combined: 0
Toll Free Number Combined: 0
Website: Not Reported
Company Description: Not Reported
Primary SIC Code: 721201
Primary SIC Description: Cleaners
Primary SIC Ad Size: Not Reported
Primary SIC Year Appeared: 2014
SIC Code 1: 721201
SIC Code 1 Description: Cleaners
SIC Code 1 Ad Size: Not Reported

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.07 miles SW	165 ft (8 ft lower than site)	8
SITE NAME			**MAPS**	**ID**
DR BOLTZ			1, 2, 4	423202-PD
ADDRESS			**CITY**	**ZIP**
2699 PACIFIC COAST HWY			HERMOSA BEACH	90254-2250
DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.07 miles S	177 ft (4 ft higher than site)	9
SITE NAME			**MAPS**	**ID**
1X QUAESTOR INC			1, 2, 4	7760533
ADDRESS			**CITY**	**ZIP**
700 S. SEPULVEPA BLVD			MANHATTAN BEACH	
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-UST-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK BMW			1, 2, 4	016625-022121-LAC
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS
Source of the list: County of Los Angeles Responsible Agency: Los Angeles Department of Public Works URL: http://ladpw.org/epd/OpenFileReview/Results.aspx?streetno=2901&streetdr=&streetname=PACIFIC%20COAST&zip=90254 File URL: Not Reported File Number: 016625-022121 Status: REM Status Description: Removed File. File does not have an active permit. Type: T Type Description: Underground Storage Tank File

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK BMW			1, 2, 4	226864
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS
Site Regulated Program Information : Site ID: 226864 Site EI ID: T0603705354 Agency Provided Latitude: 33.875526 Agency Provided Longitude: -118.396067 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported Violation Information : Not Reported Enforcement Information : Not Reported Affiliation Information : Affiliation Type Description: Local Agency Caseworker Entity Name: JOHN AWUJO - LOS ANGELES COUNTY Entity Title: Not Reported Affiliate Address: 900 S FREMONT AVE Affiliate City: ALHAMBRA Affiliate State: CA Affiliate Zip Code: Not Reported Affiliate Country: Not Reported Affiliate Phone Number: 6264583507 Affiliation Type Description: Regional Board Caseworker More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK IMPORTS			1, 2, 4	6848707
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERNOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK BMW INC			1, 2, 4	451985
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERNOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK IMPORTS			1, 2, 4	6848707
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HIST-R4-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK BMW			1, 2, 4	R-22121-UST
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERMOSA BEACH	90254

DETAILS
Type: UST Source of the list: Region 4 - Los Angeles Regional Water Quality Control Board CASENO: R-22121 STAFF: Not Reported LEGENDCODE: LC LOCATION COMMUNITY: Not Reported LOCATION XSTREET: LONG FELLOW STATUS: 9 LEADAGENCY: L DISTANCE: 7328 STATE_WELL: 03S14W29D05S DTW: 0 LAT: 33.8743782443 LONG: -118.395946204

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-LUST-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK IMPORTS			1, 2, 4	6848707
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HWY			HERMOSA BEACH	90254
DETAILS				
Reported Date: 1998 List: Region #4-UST Leak List Agency: Regional Water Quality Control Board, Region #4				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10
SITE NAME			**MAPS**	**ID**
VASEK POLAK BMW			1, 2, 4	275277
ADDRESS			**CITY**	**ZIP**
2901 PACIFIC COAST HIGHWAY			HERMOSA BEACH	90254

DETAILS
Note: ID has been assigned by ERS Tank Details: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002853B.pdf County: Los Angeles

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.08 miles NW	199 ft (26 ft higher than site)	10

SITE NAME	MAPS	ID
VASEK POLAK BMW	1, 2, 4	T0603705354

ADDRESS	CITY	ZIP
2901 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS

Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603705354
Global ID: T0603705354
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 1/28/1997
CUF Case: NO
Lead Agency: LOS ANGELES COUNTY
Case Worker: JOA
Local Agency: LOS ANGELES COUNTY
RB Case Number: R-22121
Loc Case Number: Not Reported
File Location: Not Reported
Potential Contaminants of Concern: Gasoline
Potential Media Affected: Soil
Site History: Not Reported
Begin Date: 8/15/1996
How Discovered: Tank Closure
How Discovered Description: Not Reported
Stop Method: Not Reported
Stop Method Description: Not Reported
Agency Provided Latitude: 33.8755256
Agency Provided Longitude: -118.3960673

Regulatory Activities Details
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.08 miles NW	199 ft (26 ft higher than site)	10

SITE NAME	MAPS	ID
SOUTH BAY B M W	1, 2, 4	CAD982041725

ADDRESS	CITY	ZIP
2901 PACIFIC COAST HWY	HERMOSA BEACH	90254

DETAILS

Additional details may be found online using the following link:

http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD982041725&pgm_sys_acrnm_in=RCRAINFO

Source Type: Notification
Generator Status Universe: SQG
Generator Status: Small Quantity Generator
NAICS1: NEW CAR DEALERS
Active Site Indicator: H----
Owner Name: FREDERICK E HITCHCOCK
Operator Name: NOT REQUIRED
In Handler Universes: Y
In a Universe: Y
Short Term Generator: N
Importer Activity: N
Mixed Waste Generator: N
Transporter Activity: N
Transfer Facility: N
Recycler Activity: N
Onsite Burner Exemption: N
Furnace Exemption: N
Underground Injection Activity: N
Receives Waste From Off-site: N
Universal Waste: N
Universal Waste Destination Facility: N
Used Oil Universe: NNNNNNN
Federal Universal Waste: N
Active Site Federally Regulated TSDF: ------

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11

SITE NAME	MAPS	ID
TIFFANY CLEANERS	1, 2, 4	SC AQMD-SC-104494

ADDRESS	CITY	ZIP
1133 ARTESIA BLVD STE C	MANHATTAN BEACH	90266

DETAILS

Toxic Facility Information
Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID
Facility ID: 104494
Database Year: 2015
Air Basin: SC
County Code: 19
District Code: SC
District: SOUTH COAST AQMD
Facility SIC Code: 7216
COID: LA
Prioritization Thresholds: Not Reported
Health Risk Assessment (HRA): Not Reported
Non-Cancer Chronic Hazard Index: Not Reported
Non-Cancer Acute Hazard Index: Not Reported
CHAPIS: Not Reported
CERR Code: Not Reported

Pollutant Information
: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11

SITE NAME	MAPS	ID
TIFFANY CLEANERS	1, 2, 4	104494-SC

ADDRESS	CITY	ZIP
1133 ARTESIA BLVD STE C	MANHATTAN BEACH	90266

DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=104494 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 104494 County Code: LA County: Los Angeles Facility Status Code: A Facility Status: ACTIVE Number of Employees: 2 Location Zip Code Extension: Not Reported Facility Representative First Name: REZA Facility Representative Last Name: HOSSEINI Location Area Code: 310 Location Phone Number: 3797740 Location Phone Extension: Not Reported Mailing Address: 1133 ARTESIA BLVD STE C Mailing City: MANHATTAN BEACH Mailing State: CA Mailing Zip Code: 90266 Mailing Zip Code Extension: Not Reported Mailing Area Code: 310 Mailing Phone Number: 3797740 Mailing Phone Extension: Not Reported Mailing Representative First Name: REZA Mailing Representative Last Name: HOSSEINI More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
TIFFANY CLEANERS			1, 2, 4	92009-SC
ADDRESS			**CITY**	**ZIP**
1133 C ARTESIA BLVD			MANHATTAN BEACH	90266

DETAILS

District: South Coast AQMD
Compliance URL:
http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=92009
Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.
Facility Id: 92009
County Code: LA
County: Los Angeles
Facility Status Code: A
Facility Status: ACTIVE
Number of Employees: 2
Location Zip Code Extension: Not Reported
Facility Representative First Name: YUN HEE
Facility Representative Last Name: KIM
Location Area Code: 310
Location Phone Number: 5431277
Location Phone Extension: Not Reported
Mailing Address: 21721 ANZA AVE
Mailing City: TORRANCE
Mailing State: CA
Mailing Zip Code: 90503
Mailing Zip Code Extension: Not Reported
Mailing Area Code: 310
Mailing Phone Number: 5431277
Mailing Phone Extension: Not Reported
Mailing Representative First Name: YUN HEE
Mailing Representative Last Name: KIM

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Cleaners-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
Tiffany Cleaners			1, 2, 4	22426
ADDRESS			**CITY**	**ZIP**
1133 Artesia Blvd # C			Manhattan Beach	90266

DETAILS

Facility and Program Information
County: Los Angeles
Executive First Name: Reza
Executive Last Name: Hosseini
Professional Title: Not Reported
Executive Title: Owner
Executive Gender: Male
ZIP Four: 6953
Carrier Route: C021
Delivery Point Barcode: 752
Metro Area: LA-Long Bch, CA
Neighborhood: Eastside Manhattan Beach
Phone Number Combined: (310) 379-7740
Fax Number Combined: 3104061762
Toll Free Number Combined: 0
Website: Not Reported
Company Description: Not Reported
Primary SIC Code: 721201
Primary SIC Description: Cleaners
Primary SIC Ad Size: Regular
Primary SIC Year Appeared: 2007
SIC Code 1: 721201
SIC Code 1 Description: Cleaners
SIC Code 1 Ad Size: Not Reported
SIC Code 1 Year Appeared: Not Reported
SIC Code 2: Not Reported
SIC Code 2 Description: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
TIFFANY CLEANERS			1, 2, 4	76563
ADDRESS			**CITY**	**ZIP**
1133 ARTESIA BLVD # C			MANHATTAN BEACH	90266

DETAILS
Site Regulated Program Information : Site ID: 76563 Site EI ID: 10271230 Agency Provided Latitude: 33.87351 Agency Provided Longitude: -118.39492 Program Description: Hazardous Waste Generator Evaluation Information : Evaluation Date: 3/4/2016 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Reza Hosseini Evaluation Division: Los Angeles County Fire Department Evaluation Program: HMRRP Evaluation Source: CERS Evaluation Date: 3/4/2016 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Reza Hosseini Evaluation Division: Los Angeles County Fire Department Evaluation Program: HW Evaluation Source: CERS More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
DryCleaners-CA	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
TIFFANY CLEANERS			1, 2, 4	CAD983651530
ADDRESS			**CITY**	**ZIP**
1133 ARTESIA BLVD UNIT C			MANHATTAN BEACH	902660000

DETAILS

EPA ID: CAD983651530
Create Date: 11/2/1992
Facility Act Ind: Y
Inact Date: Not Reported
Facility Street2: Not Reported
County: Los Angeles
Latitude: 33.872919
Longitude: -118.388732
Mailing Name: Not Reported
Facility Mailing Address: 1133 ARTESIA BLVD UNIT C
Facility Mailing Address 2: Not Reported
Facility Mailing City: MANHATTAN BEACH
Facility Mailing State: CA
Facility Mailing Zip Code: 902666903
Region Code: 9
Owner Name: REZA HOSSEINI
Owner Address: 1133 ARTESIA BLVD UNIT C
Owner Address2: Not Reported
Owner City: MANHATTAN BEACH
Owner State: CA
Owner Zip Code: 902666903
Owner Phone Number: 3103797740
Owner Fax Number: 0000000000
Contact Name: REZA HOSSEINI
Contact Address: 1133 ARTESIA BLVD UNIT C
Contact Address2: Not Reported
Contact City: MANHATTAN BEACH
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Cleaners	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
Tiffany Cleaners			1, 2, 4	1742
ADDRESS			**CITY**	**ZIP**
1133 Artesia Blvd			Manhattan Beach	90266

DETAILS

Sic Code: 7212
Desc: Laundry/Cleaner Services
Site Added: 2/2010

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Cleaners	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
TIFFANY CLEANERS			1, 2, 4	328089-PD
ADDRESS			**CITY**	**ZIP**
1133 ARTESIA BLVD			MANHATTAN BEACH	90266-6903
DETAILS				
Listing Year: 1997 SIC Category: CLEANERS SIC Code: 721201				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Cleaners	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
Tiffany Real Estate Services			1, 2, 4	76828
ADDRESS			**CITY**	**ZIP**
1133 Artesia Blvd			Manhattan Beach	
DETAILS				
Site Added: 1/1/2013				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.09 miles SE	182 ft (9 ft higher than site)	11
SITE NAME			**MAPS**	**ID**
TIFFANY CLEANERS			1, 2, 4	CAD983651530
ADDRESS			**CITY**	**ZIP**
1133 ARTESIA BLVD UNIT C			MANHATTAN BEACH	90266

DETAILS
Additional details may be found online using the following link: http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD983651530&pgm_sys_acrnm_in=RCRAINFO Source Type: Notification Generator Status Universe: SQG Generator Status: Small Quantity Generator Active Site Indicator: H---- Owner Name: MR DRY CLEAN In Handler Universes: Y In a Universe: Y Short Term Generator: N Importer Activity: N Mixed Waste Generator: N Transporter Activity: N Transfer Facility: N Recycler Activity: N Onsite Burner Exemption: N Furnace Exemption: N Underground Injection Activity: N Receives Waste From Off-site: N Universal Waste: N Universal Waste Destination Facility: N Used Oil Universe: NNNNNNN Federal Universal Waste: N Active Site Federally Regulated TSDF: ------ Active Site Converter TSDF: ------ Active Site State Regulated TSDF: --------- More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Cleaners-CA	Listed	0.09 miles SW	166 ft (7 ft lower than site)	12
SITE NAME			**MAPS**	**ID**
Azusa Coin Laundry			1, 2, 4	8730
ADDRESS			**CITY**	**ZIP**
2615 Pacific Coast Hwy # 328			Hermosa Beach	90254

DETAILS
Facility and Program Information County: Los Angeles Executive First Name: Not Reported Executive Last Name: Not Reported Professional Title: Not Reported Executive Title: Not Reported Executive Gender: Not Reported ZIP Four: 2227 Carrier Route: C015 Delivery Point Barcode: 782 Metro Area: LA-Long Bch, CA Neighborhood: Hermosa Beach Phone Number Combined: (310) 376-5790 Fax Number Combined: 0 Toll Free Number Combined: 0 Website: Azusacoinlaundry.Com Company Description: Not Reported Primary SIC Code: 721101 Primary SIC Description: Laundries Primary SIC Ad Size: Not Reported Primary SIC Year Appeared: 2011 SIC Code 1: 721101 SIC Code 1 Description: Laundries SIC Code 1 Ad Size: Not Reported SIC Code 1 Year Appeared: Not Reported SIC Code 2: Not Reported SIC Code 2 Description: Not Reported More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.09 miles SW	166 ft (7 ft lower than site)	12
SITE NAME			**MAPS**	**ID**
1X SCIENCE APPLICATIONS INTL CORP			1, 2, 4	7812290
ADDRESS			**CITY**	**ZIP**
2615 PACIFIC COAST HWY			HERMOSA BEACH	902540000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13

SITE NAME	MAPS	ID
WARREN PONTIAC	1, 2, 4	010871-010839-LAC

ADDRESS	CITY	ZIP
400 S SEPULVEDA BLVD	MANHATTAN BEACH	90266

DETAILS

Source of the list: County of Los Angeles
Responsible Agency: Los Angeles Department of Public Works Industrial Waste & Stormwater Permits
URL:
http://ladpw.org/epd/OpenFileReview/Results.aspx?streetno=400&streetdr=S&streetname=SEPULVEDA&zip=90266
File URL: Not Reported
File Number: 010871-010839
Status: REM
Status Description: Removed File. File does not have an active permit.
Type: Not Reported
Type Description: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13

SITE NAME	MAPS	ID
BLAKELY-COMSTOCK	1, 2, 4	224137

ADDRESS	CITY	ZIP
400 SEPULVEDA BLVD S	MANHATTAN BEACH	90266

DETAILS
Site Regulated Program Information : Site ID: 224137 Site EI ID: T0603700018 Agency Provided Latitude: 33.87692 Agency Provided Longitude: -118.395894 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported Violation Information : Not Reported Enforcement Information : Not Reported Affiliation Information : Affiliation Type Description: Local Agency Caseworker Entity Name: JOHN AWUJO - LOS ANGELES COUNTY Entity Title: Not Reported Affiliate Address: 900 S FREMONT AVE Affiliate City: ALHAMBRA Affiliate State: CA Affiliate Zip Code: Not Reported Affiliate Country: Not Reported Affiliate Phone Number: 6264583507 Affiliation Type Description: Regional Board Caseworker More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BLAKELY-COMSTOCK			1, 2, 4	932113
ADDRESS			**CITY**	**ZIP**
400 S. SEPULVEDA BLVD			MANHATTAN BEACH	902660000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
CIGNA HEALTHPLAN OF CALIFORNIA			1, 2, 4	3778880
ADDRESS			**CITY**	**ZIP**
400 S. SEPULVEDA BLVD			MANHATTAN BEACH	902660000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BOB WARREN PONTIAC			1, 2, 4	3203221
ADDRESS			**CITY**	**ZIP**
400 S. SEPULVEDA BLVD			MANHATTAN BEACH	902660000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CalFID-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
1X BLAKESLEY-COMSTOCK			1, 2, 4	7759300
ADDRESS			**CITY**	**ZIP**
400 S. SEPULVEDA BLVD			MANHATTAN BEACH	902660000
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BLAKELY-COMSTOCK			1, 2, 4	932113
ADDRESS			**CITY**	**ZIP**
400 SEPULVEDA BLVD S			MANHATTAN BEACH	90266
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HIST-R4-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BLAKELY-COMSTOCK			1, 2, 4	000308-UST
ADDRESS			**CITY**	**ZIP**
400 SEPULVEDA BLVD S			MANHATTAN BEACH	90266
DETAILS				

Type: UST
Source of the list: Region 4 - Los Angeles Regional Water Quality Control Board
CASENO: 000308
STAFF: Not Reported
LEGENDCODE: LA
LOCATION COMMUNITY: Not Reported
LOCATION XSTREET: Not Reported
STATUS: 0
LEADAGENCY: L
DISTANCE: 6258
STATE_WELL: 03S14W29D05S
DTW: 0
LAT: 33.8816195058
LONG: -118.395765829

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-LUST-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BLAKELY-COMSTOCK			1, 2, 4	932113
ADDRESS			**CITY**	**ZIP**
400 SEPULVEDA BLVD S			MANHATTAN BEACH	90266

DETAILS

Reported Date: 1998
List: Region #4-UST Leak List
Agency: Regional Water Quality Control Board, Region #4

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BOB WARREN PONTIAC INC			1, 2, 4	217555
ADDRESS			**CITY**	**ZIP**
400 SOUTH SEPULVEDA BLVD			MANHATTAN BEACH	90266

DETAILS

Note: ID has been assigned by ERS
Tank Details:
http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000267CD.pdf
County: Los Angeles

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.1 miles N	201 ft (28 ft higher than site)	13
SITE NAME			**MAPS**	**ID**
BLAKELY-COMSTOCK			1, 2, 4	T0603700018
ADDRESS			**CITY**	**ZIP**
400 SEPULVEDA BLVD S			MANHATTAN BEACH	90266

DETAILS
Sites Details URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603700018 Global ID: T0603700018 Case Type: LUST Cleanup Site Status: Completed - Case Closed Status Date: 7/9/1986 CUF Case: NO Lead Agency: LOS ANGELES COUNTY Case Worker: JOA Local Agency: LOS ANGELES COUNTY RB Case Number: 308 Loc Case Number: Not Reported File Location: Not Reported Potential Contaminants of Concern: Gasoline Potential Media Affected: Soil Site History: Not Reported Begin Date: 6/17/1986 How Discovered: Tank Closure How Discovered Description: Not Reported Stop Method: Not Reported Stop Method Description: Not Reported Agency Provided Latitude: 33.8769202 Agency Provided Longitude: -118.3958941 Regulatory Activities Details More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.13 miles N	209 ft (36 ft higher than site)	14
SITE NAME			**MAPS**	**ID**
MIDAS AUTO SYSTEMS EXPERTS			1, 2, 4	511175-PD
ADDRESS			**CITY**	**ZIP**
3125 PACIFIC COAST HWY			HERMOSA BEACH	90254-2254
DETAILS				
Listing Year: 1997 SIC Category: MUFFLERS & EXHAUST SYSTEMS-ENGINE SIC Code: 753301				

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SOUTHERN CALIFORNIA EDISON
An *EDISON INTERNATIONAL* Company

7/7/2020

Live Oak Properties, LLC

600 S Sepulveda Blvd, Manhattan Beach

Your project is located in Southern California Edison (SCE) service territory. SCE will serve the above subject project's electrical requirements per the California Public Utilities Commission and Federal Energy Regulatory Commission tariffs.

SCE may need to conduct utility studies, where applicable, to assess whether additions or modifications to the existing electric infrastructure are required to serve this project. Where applicable, SCE has attached Appendix (B) which not only describes the study, and permitting, but includes a Project Information Sheet that will need to be completed by you and submitted to SCE if your project is at a point where SCE has to determine the required electrical utility work. This Will-Serve letter does not imply that either: (i) these studies have been completed, or (ii) that any required California Environmental Quality Act (CEQA) analysis of project-related electric utility impacts has been conducted.

I am the SCE Design Representative currently assigned to this project. SCE or Applicant will design and construct all required electrical infrastructure to serve this project provided you enter into the applicable contractual agreements with SCE identify scope of electrical utility work required, and supply the following information:

- Site plans as required
- Required contracts and agreements (fully executed)
- Applicable fees
- Local permits
- Required easement documents

Your project will be scheduled for construction once SCE has all the necessary information for your project and you have submitted or agreed to the applicable requirements as stated above, and paid any necessary fees.

If your project will not require SCE services, please notify us so that we can update our records.

SCE appreciates your business. If you have any questions, please feel free to call me at (310) 483-4025.

Sincerely,

SCE Design Representative

Enclosure: Appendix B, where applicable

701 N. Bullis Rd.
Compton, CA 90224-9099

July 21, 2020

Live Oak Properties, LLC
1219 Morningside Ave, Suite 201
Manhattan Beach, CA 90266
Attn: Jan A. Holtze

Subject: Will Serve - 600 S. Sepulveda Blvd. Manhattan Beach, CA

`

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (CPUC) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Jason Sum

Jason Sum
Pipeline Planning Assistant
SoCalGas-Compton HQ

City of Manhattan Beach
Department of Public Works

3621 Bell Avenue, Manhattan Beach, CA 90266
Phone: (310) 802-5313 Fax: (310) 802-5301 TDD: (310) 546-3501

July 13, 2020

Jan Holtz
Managing Partner, Live Oak Properties
1219 Morningside Ave.
Manhattan Beach, CA 90266

Dear Jan,

This letter is in response to your request for a "will serve" letter from the City of Manhattan Beach. Please be advised that Manhattan Beach will serve the property located at 600 S. Sepulveda Blvd. according to the following assumptions and conditions:

The proposed development will be a 2-story, 164-guest room hotel with an expected potable water demand of 14,432 gallons per day, and an office retail building with an estimated potable water demand of 1,693 gallons per day, for a combined total of 16,125 GPD.

1. Wastewater generated from this facility is also projected to be 14,659 gallons per day, which will discharge into the City's sewer system via one 8" main located on Tennyson Street, and one 8" main located on Chabela Drive for conveyance to Los Angeles County's trunk sewer line. The applicant also will need to obtain a "will serve" letter from the County Sanitation Districts of Los Angeles County for this development's projected wastewater flows prior to a building permit issuance.
2. The City of Manhattan Beach will charge various fees for providing potable water and wastewater services, which include but are not limited to readiness to serve, water usage (quantity), and treatment. These rates will be determined based on consumption and infrastructure specifications specific to the development.
3. Due to the water necessities of this particular type of business, the Manhattan Beach Public Works Utilities Division strongly recommends that the development install redundant potable water connection. The applicant will need to obtain approval from the City's Water Division for the required potable water connections.

Please let me know if you have any questions or need additional information.

Sincerely,

Stephanie Katsouleas
Director of Public Works

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Attachment G

ARCHITECTURAL

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4. PROJECT OVERVIEW
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18. ELEVATIONS - HOTEL
19. ELEVATIONS - OFFICE/RETAIL
20. ELEVATIONS - OFFICE/RETAIL
21. SECTIONS (A & B)
22. SECTIONS (C & D)
23. WALL SECTION: WA-1
24. WALL SECTION: WA-2
25. WALL SECTION: WA-3
26. WALL SECTION: WA-4
27. WALL SECTION: WA-5
28. VIEW FROM SEPULVEDA
29. APPROACH FROM SEPULVEDA
30. APPROACH FROM SEPULVEDA
31. HOTEL ARRIVAL EXPERIENCE
32. HOTEL ARRIVAL EXPERIENCE
33. HOTEL ARRIVAL EXPERIENCE
34. CENTER OF DEVELOPMENT
35. VIEW FROM INTERIOR
36. VIEW FROM TENNYSON
37. VIEW FROM CHABELA
38. FINISH MATERIALS
39. FINISH MATERIALS
40. FINISH MATERIALS
41. FINISH MATERIALS
42. FINISH MATERIALS

CIVIL

1. CONCEPTUAL GRADING PLAN
2. CONCEPTUAL GRADING QUANTITIES

SURVEY

1. SITE DEMOLITION/ DEVELOPMENT SURVEY (SITE MAP)
2. SITE DEMOLITION/ DEVELOPMENT SURVEY (ENLARGED)

LANDSCAPE

1. SITE ILLUSTRATIVE PLAN
2. ROOF PLAN
3. ILLUSTRATIVE SECTION A & SECTION B

PROJECT TEAM:

OWNER: MB HOTEL PARTNERS, LLC
ADDRESS: P.O. BOX 2018
M.B., CA 90267

ARCHITECT: AXIS/GFA ARCHITECTURE + DESIGN
ADDRESS: 1130 WESTWOOD BLVD,
LOS ANGELES, CA 90024
(310) 209-7520

LANDSCAPE: BENNITT DESIGN GROUP
ADDRESS: 4609 E ANAHEIM ST. # B,
LONG BEACH, CA 90804
(562) 597-2221

CIVIL ENGINEER: BARBARA L. HALL, P.E., INC.
ADDRESS: 318 WEST EVERGREEN AVE.
MONROVIA, CA 91016
(626) 256-3220

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

INDEX

DATE: SEPT. 29, 2020
JOB NO.: 18543
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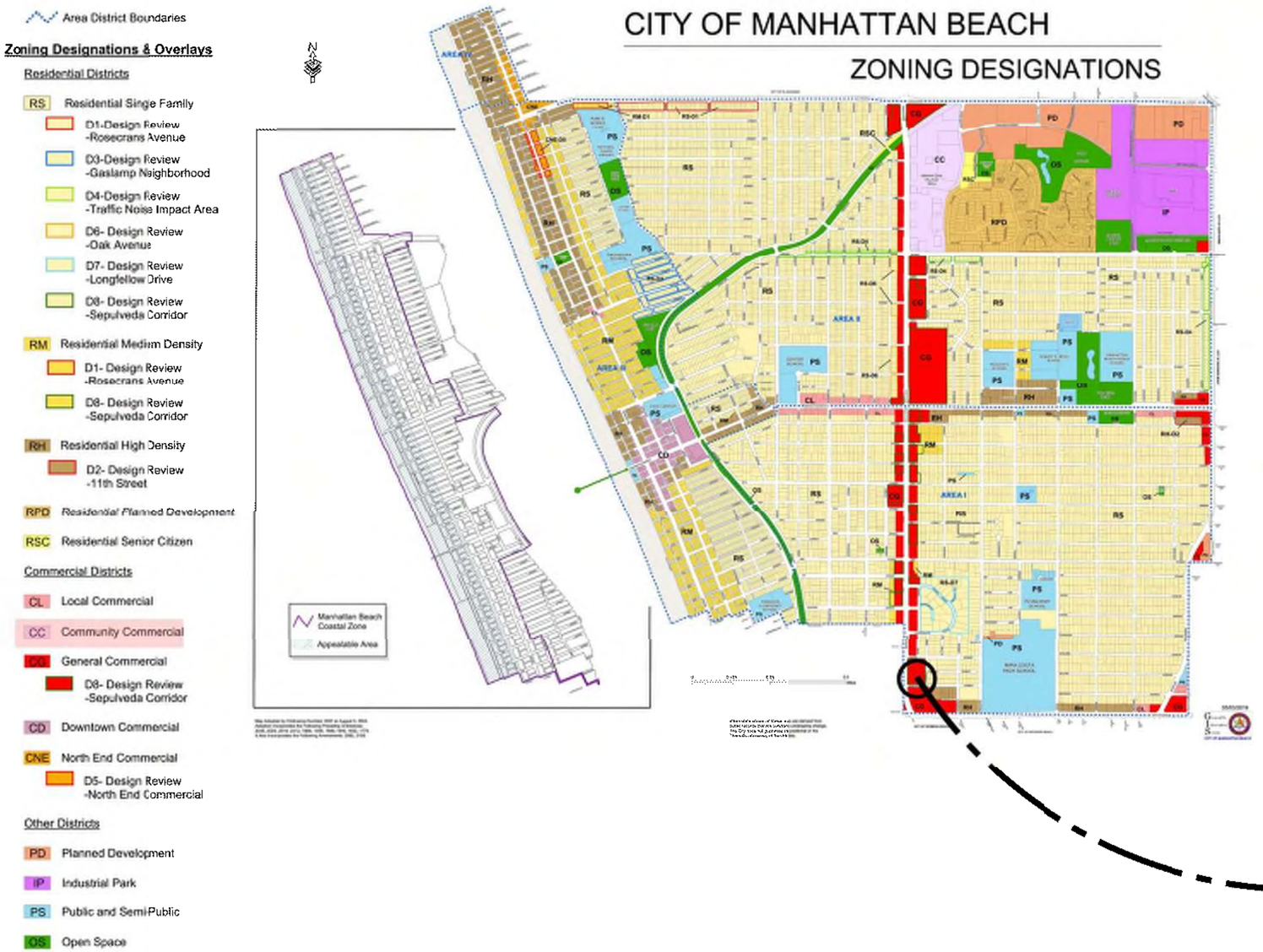
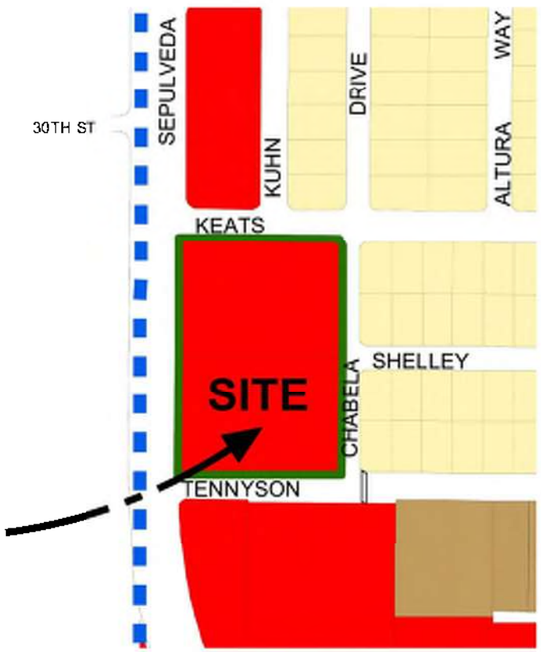
CITY OF MANHATTAN BEACH

ZONING DESIGNATIONS



General Commercial

The General Commercial category provides opportunities for a broad range of retail and service commercial and professional office uses intended to meet the needs of local residents and businesses and to provide goods and services for the regional market. Limited industrial uses are also permitted consistent with zoning regulations. The General Commercial category accommodates uses that typically generate heavy traffic. Therefore, this designation applies primarily along Sepulveda Boulevard and targeted areas along Manhattan Beach Boulevard, Artesia Boulevard, and Aviation Boulevard. The maximum FAR is 1.5:1.



MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ZONING

DATE: SEPT. 29, 2020
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SHEET NO.: 02

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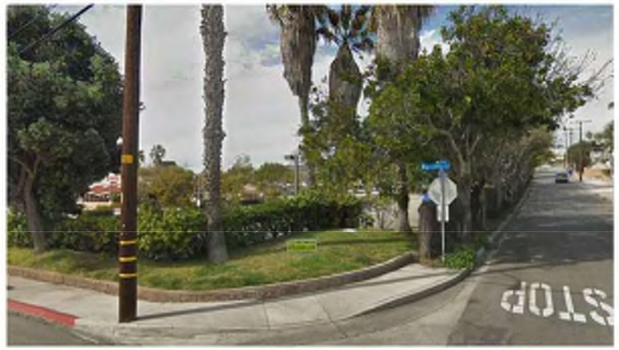
1 VIEW FROM CHABELA DR. SIDE OF THE SITE LOOKING SOUTHWEST



2 VIEW FROM CORNER OF TENNYSON ST. AND CHABELA DR.

3 VIEW FROM TENNYSON ST. SIDE OF THE SITE LOOKING NORTH

4 VIEW FROM CORNER OF SEPULVEDA BLVD. AND TENNYSON ST.

5 VIEW FROM SEPULVEDA BLVD. SIDE OF THE SITE LOOKING EAST

6 VIEW FROM SEPULVEDA BLVD. SIDE OF THE SITE LOOKING SOUTHEAST

EXISTING SITE PLAN

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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EXISTING CONDITIONS

NORTH

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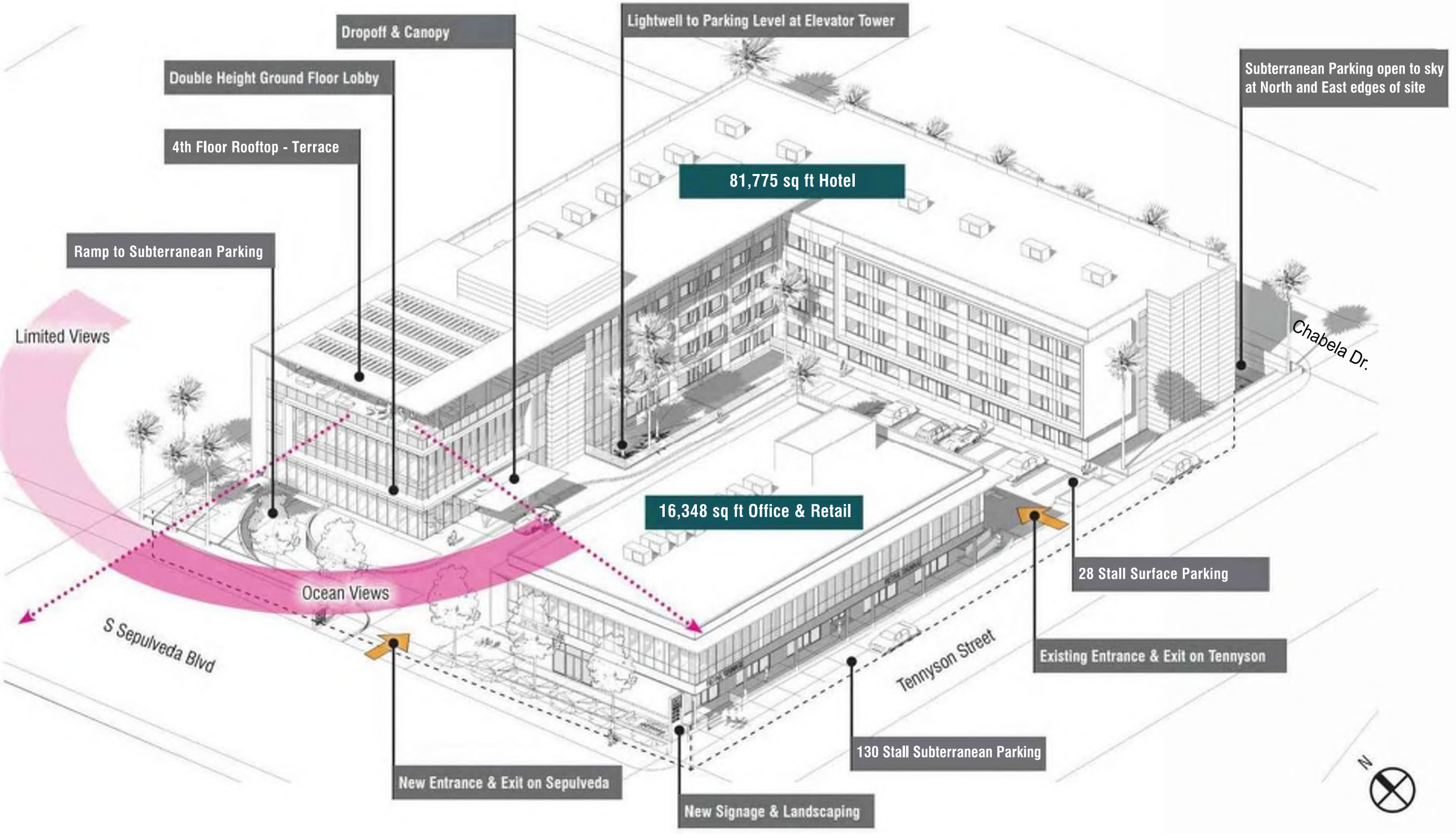

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

PROJECT OVERVIEW

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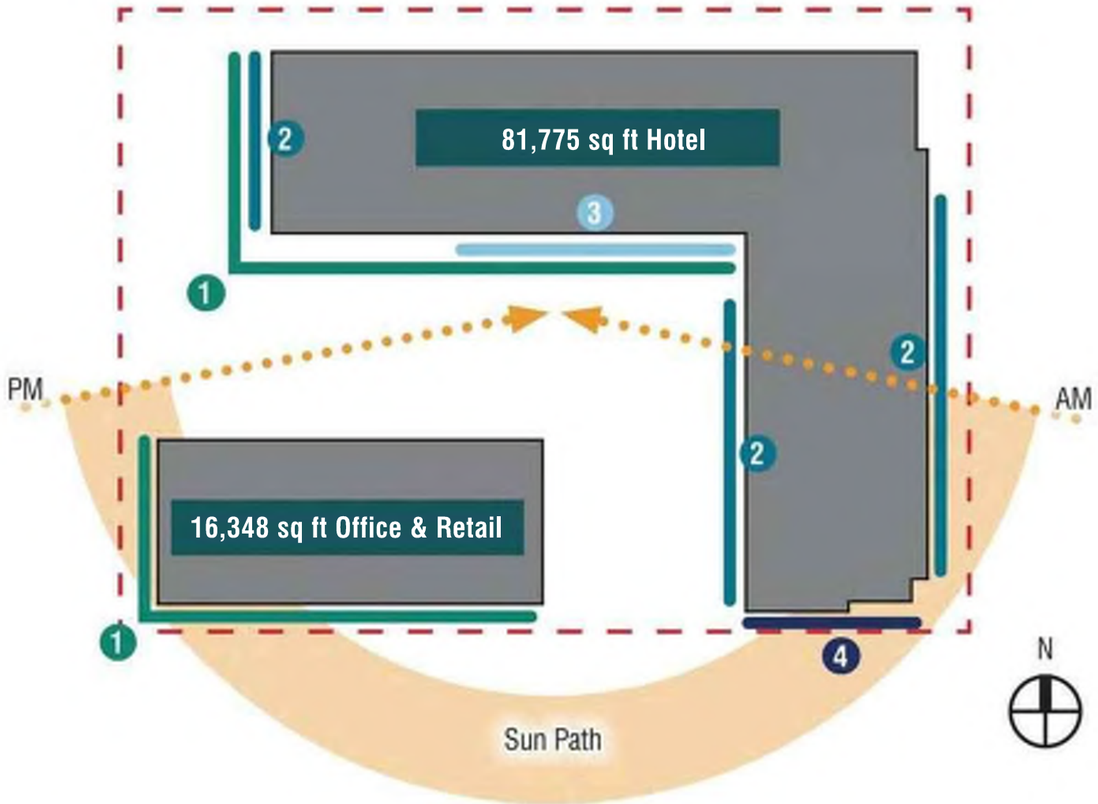

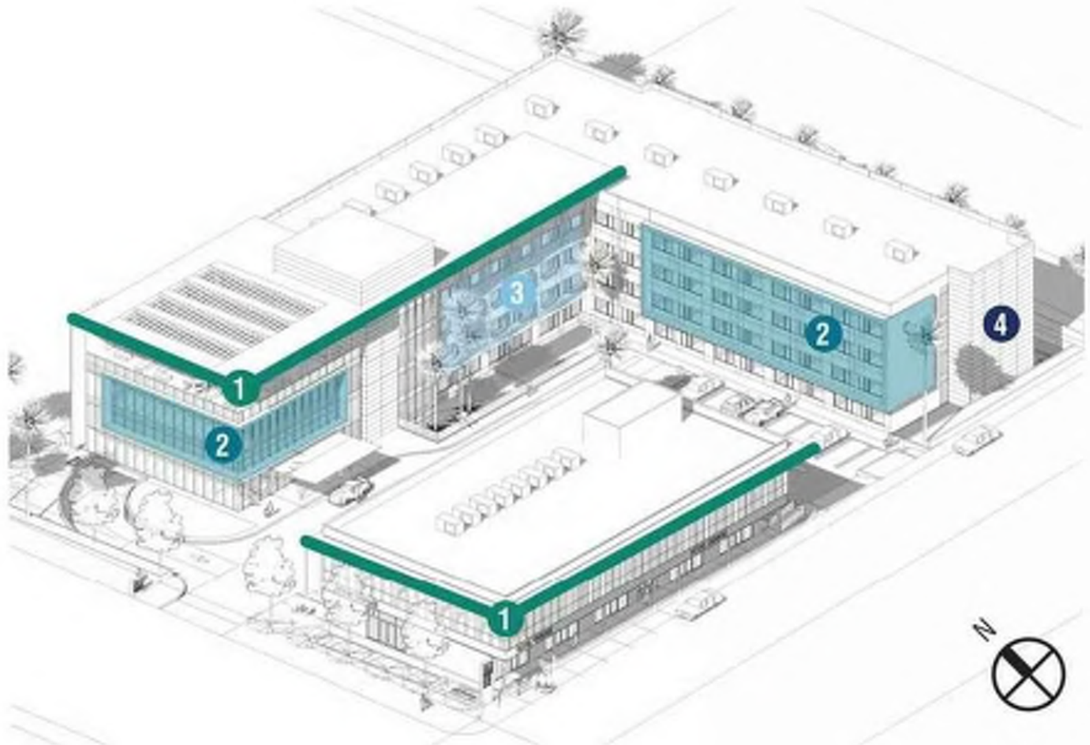

1. Horizontal Roof Overhang
2. Secondary Projecting Surrounds
3. Individual Window Frame Projections
4. Opaque Materials - Limited Glazing

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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SOLAR STRATEGY

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MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SITE CONTEXT

NORTH

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MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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SITE CONTEXT

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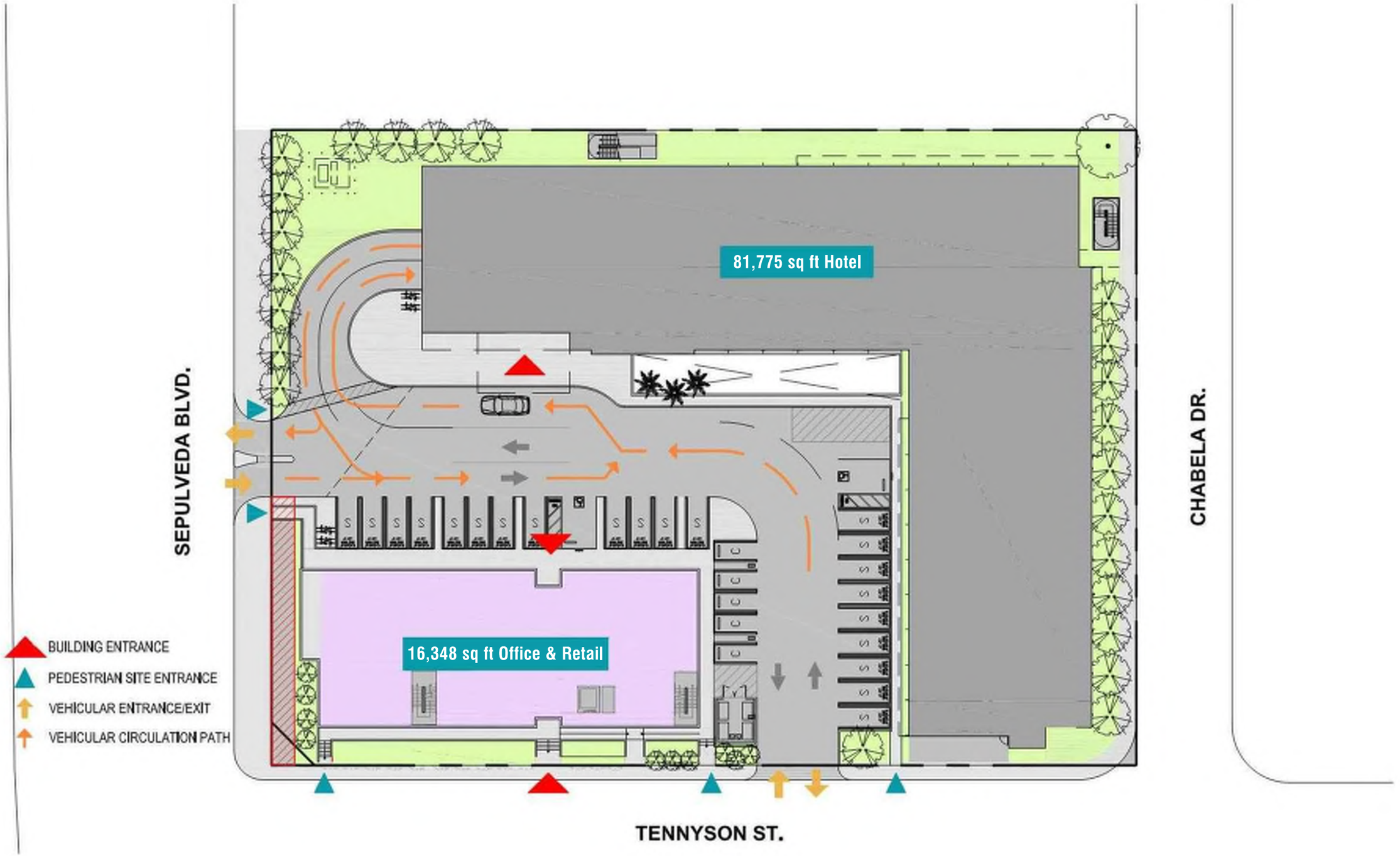

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SITE CIRCULATION PLAN

SCALE: 1/32"=1'-0"

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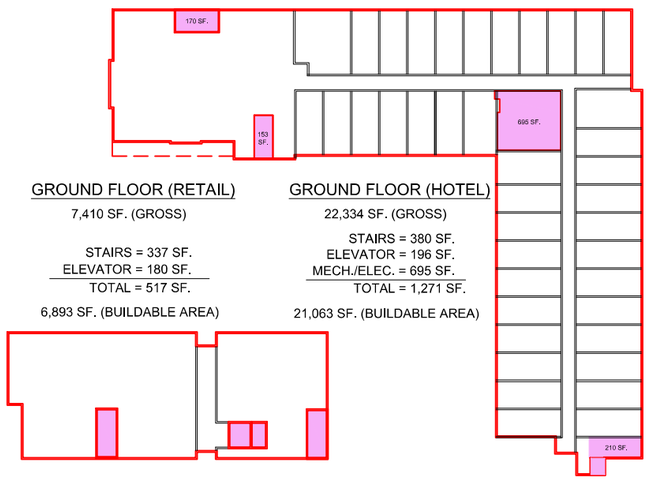


GROUND FLOOR (RETAIL)

7,410 SF. (GROSS)

STAIRS = 337 SF.
ELEVATOR = 180 SF.
TOTAL = 517 SF.

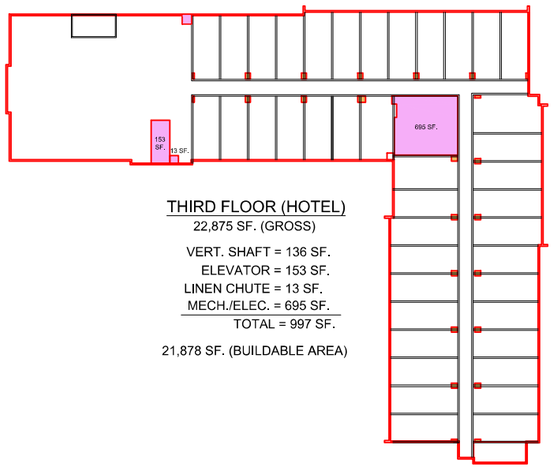
6,893 SF. (BUILDABLE AREA)

GROUND FLOOR (HOTEL)

22,334 SF. (GROSS)

STAIRS = 380 SF.
ELEVATOR = 196 SF.
MECH./ELEC. = 695 SF.
TOTAL = 1,271 SF.

21,063 SF. (BUILDABLE AREA)

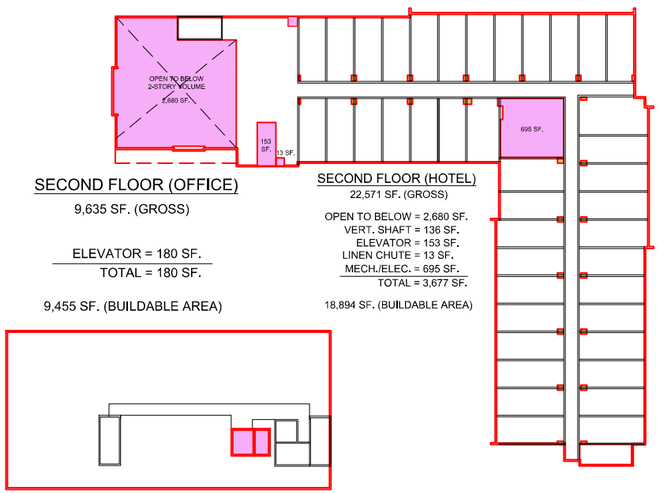


THIRD FLOOR (HOTEL)

22,875 SF. (GROSS)

VERT. SHAFT = 136 SF.
ELEVATOR = 153 SF.
LINEN CHUTE = 13 SF.
MECH./ELEC. = 695 SF.
TOTAL = 997 SF.

21,878 SF. (BUILDABLE AREA)



SECOND FLOOR (OFFICE)

9,635 SF. (GROSS)

ELEVATOR = 180 SF.
TOTAL = 180 SF.

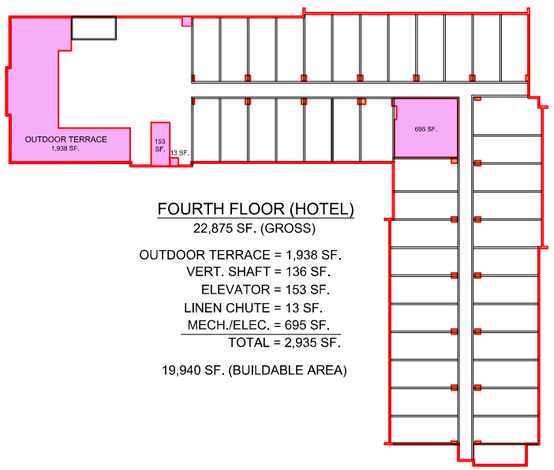
9,455 SF. (BUILDABLE AREA)

SECOND FLOOR (HOTEL)

22,571 SF. (GROSS)

OPEN TO BELOW = 2,680 SF.
VERT. SHAFT = 136 SF.
ELEVATOR = 153 SF.
LINEN CHUTE = 13 SF.
MECH./ELEC. = 695 SF.
TOTAL = 3,677 SF.

18,894 SF. (BUILDABLE AREA)



FOURTH FLOOR (HOTEL)

22,875 SF. (GROSS)

OUTDOOR TERRACE = 1,938 SF.
VERT. SHAFT = 136 SF.
ELEVATOR = 153 SF.
LINEN CHUTE = 13 SF.
MECH./ELEC. = 695 SF.
TOTAL = 2,935 SF.

19,940 SF. (BUILDABLE AREA)

PROJECT INFORMATION				
GROSS LOT AREA	**66,219 SF**			
NET LOT SF	**66,219 SF** - 800 SF (Proposed Dedication) = **65,419 SF**			
PROJECT DESCRIPTION	MIXED USE			
FAR	1.5x			
ALLOWABLE AREA	**65,419 SF** x 1.5 = **98,128 SF**			
PROJECT USE	**98,123 SF**			

HOTEL				
	KING	Q/Q	TOTAL ROOMS	BUILDABLE AREA
SUBTERRANEAN PARKING				
(1) GROUND	38	1	**39**	**21,063**
(2) SECOND	18	23	**41**	**18,894**
(3) THIRD	18	23	**41**	**21,878**
(4) FOURTH	18	23	**41**	**19,940**
TOTAL	92	70	**162**	**81,775**
	57%	*43%*	***100%***	

RETAIL/OFFICE			
RETAIL			**6,893**
OFFICE			**9,455**
TOTAL			**16,348**

TOTAL BUILDABLE AREA	**98,123**

**BUILDABLE AREA HAS BEEN CALCULATED TO THE EXTERIOR FACE OF WALLS. IT EXCLUDES ALL VERT. SHAFTS, MECH/ELEC AND OUTDOOR TERRACE MEASURED AT CENTER WALLS.*

CAR PARKING INFORMATION		
	REQUIRED	
HOTEL (1.10 PER ROOM)	162x1.1	**178.2**
RETAIL (5 SPACES PER 1000 SF)	5 Spaces per 1,000 sf	**34.5**
OFFICE (3 SPACES PER 1000 SF)	9,455/300	**31.5**
TOTAL		**244**
15% Reduction allowed for multi-use*		**208**

**PURSUANT TO SECTION 10.64.040 (COLLECTION PROVISION OF PARKING)*

	PROVIDED			
	STANDARD	COMPACT	HC	TOTAL
SURFACE	21	5	2	**28**
SUBTERRANEAN PARKING	88	38	4	**130**
TOTAL	109	43	6	**158 (+ 1 EV)**
	69%	*27%*	*4%*	***100%***

BIKE PARKING INFORMATION				
REQUIRED: 159 x 5% = 7.95 SPACES		PROVIDED		
		HOTEL	RETAIL/ OFFICE	TOTAL SPACES
SURFACE (SHORT TERM)	*RACK	2	2	**4 x 2 = 8 > 7.95**
SUBTERRANEAN PARKING (LONG TERM)	*LOCKER	2	2	**4 x 2 = 8 > 7.95**
TOTAL		4	4	**16**

**1 BICYCLE RACK/LOCKER = 2 SPACES*

SITE COVERAGE PERCENTAGE			
% OF BUILDING COVERAGE		29,744.00	**45%**
% OF LANDSCAPE COVERAGE		7,479.00	**11%**
% OF SURFACE PARKING COVERAGE		16,367.00	**25%**
% OF WALKWAY/PATIO/HARDSCAPE		9,633.00	**15%**
% OF PROPOSED DEDICATION	*	800.00	**1%**
% OF OPEN TO GARAGE BELOW		1,396.00	**2%**
TOTAL		65,419	**100%**

**ACTUAL DEDICATION AREA MAY CHANGE BASED UPON CALTRANS REQUIREMENT.*

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

PROJECT SUMMARY & BFA DIAGRAM

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 09

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GENERAL NOTES:

1. PROJECT SITE IS LOCATED IN 'GENERAL COMMERCIAL' ZONING AND IT HAS NO SETBACK REQUIREMENT.
2. SEE GROUND FLOOR PLAN FOR SPOT ELEVATIONS, STRIPING PLANS & DIMENSIONS.

KEY NOTES:

1. AREA SET ASIDE FOR LOCATION OF DECELERATION LANE
2. 15'x15' CORNER DEDICATION
3. SIDEWALK DESIGNED TO MEET PUBLIC WORKS REQUIREMENT OF 6'.
4. SIDEWALK DESIGNED TO MEET PUBLIC WORKS REQUIREMENT OF 6'.
5. RETAINING WALL
6. FENCE
7. 92'x15' OPENING TO SUBTERRANEAN PARKING BELOW W/ PLANTER @ GARAGE W/ TALL PALM TREES.
8. LOADING ZONE W/ TALL SCREENING PLANTS
9. STARDARD PARKING STALL (8.5'x18')
10. COMPACT PARKING STALL (8'x15')
11. SHORT TERM BIKE PARKING (TOTAL 8 PROVIDED). LONG TERM BIKE PARKING @ SUBTERRANEAN PARKING (TOTAL 8 PROVIDED).
12. CONVENIENCE STAIR FROM NEIGHBOR'S PARKING LOT TO LOWER GARAGE
13. F.D. REQUESTED STAIR FROM CHABELA DR. TO 2ND FLOOR HOTEL AND TO SUBTERRANEAN PARKING.
14. NEW RIGHT-IN & RIGHT-OUT DRIVEWAY. 30' WIDE. FIRE DEPT. ACCESS
15. RAMP DOWN TO SUBTERRANEAN PARKING. 15% SLOPE MAX.
16. TRANSFORMER. FINAL LOCATION TO BE FINALIZED W/ EDISON.
17. TRASH ENCLOSURE
18. MIN. 28' WIDE DRIVE AISLE (PER FIRE DEPARTMENT)
19. EXISTING DRIVEWAY RELOCATED
20. CANOPY AT PORTE COCHERE
21. OUTDOOR PATIO @ GROUND LEVEL
22. ROOF DECK @ 4TH FLOOR HOTEL
23. FUTURE DECELERATION LANE PER CALTRAN/PUBLIC WORKS. FINAL DESIGN TO BE COMPLETED AT A LATER TIME.

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SITE PLAN

SCALE: N.T.S.

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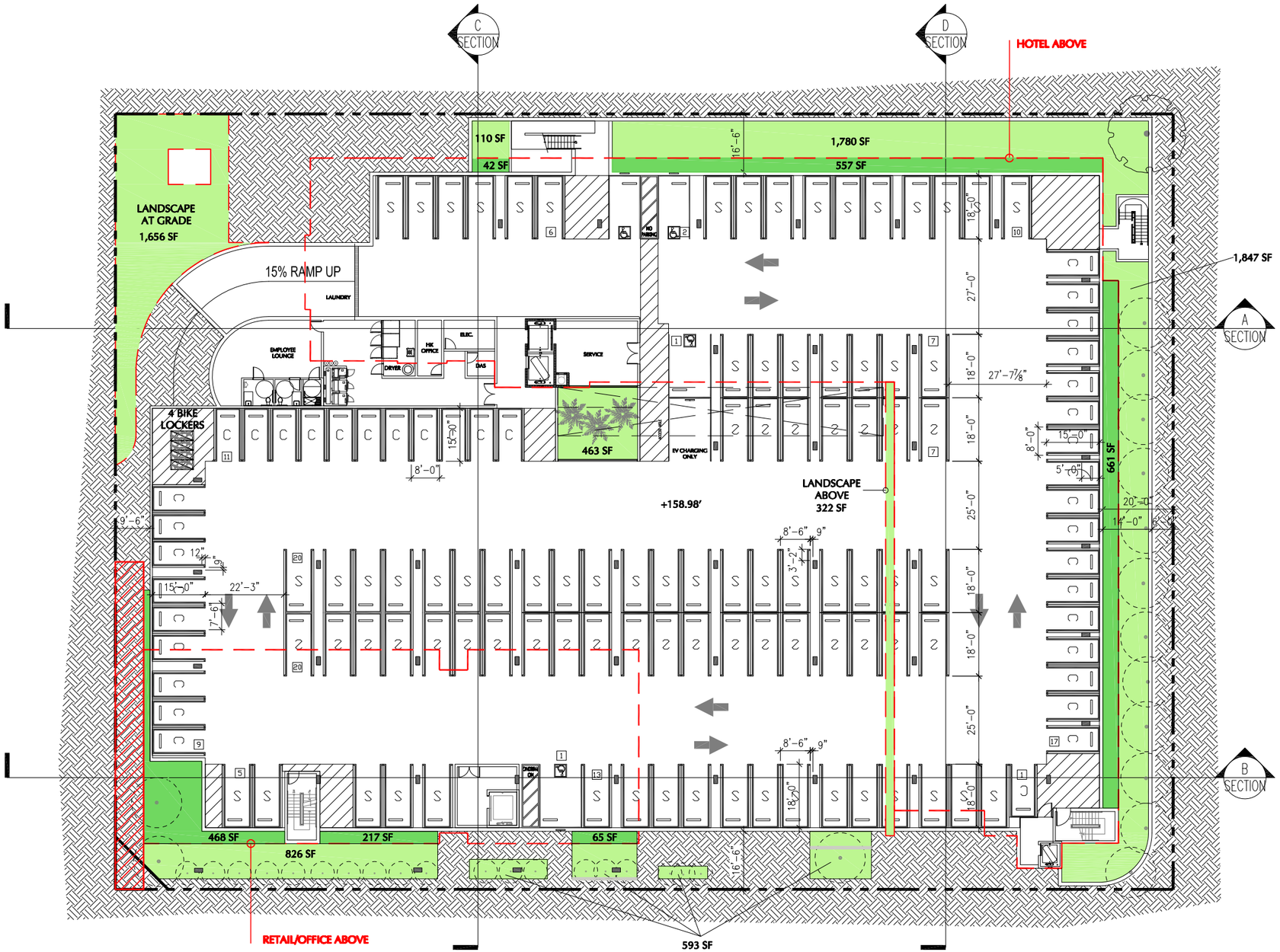

SHEET NOTES:

1. FOR EACH BICYCLE PARKING SPACE REQUIRED, A STATIONARY OBJECT SHALL BE PROVIDED TO WHICH A USER CAN SECURE BOTH WHEELS AND THE FRAME OF A BICYCLE WITH A USER-PROVIDED (6') CABLE AND LOCK. THE STATIONARY OBJECT MAY BE EITHER A FREESTANDING BICYCLE RACK OR A WALL-MOUNTED BRACKET.

2. PARKING LOTS SHALL HAVE PAVING, DRAINAGE, WHEEL STOPS, LIGHTING, SPACE MARKING, AND DIRECTIONAL SIGNS, WHICH SHALL BE SUBJECT TO APPROVAL OF THE COMMUNITY DEVELOPMENT DIRECTOR.

3. ALL REQUIRED STALLS PROVIDED ARE 8.5' x 18' FOR STANDARD STALLS AND 8' x 15' FOR COMPACT STALLS.

	PARKING PROVIDED			
	STANDARD	COMPACT	HC	TOTAL
SURFACE	21	5	2	28
LOWER LEVEL	88	38	4	130
TOTAL	109	43	6	158 + 1 EV

LANDSCAPE AT GRADE (SF)		1656
		110
		1751
		1668
		593
		826
		553
		322
	TOTAL	7479
LANDSCAPE UNDER STRUCTURE (SF)		42
		557
		661
		65
		217
		468
	TOTAL	2010
GRAND TOTAL		9489
NET LOTAREA		65419
% OF LANDSCAPE		14.50%

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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SUBTERRANEAN PARKING PLAN

SCALE: 1/32"=1'-0"

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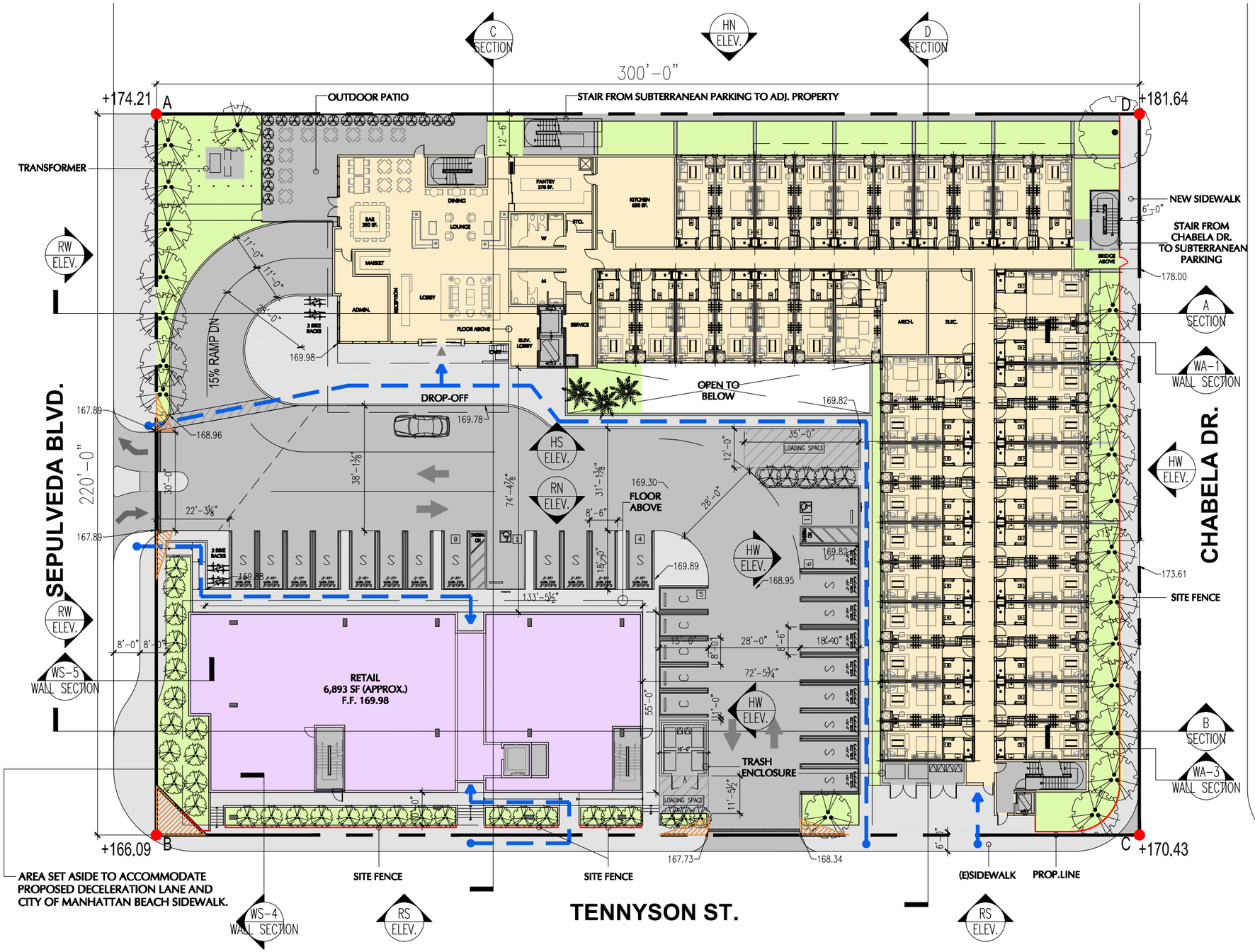

SHEET NOTES:

1. SIGNAGE SHALL BE APPROVED AS PART OF SEPERATE APPROVAL.
2. ALL UTILITIES ARE UNDERGROUNDED IN ACCORDANCE WITH SECTION 10.60.110 OF THE MBMC.
3. SEPARATE PERMITS AND PLANS ARE REQUIRED FOR SIGNS, DEMOLITION, AND SEWER CAP OF EXISTING BUILDINGS.
4. (2) PASSENGER VEHICLE STALLS SHALL BE PROVIDED.
5. FOR EACH BICYCLE PARKING SPACE REQUIRED, A STATIONARY OBJECT SHALL BE PROVIDED TO WHICH A USER CAN SECURE BOTH WHEELS AND THE FRAME OF A BICYCLE WITH A USER-PROVIDED (6') CABLE AND LOCK. THE STATIONARY OBJECT MAY BE EITHER A FREESTANDING BICYCLE RACK OR A WALL-MOUNTED BRACKET.
6. PARKING LOTS SHALL HAVE PAVING, DRAINAGE, WHEEL STOPS, LIGHTING, SPACE MARKING, AND DIRECTIONAL SIGNS, WHICH SHALL BE SUBJECT TO APPROVAL OF THE COMMUNITY DEVELOPMENT DIRECTOR.
7. ALL REQUIRED STALLS PROVIDED ARE 8.5' x 18' FOR STANDARD STALLS AND 8' x 15' FOR COMPACT STALLS.

AVERAGE GRADE CALCULATION:

(A)	(B)	(C)	(D)	(AVG)
+174.21	+166.09	+170.43	+181.64	+173.09

MAXIMUM HEIGHT FOR HOTEL = 40 FT.
173.09 + 40 = 213.09 FT
(5 FT. MECHANICAL PROJECTION BEYOND 40 FT. ALLOWED)

MAXIMUM HEIGHT FOR OFFICE = 30 FT.
173.09 + 30 = 203.09 FT

	PARKING PROVIDED			
	STANDARD	COMPACT	HC	TOTAL
SURFACE	21	5	2	28
LOWER LEVEL	88	38	4	130
TOTAL	109	43	6	158 + 1 EV

TRUCK LOADING: (2) PROVIDED
- (1) 12' x 35'
- (1) 15' x 11'-6"

ACCESSIBLE PATH

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

GROUND FLOOR PLAN

SCALE: 1/32"=1'-0"

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MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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SECOND FLOOR PLAN

SCALE: 1/32"=1'-0"

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MANHATTAN BEACH HOTEL

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MANHATTAN BEACH, CA 90266

THIRD FLOOR PLAN

SCALE: 1/32"=1'-0"

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MANHATTAN BEACH HOTEL

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FOURTH FLOOR PLAN

SCALE: 1/32"=1'-0"

NORTH

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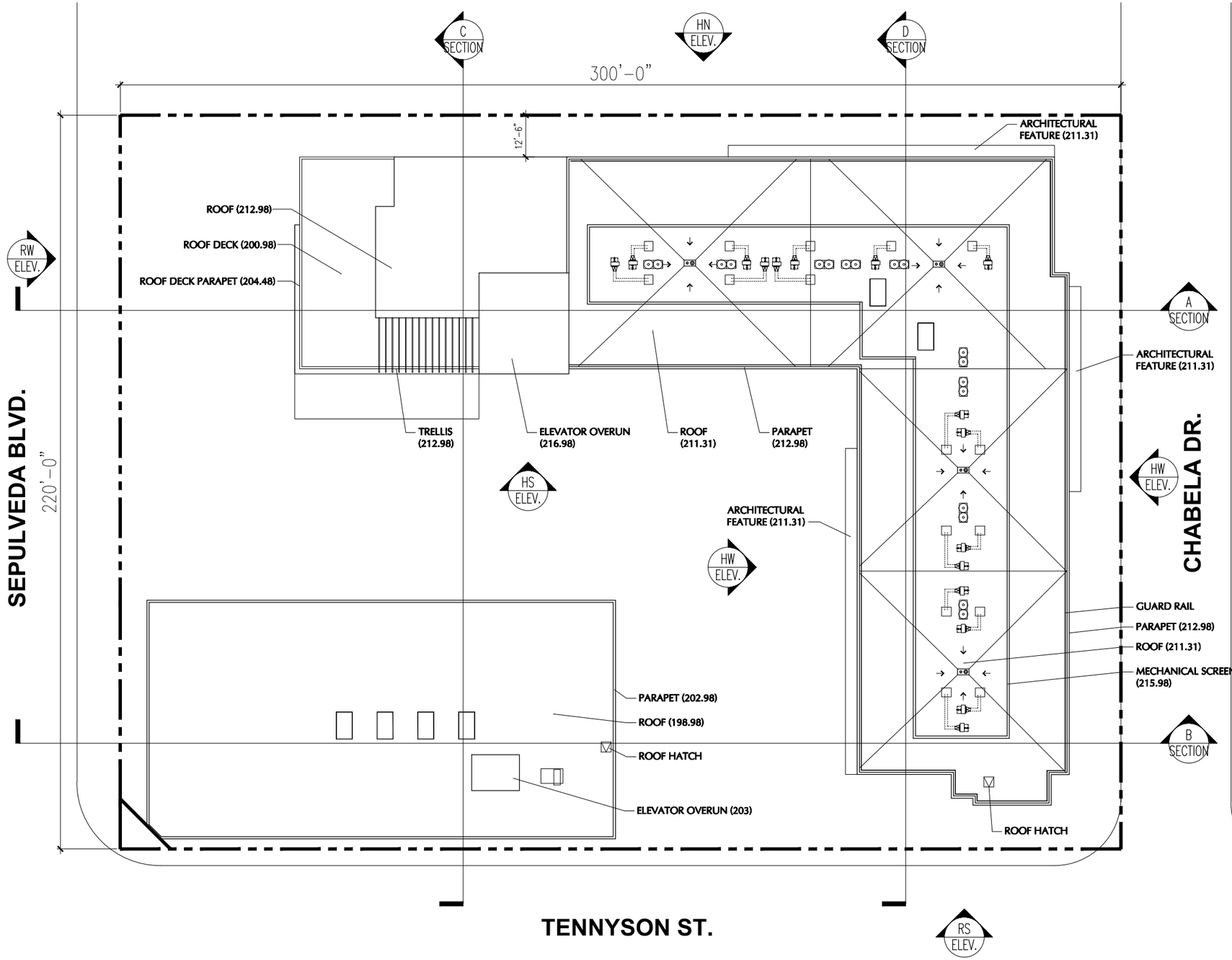

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
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ROOF PLAN

SCALE: 1/32"=1'-0"

NORTH

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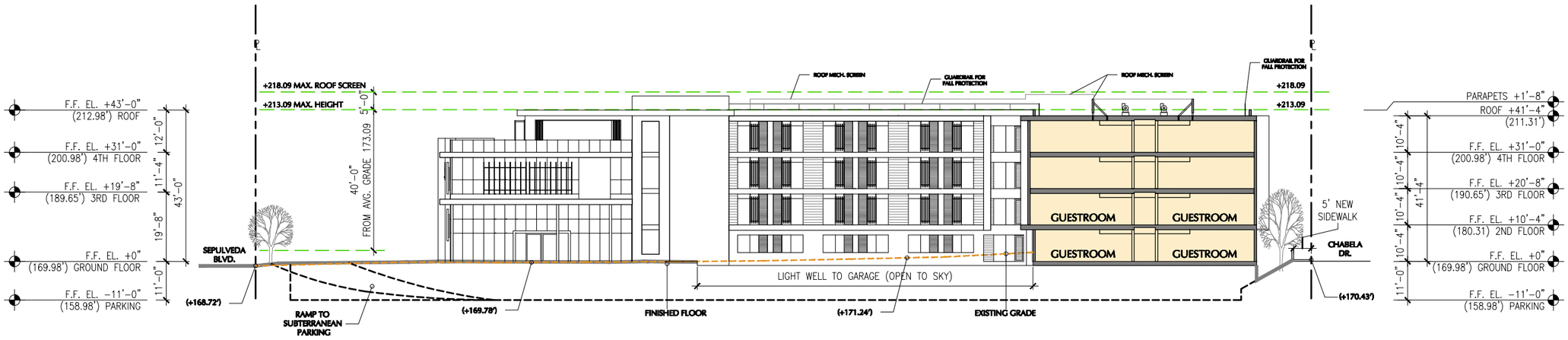


ELEVATION - HS (HOTEL SOUTH)

ELEVATION - HE (HOTEL EAST)

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

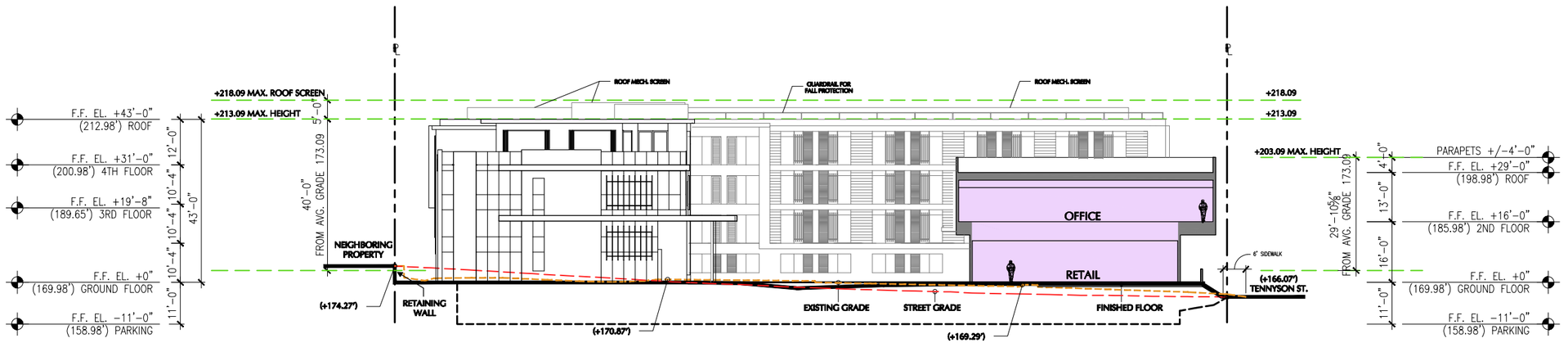
ELEVATIONS (HOTEL)

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 17

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com

ELEVATION - HN (HOTEL NORTH)



ELEVATION - HW (HOTEL WEST)

MANHATTAN BEACH HOTEL

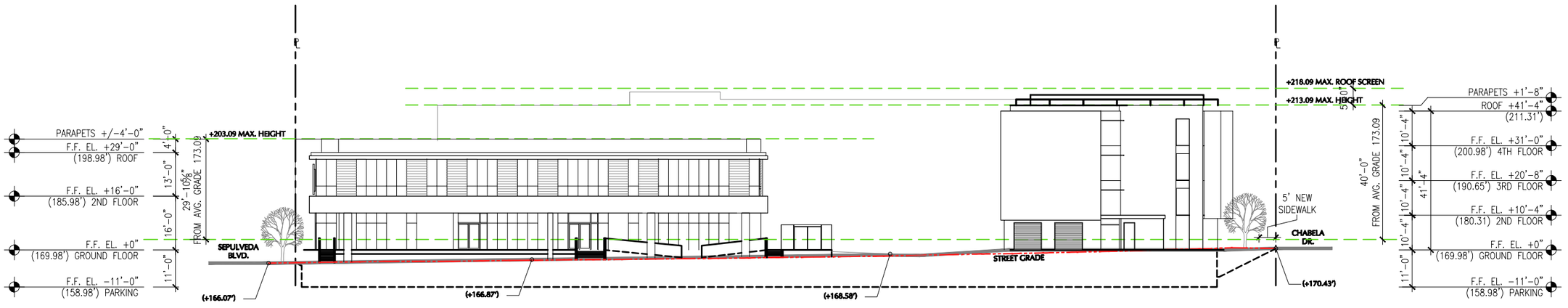
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ELEVATIONS (HOTEL)

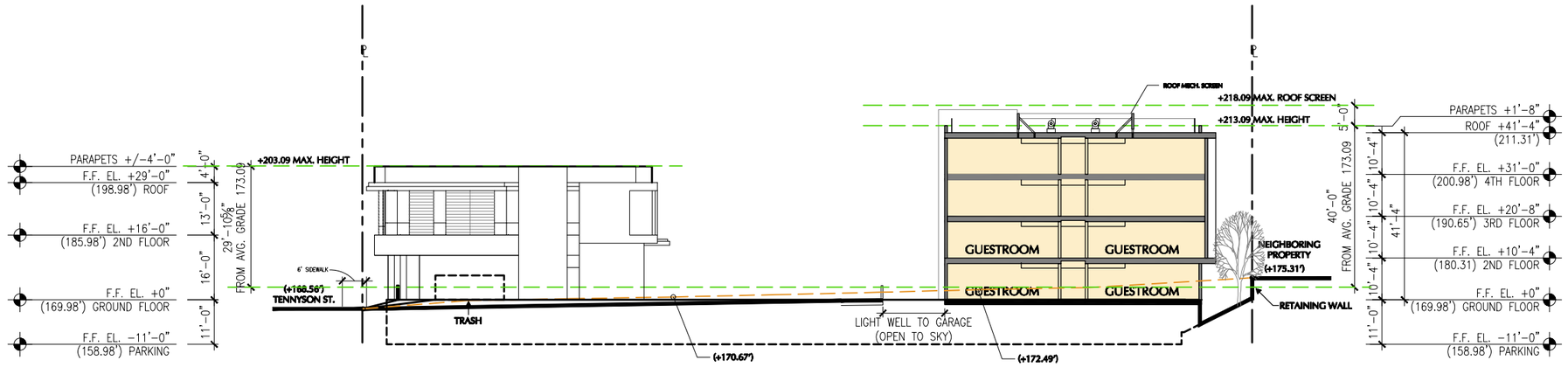
SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 18

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



ELEVATION - RS (RETAIL/OFFICE SOUTH)



ELEVATION - RE (RETAIL/OFFICE EAST)

MANHATTAN BEACH HOTEL

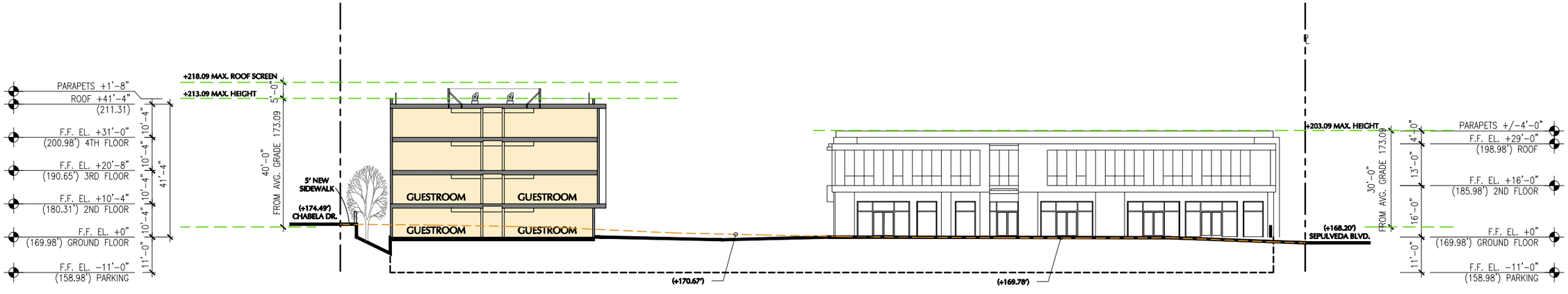
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ELEVATIONS (RETAIL & OFFICE)

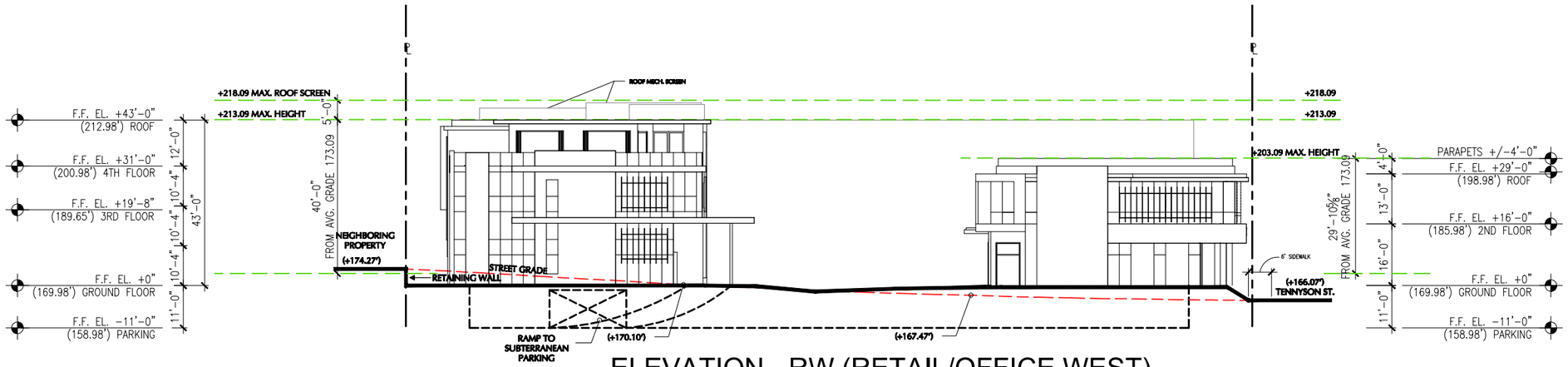
SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 19

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



ELEVATION - RN (RETAIL/OFFICE NORTH)



ELEVATION - RW (RETAIL/OFFICE WEST)

MANHATTAN BEACH HOTEL

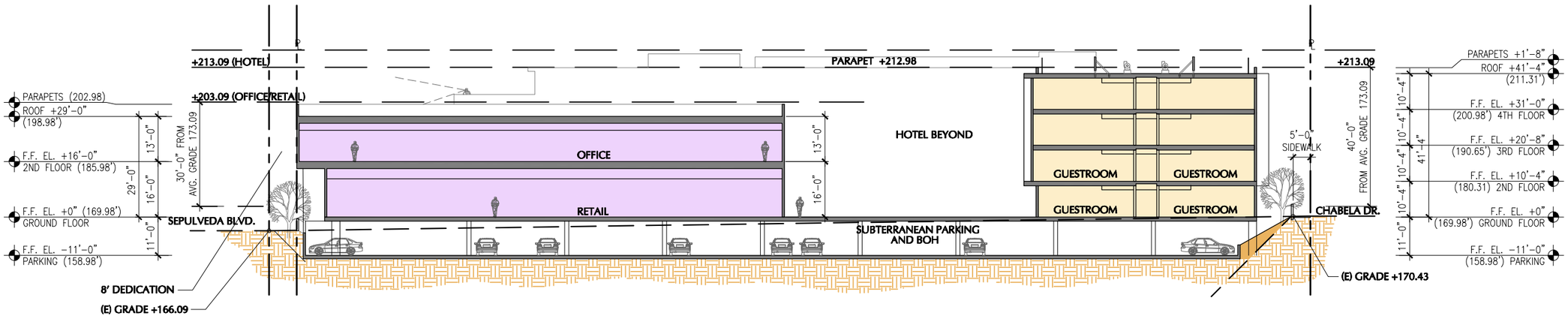
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ELEVATIONS (RETAIL & OFFICE)

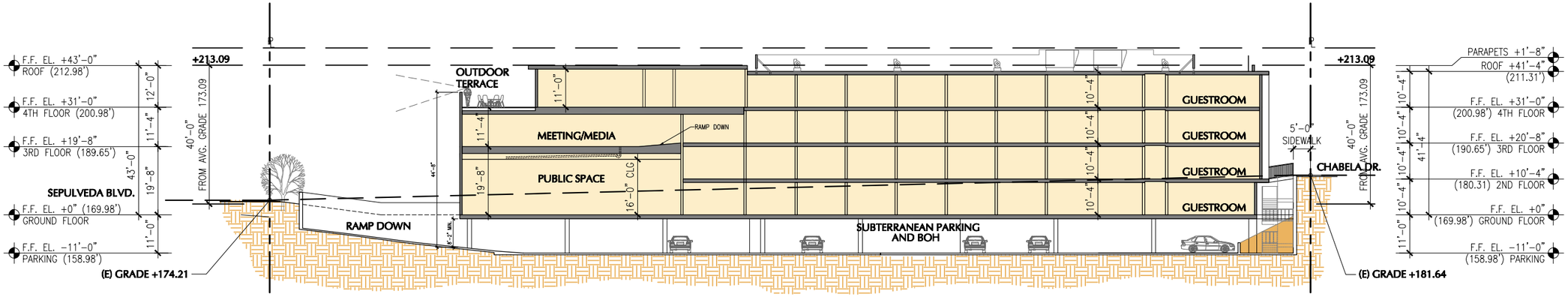
SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 20

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



SECTION 'B'



SECTION 'A'

MANHATTAN BEACH HOTEL

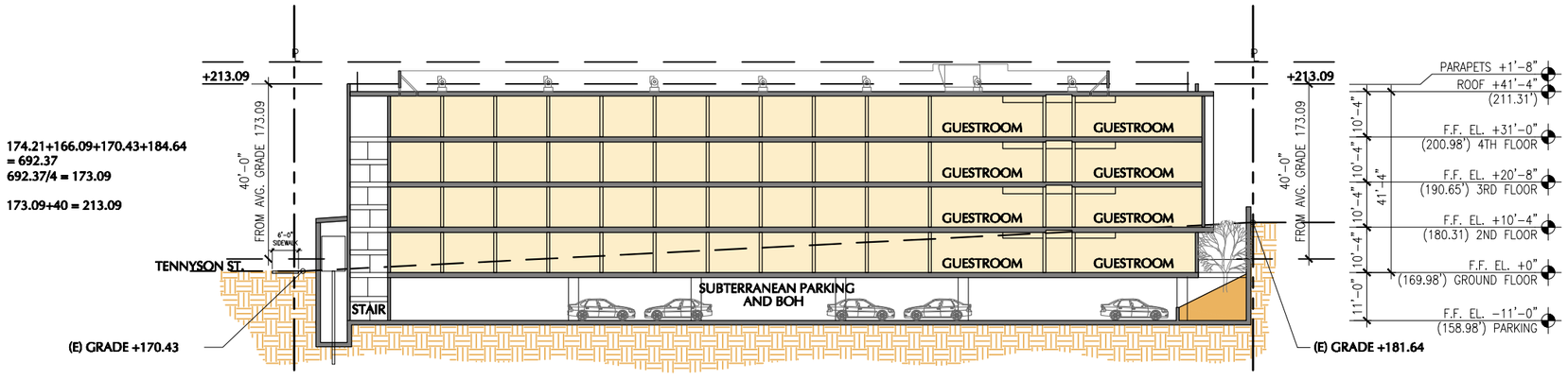
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SECTIONS

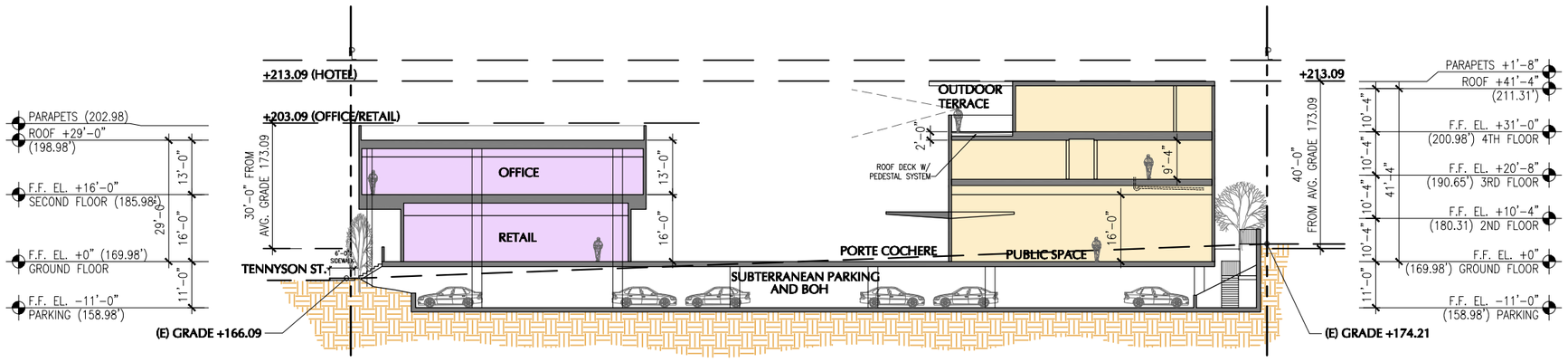
SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 21

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



SECTION 'D'



SECTION 'C'

MANHATTAN BEACH HOTEL

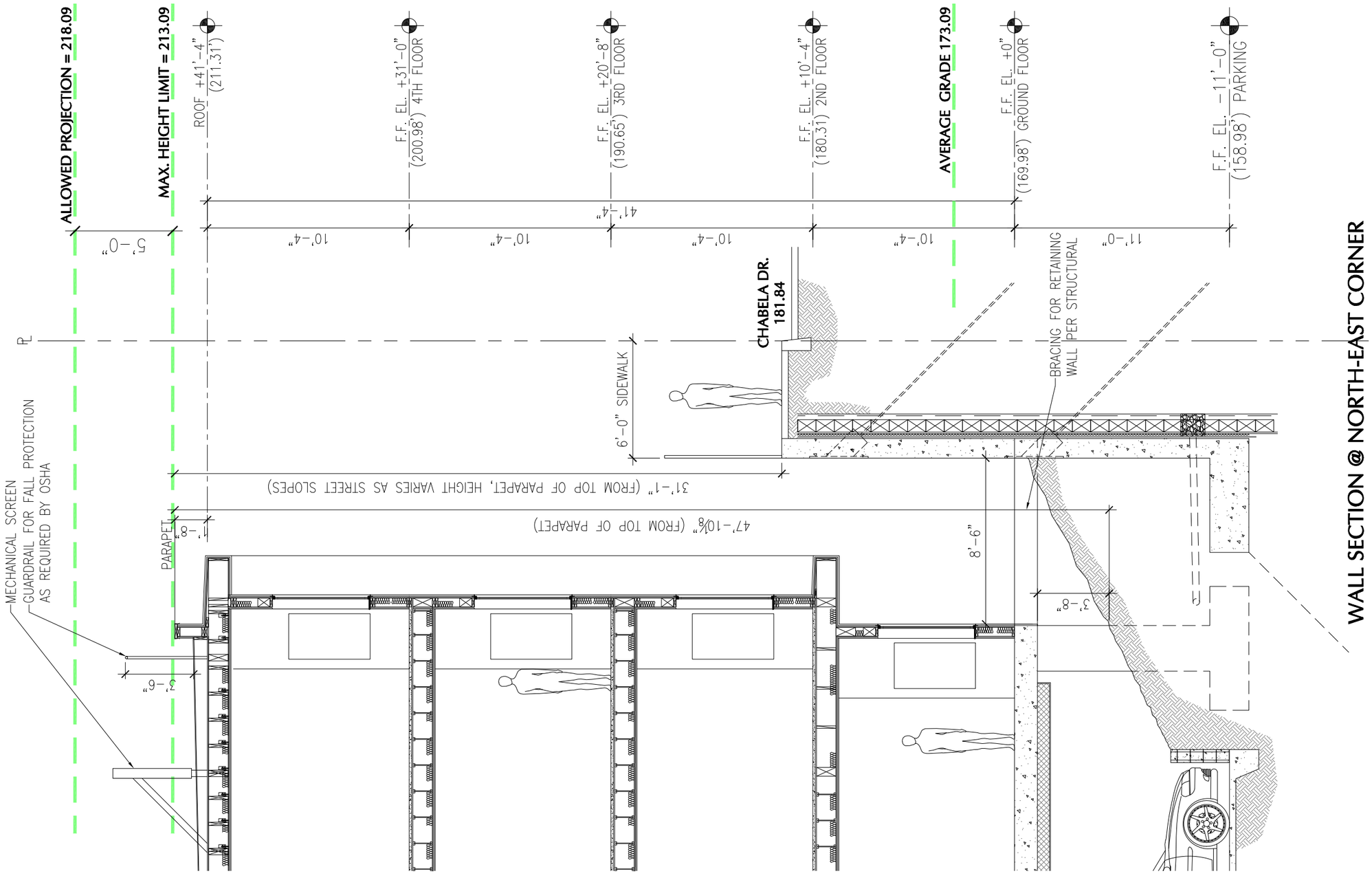
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SECTIONS

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 22

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



WALL SECTION @ NORTH-EAST CORNER

MANHATTAN BEACH HOTEL

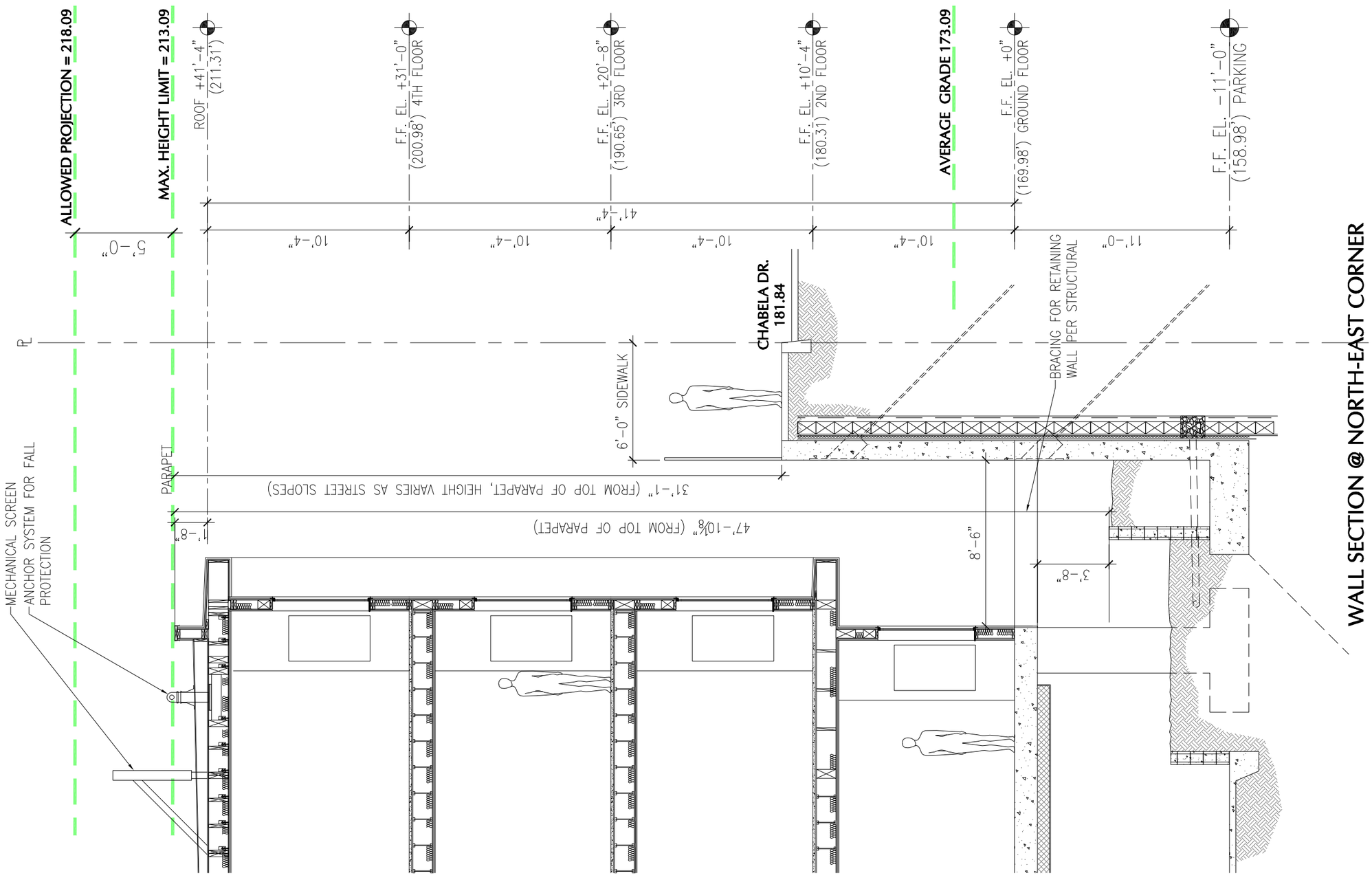
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ENLARGED WALL SECTION:WA-1

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 23

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7515 - www.axisgfa.com



WALL SECTION @ NORTH-EAST CORNER

MANHATTAN BEACH HOTEL

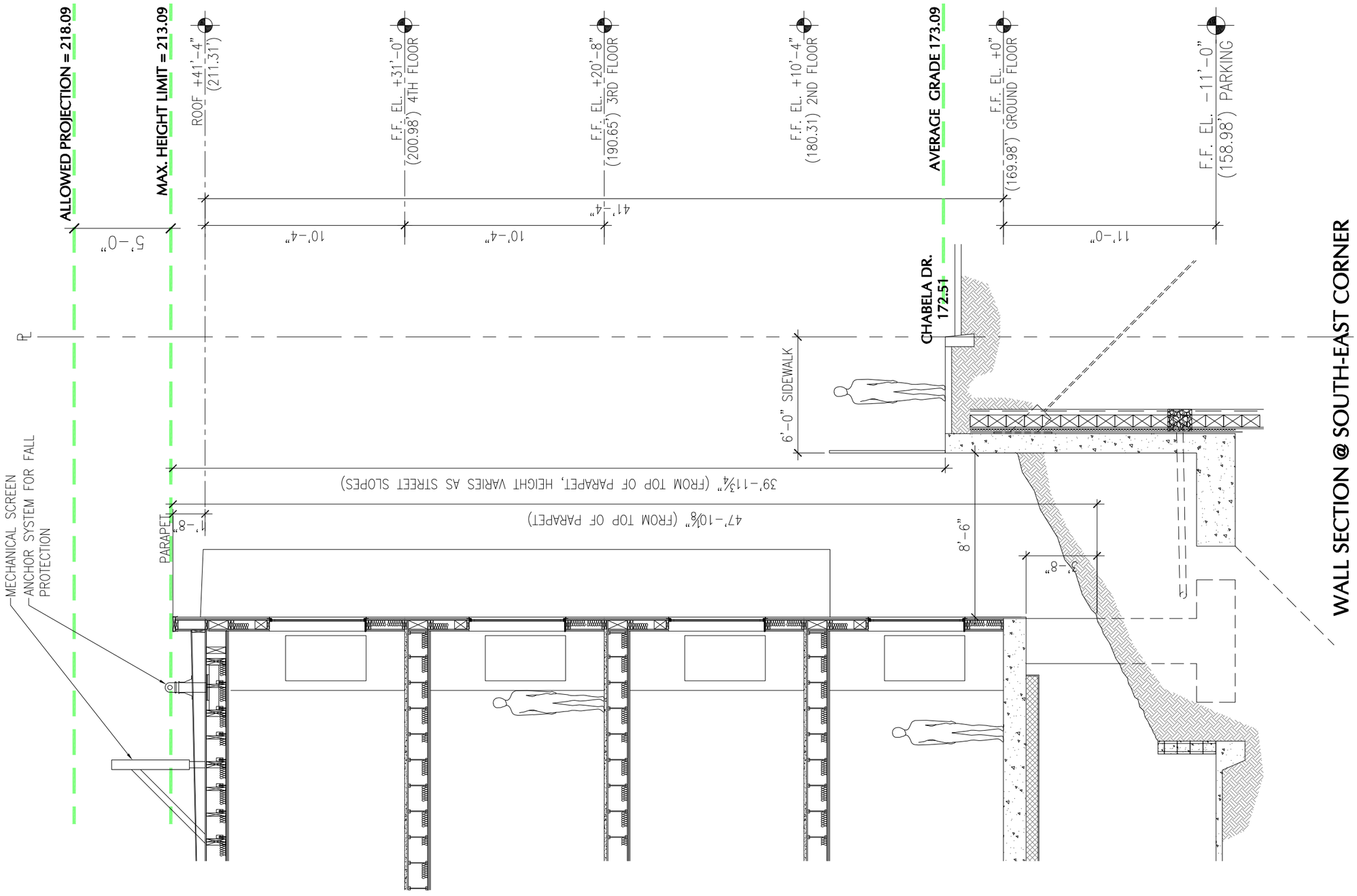
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ENLARGED WALL SECTION:WA-2

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 24

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7515 - www.axisgfa.com



WALL SECTION @ SOUTH-EAST CORNER

MANHATTAN BEACH HOTEL

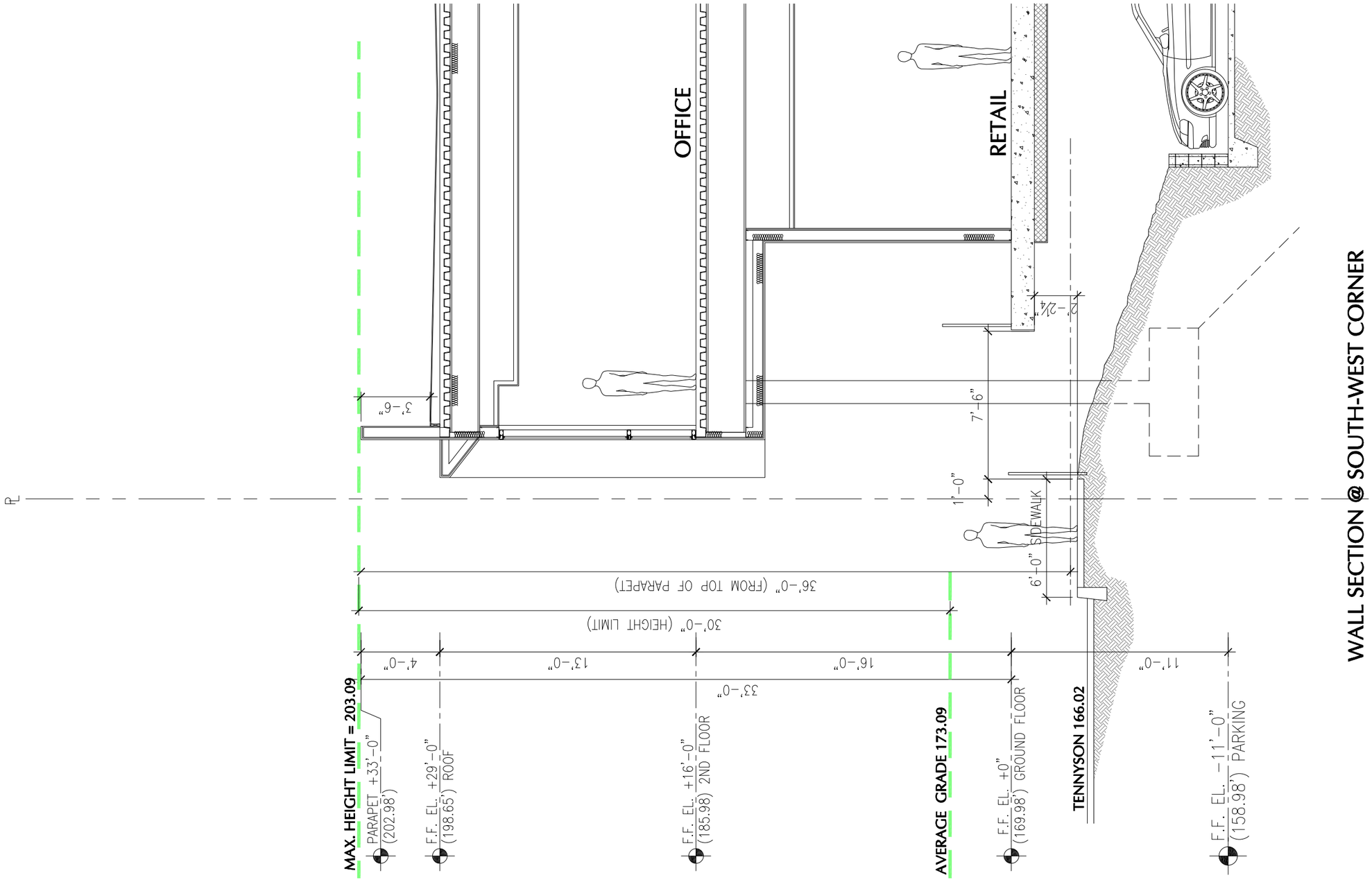
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ENLARGED WALL SECTION:WA-3

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 25

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7515 - www.axisgfa.com



WALL SECTION @ SOUTH-WEST CORNER

MANHATTAN BEACH HOTEL

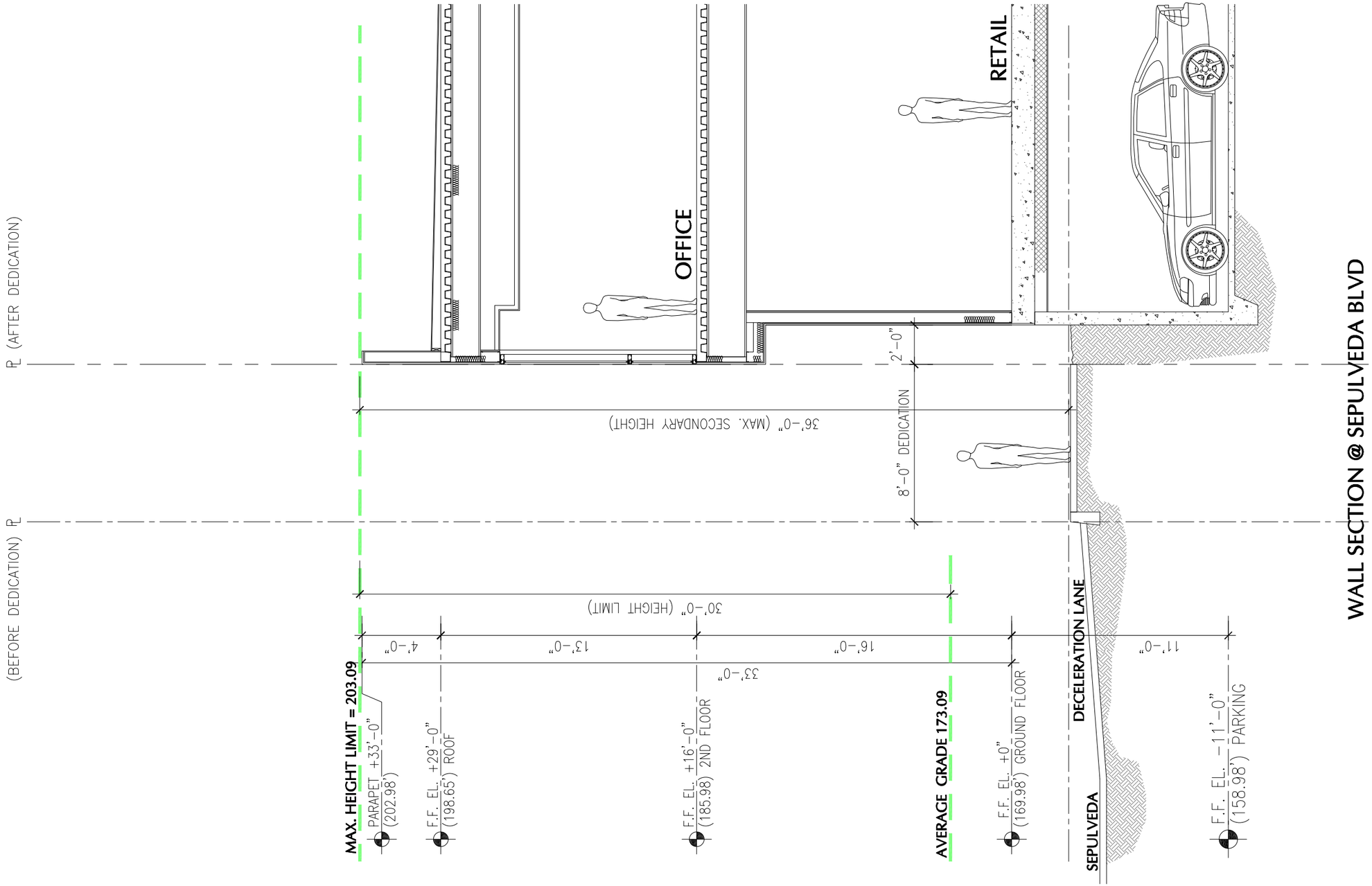
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ENLARGED WALL SECTION:WA-4

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 26

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com



WALL SECTION @ SEPULVEDA BLVD

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

ENLARGED WALL SECTION:WA-5

SCALE: 1/32"=1'-0"

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 27

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD - LOS ANGELES, CA 90024
T 310.209.7520 - F 310.209.7516 - www.axisgfa.com

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

VIEW FROM SEPULVEDA BLVD

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 28

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
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MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

APPROACH FROM SEPULVEDA BLVD (LOOKING SOUTH)

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 29

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

APPROACH FROM SEPULVEDA BLVD

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 30

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

VIEW FROM SEPULVEDA & TENNYSON

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 31

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

HOTEL ARRIVAL EXPERIENCE

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 32

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

HOTEL ARRIVAL EXPERIENCE

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 33

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

CENTER OF DEVELOPMENT

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 34

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

VIEW FROM INTERIOR OF DEVELOPMENT

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 35

AXIS GFA
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1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
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MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

VIEW FROM CORNER OF TENNYSON

NORTH

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 36

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
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MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

VIEW FROM CORNER OF CHABELA

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 37

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

1 Whitewashed Brick

2 Wood Look Trespa

3 Curtain Wall Glazing

4 Storefront Glazing

5 Nana Wall Folding Doors

6 Composite Metal Panel, White

7 White Horizontal Siding

8 Vertical Sunshades

9 VTAC Grille

10 Cast In Place Concrete

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

WEST ELEVATION - SEPULVEDA BLVD

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 38

AXIS GFA
ARCHITECTURE • DESIGN
1130 WESTWOOD BLVD. LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

1 Whitewashed Brick

2 Wood Look Trespa

3 Curtain Wall Glazing

4 Storefront Glazing

5 Nana Wall Folding Doors

6 Composite Metal Panel, White

7 White Horizontal Siding

8 Vertical Sunshades

9 VTAC Grille

10 Cast In Place Concrete

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SOUTH ELEVATION - TENNYSON STREET

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 39

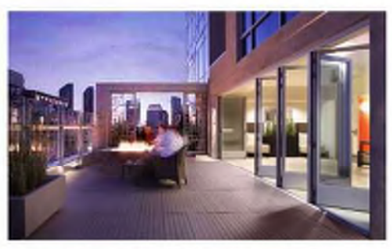
AXIS GFA
ARCHITECTURE • DESIGN
1130 WESTWOOD BLVD. LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

1 Whitewashed Brick

2 Wood Look Trespa

3 Curtain Wall Glazing

4 Storefront Glazing



5 Nana Wall Folding Doors

6 Composite Metal Panel, White

7 White Horizontal Siding

8 Vertical Sunshades

9 VTAC Grille

10 Cast In Place Concrete

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

SOUTH ELEVATION - TENNYSON STREET

(RETAIL/COMMERCIAL BUILDING NOT SHOWN)

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 40

AXIS GFA
ARCHITECTURE • DESIGN
1130 WESTWOOD BLVD. LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

1 Whitewashed Brick

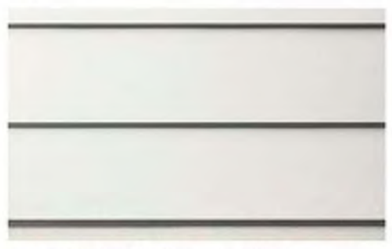
2 Wood Look Trespa

3 Curtain Wall Glazing

4 Storefront Glazing

5 Nana Wall Folding Doors

6 Composite Metal Panel, White



7 White Horizontal Siding

8 Vertical Sunshades

9 VTAC Grille

10 Cast In Place Concrete

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

EAST ELEVATION - CHABELA DRIVE

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 41

AXIS GFA
ARCHITECTURE • DESIGN
1130 WESTWOOD BLVD. LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

1 Whitewashed Brick

2 Wood Look Trespa

3 Curtain Wall Glazing

4 Storefront Glazing

5 Nana Wall Folding Doors

6 Composite Metal Panel, White

7 White Horizontal Siding

8 Vertical Sunshades

9 VTAC Grille

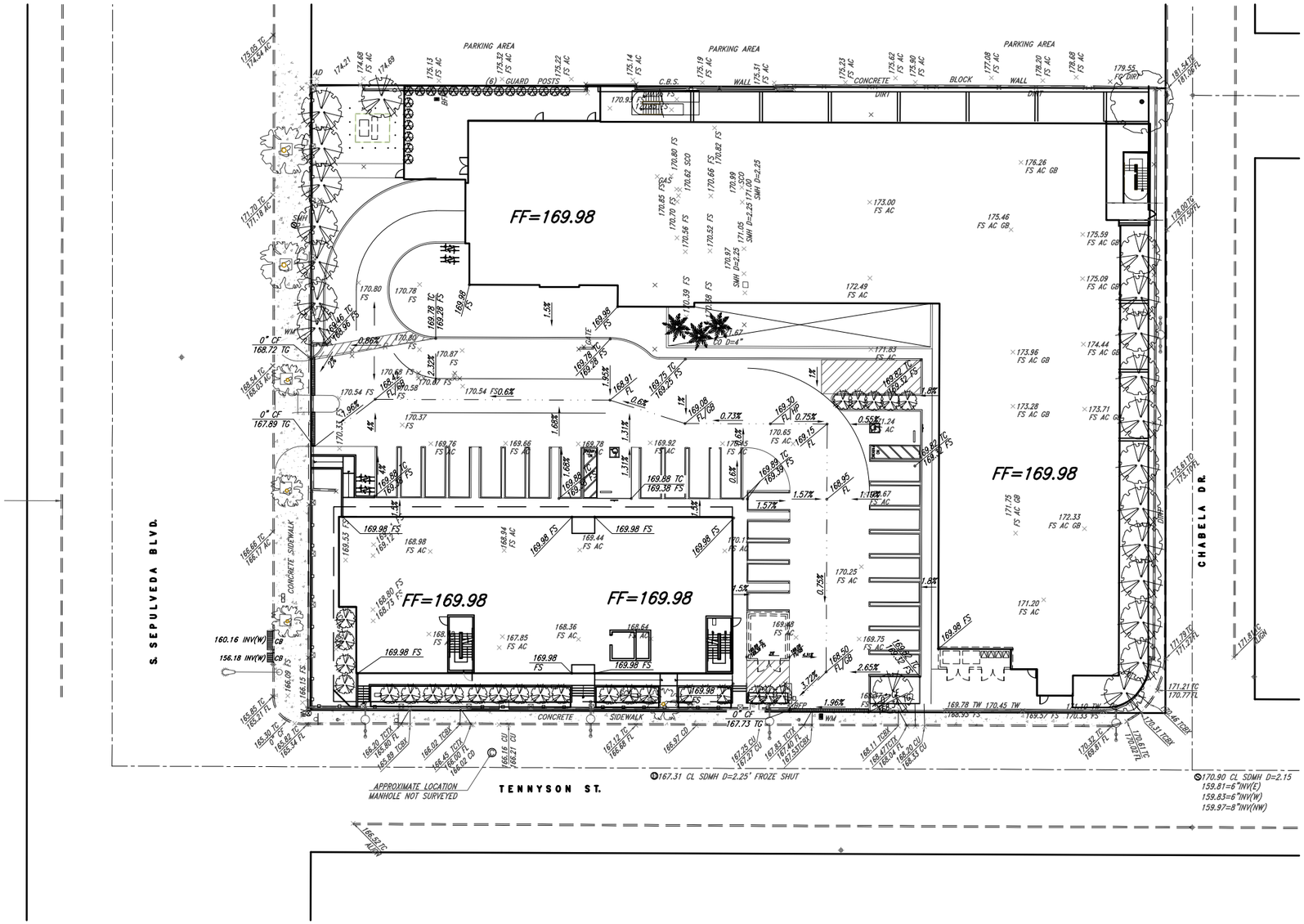
10 Cast In Place Concrete

MANHATTAN BEACH HOTEL
600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

NORTH ELEVATION - RETAIL COMPLEX
(FACING ADJACENT MULTI-TENANT OFFICE)

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: 42

AXIS GFA
ARCHITECTURE • DESIGN
1130 WESTWOOD BLVD. LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com



GRADING QUANTITIES	
CUT	26,787 C.Y.

0' 20'

Barbara L. Hall, P.E., Inc.
318 West Evergreen Avenue
Monrovia, CA 91016
Phone: (626) 256-3220
Fax: (626) 256-3218

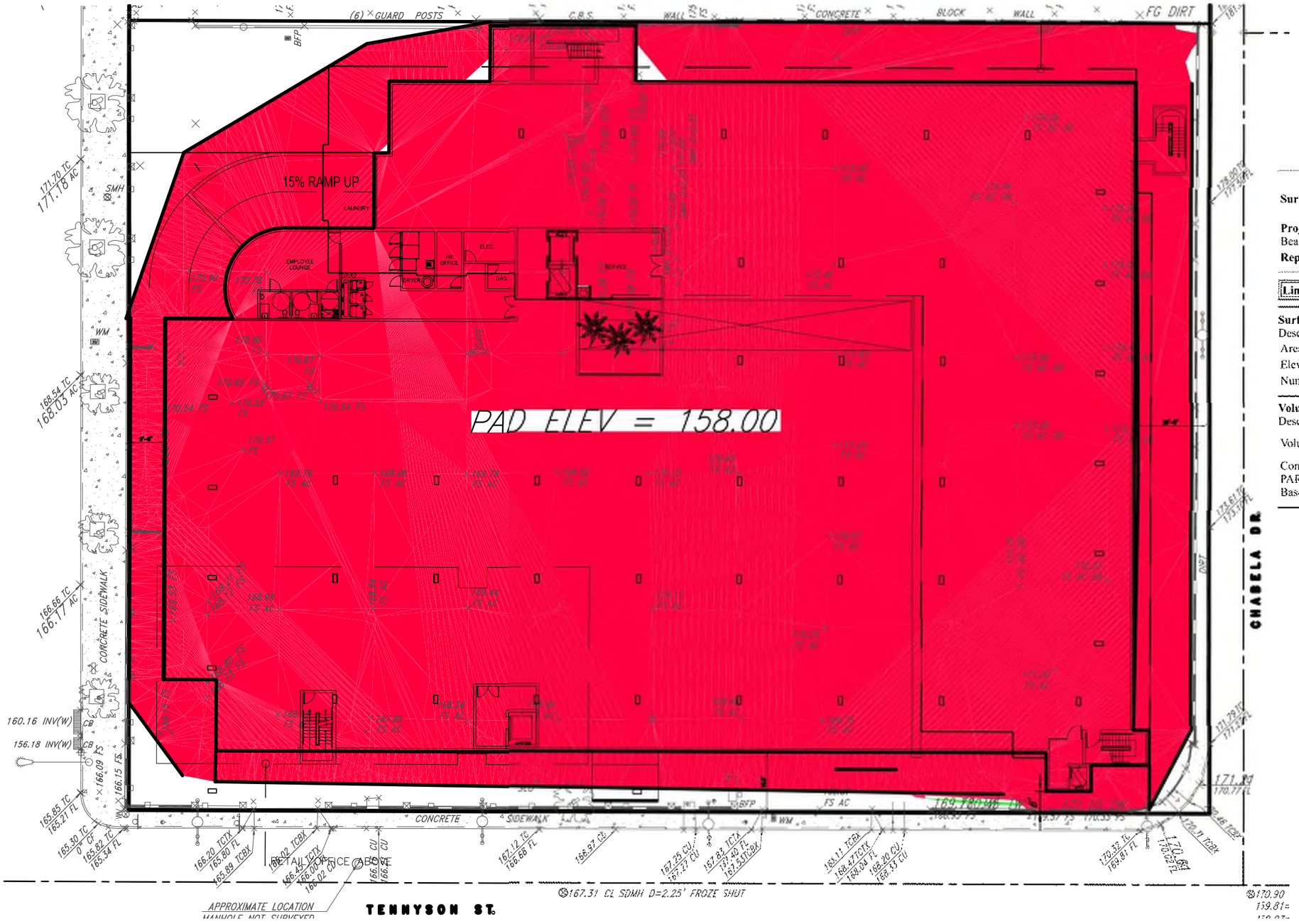
MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

CONCEPTUAL GRADING PLAN

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: C-1

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com



GRADING QUANTITIES	
CUT	26,787 C.Y.

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-20.527	-0.100	

MANHATTAN BEACH HOTEL

600 S. SEPULVEDA BLVD.
MANHATTAN BEACH, CA 90266

CONCEPTUAL GRADING QUANTITIES

DATE: SEPT. 29, 2020
JOB NO.: 18543
SHEET NO.: C-2

AXIS GFA
ARCHITECTURE + DESIGN
1130 WESTWOOD BLVD • LOS ANGELES, CA 90024
T 310.209.7520 • F 310.209.7516 • www.axisgfa.com

B. L. Hall P.E.

318 W. Evergreen Ave.

Monrovia, CA 91016

Surface Report

Client: Manhattan Beach

Project Name: P:\Shared\Projects\Live Oak Properties\19520-Manhattan Beach\SKETCH\SURF\CI-MANHATTAN-SURF-FG.dwg

Project Description:

Report Date: 2/26/2020 5:21:24 PM

Prepared by:

Linear Units: USSurveyFoot	**Area Units:** squareFoot	**Volume Units:** cubicYard

Surface: CI-MANHATTAN-VOL-SURF-EG-FG-BASEMENT-PARKING
Description: Description

Area 2D: 61034.035	Area 3D: 66828.266
Elevation Max: 0.676	Elevation Min: -20.527
Number of Points: 7421	Number of Triangles: 14423

Volume Surface: CI-MANHATTAN-VOL-SURF-EG-FG-BASEMENT-PARKING
Description: Description

Volume Cut: 26787.140	Volume Fill: 0.423	Volume Total: -26786.717

Compare Surface: CI-MANHATTAN-SURF-FG-BASEMENT-PARKING
Base Surface: CI-MANHATTAN-SURF-EG

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. BILL CARR SURVEYS, INC. (BCS) PERFORMED A TOPOGRAPHIC SURVEY OF THE AREA AS SHOWN.
3. CENTERLINES AND SECTION LINE ARE PLOTTED FOR REFERENCE ONLY.
4. THE PURPOSE OF THE SURVEY IS TO DOCUMENT EXISTING GRADE CONDITIONS, FOR A DETERMINATION OF THE MAXIMUM PERMITTED BUILDING HEIGHT OF FUTURE STRUCTURES (MBMC SECTIONS 10.12.030 (H) AND 10.60.050), THE LOCATION OF EXISTING STRUCTURES, AND EXISTING FRONT YARD, STREETSIDE YARD AND PUBLIC RIGHT-OF-WAY TREES.
5. TITLE INFORMATION SHOWN HEREON IS BASED ON FIRST AMERICAN TITLE INSURANCE COMMITMENT NO.: NCS-946160-SA1, HAVING A COMMITMENT DATE: JANUARY 29, 2019 AT 8:00AM

LEGAL DESCRIPTION

PARCEL 1:
THE SOUTHERLY 130 FEET OF LOTS 6 AND 7 IN BLOCK 2 OF AMENDED MAP OF SEASIDE PARK, IN THE CITY OF MANHATTAN BEACH, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 8 PAGE 19 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THEREFROM THE EASTERLY 9 1/2 FEET OF LOT 7.

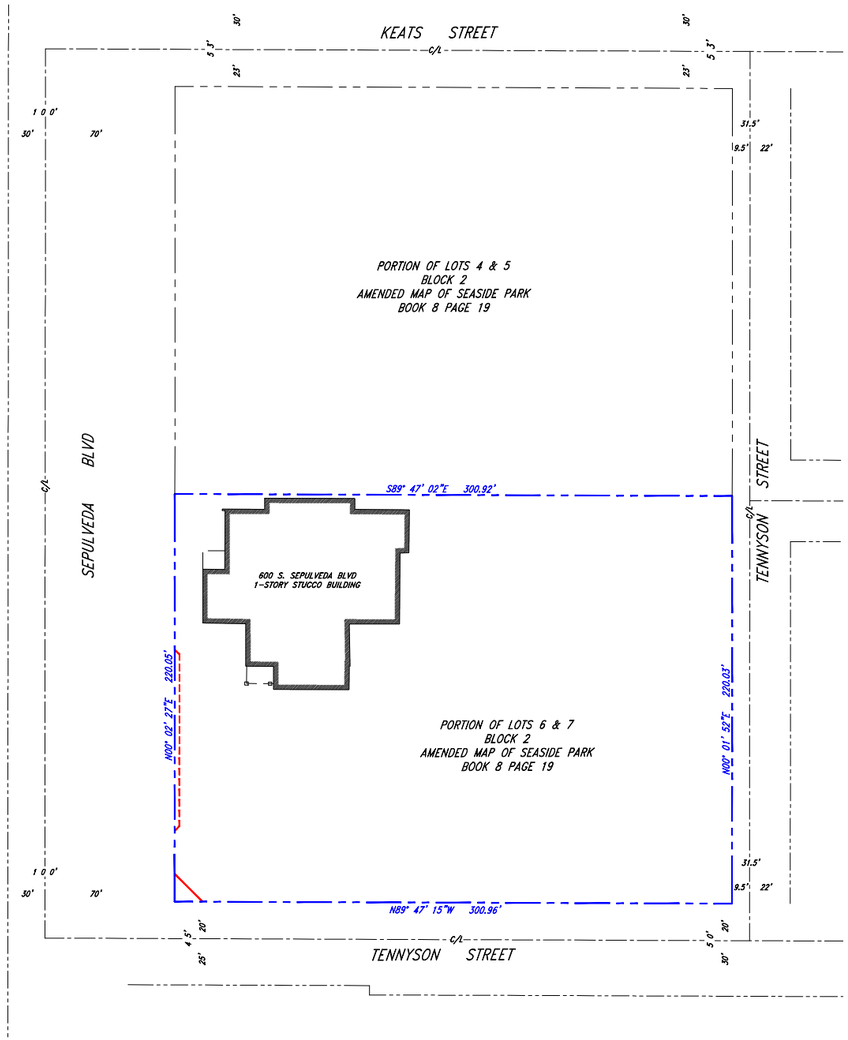
ALSO EXCEPT THEREFROM FIVE PER CENT OF ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES AND MINERAL SUBSTANCES IN SAID LAND, AS GRANTED TO ROBERT MCLAUGHLIN AND L. ADELE MCLAUGHLIN, IN DEED RECORDED IN BOOK 2924 PAGE 181, OFFICIAL RECORDS.

PARCEL 2:
THE NORTHERLY 90 FEET OF LOTS 6 AND 7 IN BLOCK 2 OF AMENDED MAP OF SEASIDE PARK, IN THE CITY OF MANHATTAN BEACH, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 8 PAGE 19 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

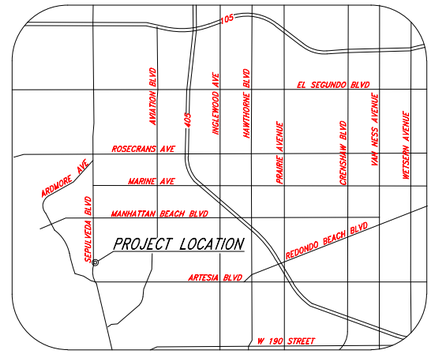
EXCEPT THEREFROM THE EASTERLY 9 1/2 FEET OF LOT 7.

ALSO EXCEPT THEREFROM FIVE PER CENT OF ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES AND MINERAL SUBSTANCES IN SAID LAND, AS GRANTED TO ROBERT MCLAUGHLIN AND L. ADELE MCLAUGHLIN, IN DEED RECORDED BOOK 2924 PAGE 181, OFFICIAL RECORDS.

ABBREVIATION	DESCRIPTION
AC	ASPHALT CONCRETE
AD	AREA DRAIN
AS	ALUMINUM SHED
BFP	BACKFLOW PREVENTOR
BW	BACK OF WALK
CB	CATCH BASIN
CBS	CONCRETE BLOCK STUCCO
CD	CURB DRAIN
CMH	COMMUNICATION MANHOLE
CONC	CONCRETE
CU	CULVERT
D	DIAMETER
ELEV	ELEVATION
E'LY	EASTERLY
EPB	ELECTRICAL PULL BOX
GB	GRADE BREAK
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
GA	GUY ANCHOR
H/C	HANDICAP.
INV	INVERT
LIP	LIP OF GUTTER
L.S.	LICENSED SURVEYOR
LT&T	LEAD TACK AND TAG
N'LY	NORTHERLY
NW	NORTHWEST
PL	PROPERTY LINE
PP	POWER POLE
S'LY	SOUTHERLY
SCO	SEWER CLEANOUT
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SLPB	STREET LIGHT PULL BOX
SMH	SEWER MANHOLE
TC	TOP OF CURB / CURB FACE
TCBX	TOP OF CURB / BOTTOM OF SLOPE
TCTX	TOP OF CURB / TOP OF SLOPE
TPOB	TRUE POINT OF BEGINNING
TSPB	TRAFFIC SIGNAL PULLBOX
W	WEST
WM	WATER METER
WV	WATER VALVE



SITE MAP
SEE SHEET 2 OF 2 FOR ENLARGED VIEW



VICINITY MAP
NOT TO SCALE

LEGEND

SYMBOL	DESCRIPTION
	TREES - VARIOUS SPECIES - VARIOUS SIZES - TRUNK SIZE AS INDICATED +/- - DRIP LINE NOT MEASURED
	AREA LIGHT-SINGLE ARM
	AREA LIGHT-DOUBLE ARM
	BOLLARD
EPB	ELECTRICAL PULL BOX
	GUY ANCHOR
	IRRIGATION CONTROL VALVE
C	MANHOLE LID - COMM
D	MANHOLE LID - STORM DRAIN
S	MANHOLE LID - SEWER
	POWER POLE
	STREET LIGHT
	SIGNS - VARIOUS TRAFFIC AND USE - PED, STOP, BIKE LANE .....
SLPB	STREET LIGHT PULL BOX
SPX	TRAFFIC SIGNAL PULLBOX
WM	WATER METER
	WATER VALVE
	BUILDING FACE
	CONCRETE
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROPOSED EASEMENT LINE
	CHAIN LINK FENCE
	WROUGHT IRON FENCE

SCALE 1"=30'
30' 0' 30' 60'

PREPARED BY:
LICENSED LAND SURVEYOR
BILL CARR SURVEYS
(714) 818-2889
1561 SEGOVIA LANE
ANAHEIM, CA 92805
JEFF C. CLARK P.L.S. 8671
EXP. DATE: 12-31-2019

SITE DEMOLITION/DEVELOPMENT SURVEY
600 SEPULVEDA BLVD, MANHATTAN BEACH, CA

BENCH MARK:
LA COUNTY PUBLIC WORKS BM QY8383
NAVD 88 ELEV=29.59 FEET.
BASIS OF BEARINGS:
THE BEARING N89°47'15"W OF THE CL OF TENNYSON ST. WAS TAKEN AS THE BASIS OF BEARING FOR THIS MAP.

PREPARED FOR:
LIVE OAK

NO.	BY:	REVISION

CHECKED BY: DG
DRAWN BY: CL
SURVEY CREW: DG,GV
DATE OF SURVEY: 08/25/2018
DATE OF PLOT: 3/4/2020
COORDINATE FILE: ********.ASC
SCALE: 1" = 30'
SHEET 1 OF 2 SHEETS

F:\LAND PROJECTS\MANHATTAN BEACH\600 Sepulveda\Dwg\SDMD_PHASE_600 Sepulveda_20190725.dwg PLOTTED 3/4/2020 4:08:17 PM

PROPERTY CORNER
SET LT&T STAMPED "L.S. 8671";
ELEV.: 174.21

PROPERTY CORNER
SET LT&T STAMPED "L.S. 8671";
O/S OR E'LY PROD 0.50'
ELEV.: 181.64

600 S. SEPULVEDA BLVD
1-STORY STUCCO BUILDING
AREA = 8,392 SQ. FT.

PATIO AREA

PLANTER AREA

PLANTER

PEBBLES

ELEC

GAS

BOLLARD (TYP.)

GATE

RAMP

ASPHALT / PAVEMENT

DIRT

CONCRETE

SIDEWALK

GRASS

WOOD FRAME

SCO

SDMH

SMH

WV

WM

BFP

N44° 57' 33"E
3.63'

N89° 47' 15"W 300.96'

S89° 47' 15"E 104.00'

N00° 02' 27"E 92.73'

N00° 01' 52"E 220.03'

ESMT IN FAVOR OF S.C.E.
POINT "A" (STRIP ONE)
INSTR. NO. 12-87465342

ESMT IN FAVOR OF S.C.E.
TP08 (STRIP ONE)
INSTR. NO. 12-87465342

15' PROPOSED CURB-CUT DEDICATION

PROPOSED SIDEWALK EASEMENT

FACE OF CURB 0.69' E'LY OF PL

FACE OF CURB 0.55' E'LY OF PL

FACE OF CURB 0.17' E'LY OF PL

FACE OF WALL 0.71' W'LY OF PL

FACE OF WALL 1.09' W'LY OF PL

APPROXIMATE LOCATION MANHOLE NOT SURVEYED

67.31 CL SDMH D=2.25' TROZE SHUT

170.90 CL SDMH D=2.15
159.81=6"INV(E)
159.83=6"INV(W)
159.97=8"INV(NW)

380.46'
N89° 47' 15"W 940.38' TO PROSPECT AVENUE

S. SEPULVEDA BLVD.

C H A B E L A D R.

T E N N Y S O N S T.

SCALE 1"=10'

PREPARED BY:
BILL CLARK LICENSED LAND SURVEYOR
(714) 818-2889
786 DEBRA LANE
ANAHEIM, CA 92805
JEFF C. CLARK P.L.S. 8671
EXP. DATE: 12-31-2019

SITE DEMOLITION/DEVELOPMENT SURVEY
600 SEPULVEDA BLVD, MANHATTAN BEACH, CA

BENCH MARK:
LA COUNTY PUBLIC WORKS BM QY8383
NAVD 88 ELEV=29.59 FEET.
BASIS OF BEARINGS:
THE BEARING N89°47'15"W OF THE CL OF TENNYSON ST. WAS TAKEN AS THE BASIS OF BEARING FOR THIS MAP.

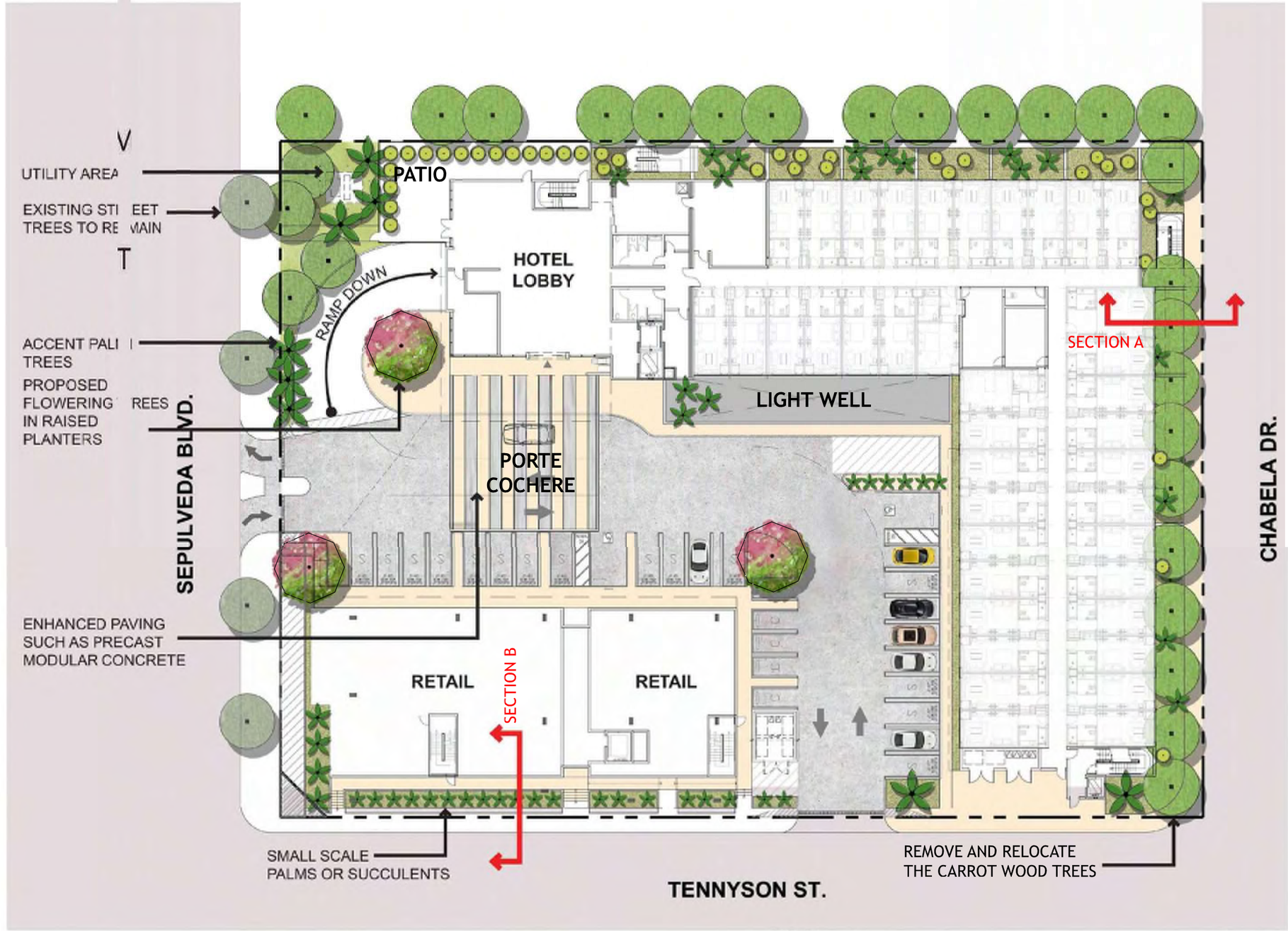
PREPARED FOR:
LIVE OAK

NO.	BY:	REVISION

CHECKED BY: DG
DRAWN BY: CL
SURVEY CREW: DG,GV
DATE OF SURVEY: 08/25/2018
DATE OF PLOT: 3/4/2020
COORDINATE FILE: ******* ASCII
SCALE: 1" = 10' FEET
SHEET 2 OF 2

T:\LAND PROJECTS\MANHATTAN VILLAS\600 Sepulveda\Dwg\SURVEY_PHASE_600 Sepulveda_20190725.dwg PLOTTED 3/4/2020 4:58:41 PM

REFERENCE / INSPIRATION IMAGES



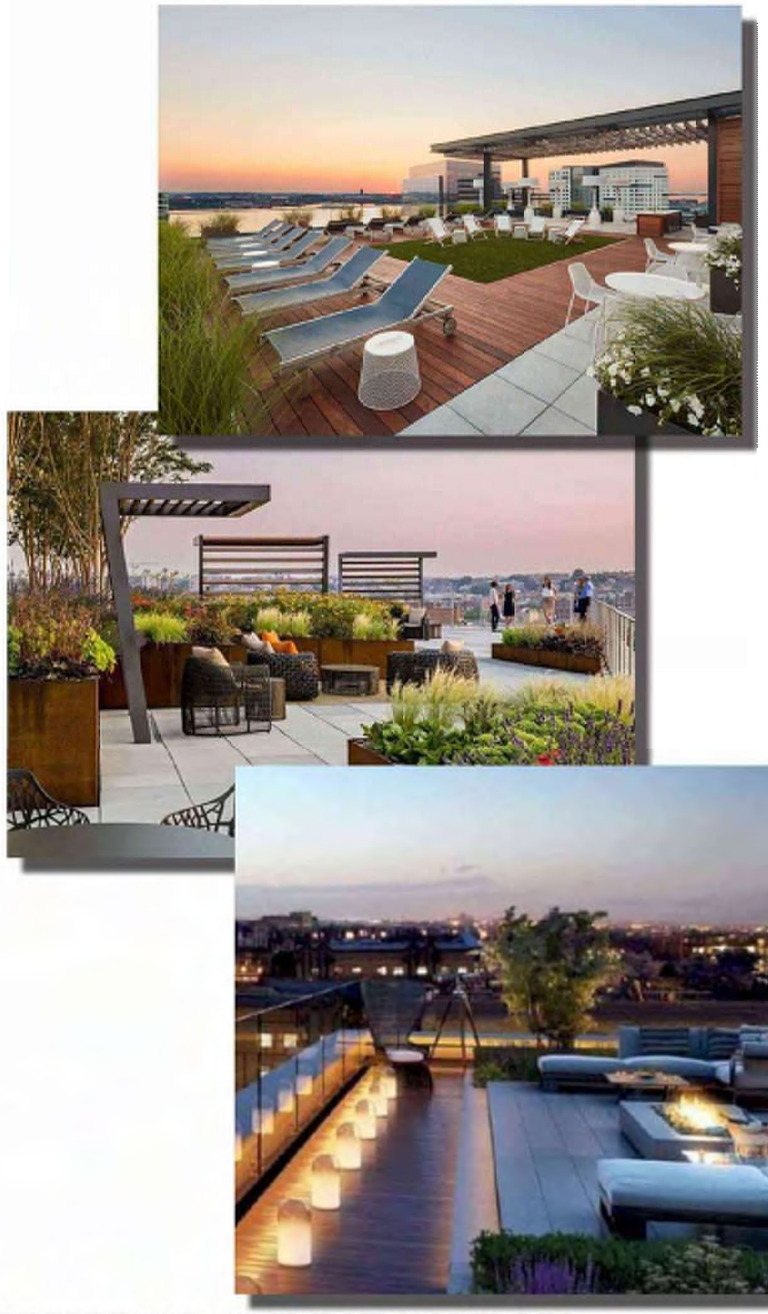
NOTE:
All Site Landscape Design and installation shall be in strict conformance to the City of Manhattan Beach Applicable Ordinances, Regulations and Standards including Water Efficient Irrigation Requirements.

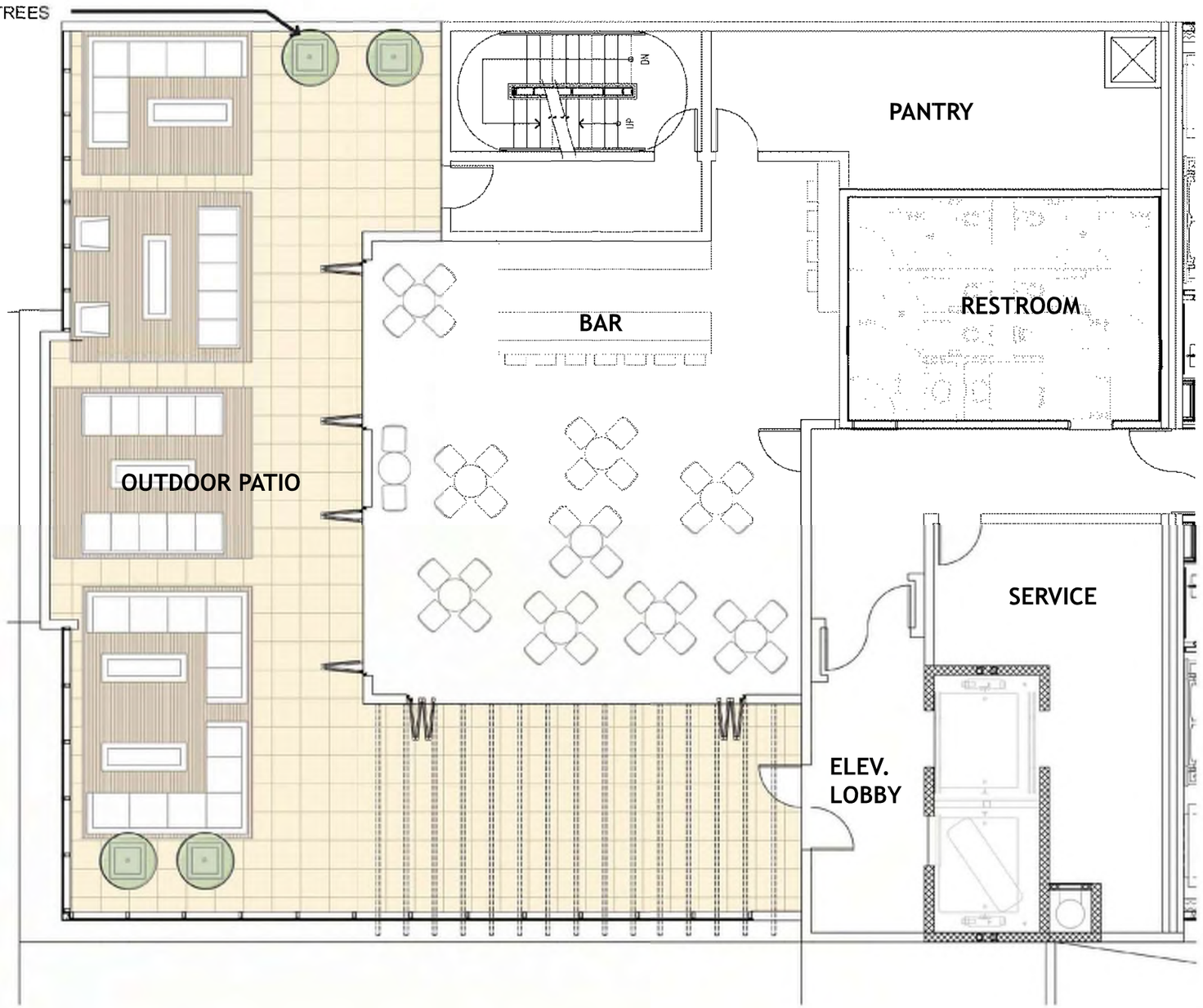
AXIS GFA ARCHITECTURE + DESIGN
Bennitt DESIGN GROUP

0' 8' 16' 32'

SITE ILLUSTRATIVE PLAN
MANHATTAN BEACH HOTEL
CONCEPT / SCHEMATIC LANDSCAPE PLANS

L-01
MARCH 09,2020





REFERENCE / INSPIRATION IMAGES

AXIS GFA ARCHITECTURE + DESIGN

+Bennitt DESIGN GROUP

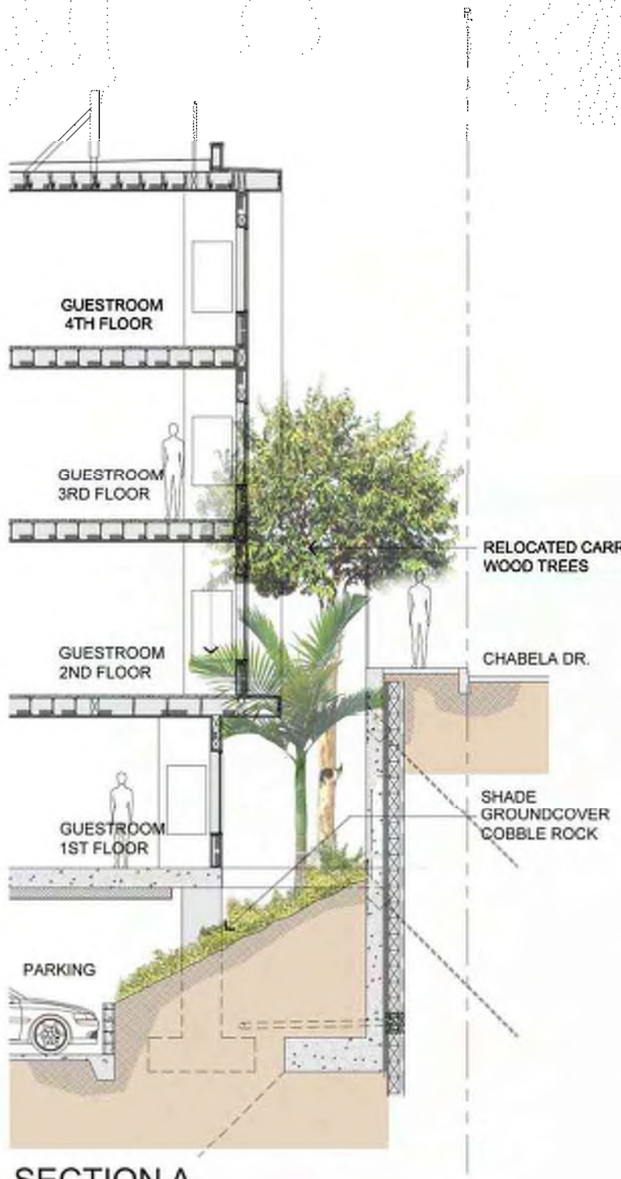
0' 2' 4' 8'

ROOF PLAN

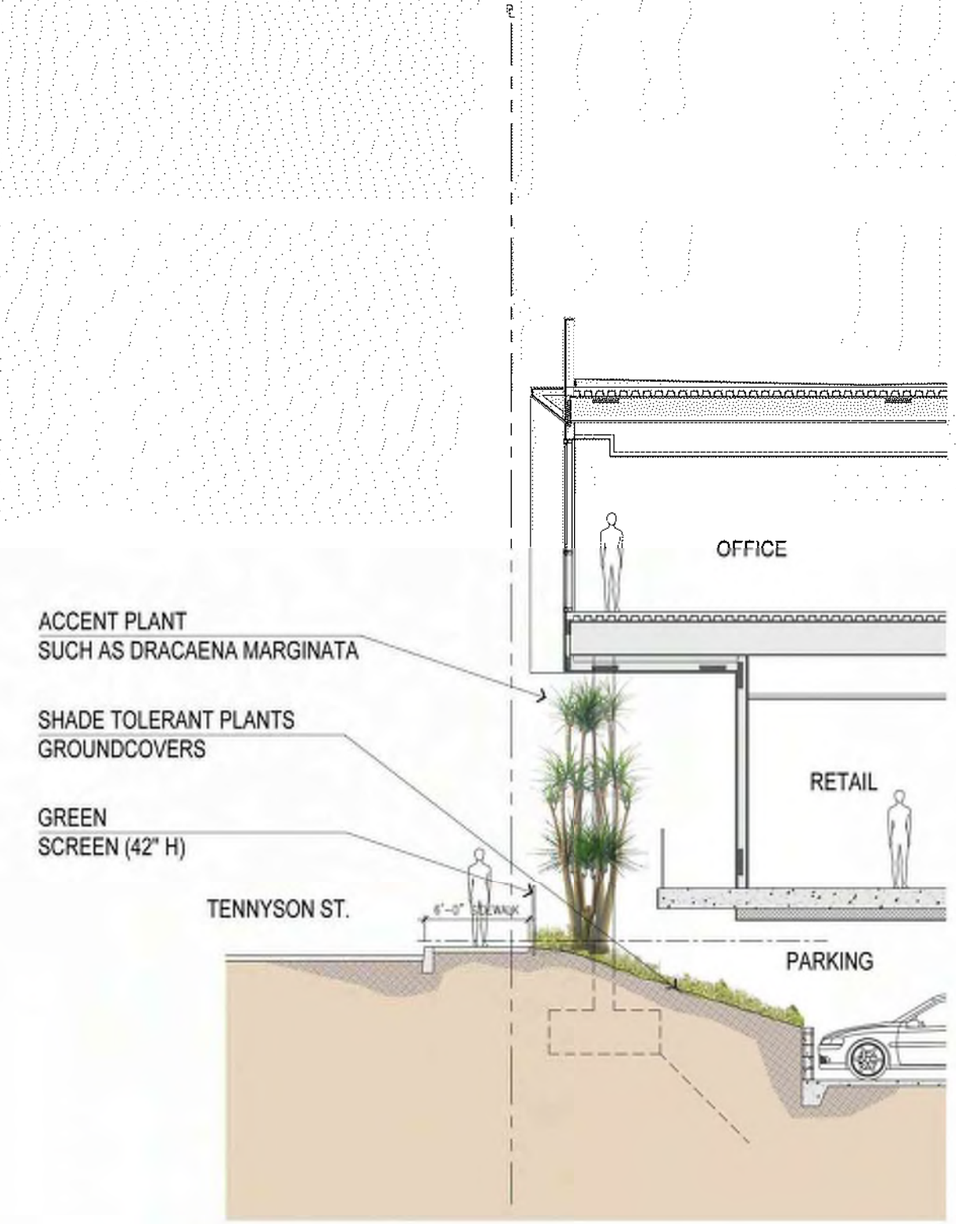
MANHATTAN BEACH HOTEL
CONCEPT / SCHEMATIC LANDSCAPE PLANS

L-02

MARCH 09,2020



SECTION A



SECTION B

AXIS GFA
ARCHITECTURE + DESIGN
+Bennitt
DESIGN GROUP

0' 1' 4' 8'

ILLUSTRATIVE SECTION A & SECTION B L-03

MANHATTAN BEACH HOTEL MARCH 09,2020

CONCEPT / SCHEMATIC LANDSCAPE PLANS